

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 distribution of atmospheric pressure during the month now under review was very variable. Within the region under observation there were numerous disturbances and several high pressure systems, but in nearly all instances the centres kept well outside the British Isles. During the first twelve days an anticyclone of varying intensity extended from our south-western coasts and the Bay of Biscay down to and beyond the Azores. The main depressions of this period were all in the far north, the majority of them keeping on north-easterly courses across Iceland or between Iceland and Greenland. A large depression which appeared far out on the Atlantic in the direction of southern Greenland on the morning of the 1st followed, however, a course well to the southward of Iceland, and travelling at a rapid rate to the northward of Shetland it crossed the southern parts of Norway and Sweden, and dispersed over the interior of Russia on the morning of the 3rd. Another disturbance, appearing between Iceland and Greenland in the night of the 9th, moved slowly on a south-easterly course, dispersing over southern Norway on the morning of the 13th. Over the United Kingdom the weather of these twelve days was influenced more by a series of "V"-shaped depressions, secondaries formed near the southern limits of the far northern disturbances. One of these "V's" appeared on the morning of the 3rd out on the Atlantic in about 49° N., 26° W. It moved across Ireland and England, and disappeared over the North Sea in the night of the 4th. Another formed in about 54° N., 13° W. on the evening of the 5th, and dispersed next day over England. A third was developed in the St. George's Channel on the evening of the 8th, crossed England and the North Sea, and died out on the Baltic. A fourth appeared on the morning of the 10th in 54° N., 18° W., advanced to our western districts, and by next morning had developed a distinct cyclonic centre over Brittany, where it dispersed in the course of the day. A fifth made its appearance on the morning of the 11th in 52° N., 25° W. By the evening of the following day it had formed a separate centre immediately to the north of Scilly. Moving eastward along the south coast of England it deepened quickly, the barometer falling to 29 in. over Belgium on the morning of the 13th. Subsequently the system made slow and erratic progress, passing to the mouth of the Elbe, crossing the North Sea to the coast of Norfolk, then down to the north-east of France, where it dispersed on the 16th.

After the 12th the general distribution of pressure underwent considerable modification—in fact there was a complete reversal of the conditions. For the rest of the month anticyclones frequented the northern half of our area—Iceland, Scandinavia, Denmark and the Baltic, and from the 25th to the 28th near Scotland and the Hebrides. Depressions were now found where during the earlier portion of the month areas of high pressure were in the ascendant. Every day from the 12th to the 31st, the barometer was relatively low between our south-western coasts and the Azores, the centres of some of the systems passing down almost to the latitude of Madeira. The most important of these disturbances appeared over mid-ocean on the 50th parallel in the night of the 14th, moving due eastward as far as the 15th meridian by the evening of the 16th. Its progress was then arrested, and until the 24th it wandered about irregularly beyond our south-western coasts and on the Bay of Biscay, finally dispersing without reaching the mainland. An unusual track was followed by a depression which formed over Algeria on the 20th. It passed across Tunis and Sicily, then curved northward and north-westward through Italy and Eastern France to the English Channel by the 27th, and during the next two days it moved westward along the 50th parallel as far as the 17th meridian, where it dispersed.

Under these circumstances the mean distribution of pressure over these islands for the whole month bears no resemblance to the conditions at any particular period. The mean highest pressure, slightly above 30 in., was outside our north-western coasts, and the lowest, a little below 29.9 in., between the Thames Estuary and Rhineland, but the extreme values ranged from 30.22 in. at the Azores to below 29.8 in. northward of Iceland and across to northern Scandinavia. The greatest range of pressure at our home stations was in the extreme north and along the Channel and south-east coasts, where it exceeded an inch, 1.5 in. at Sumburgh Head, and 1.2 in. from Scilly to Dover. Between these it diminished to about $\frac{3}{8}$ in. at Birr Castle and Liverpool. The highest reading in the south, 30.57 in., occurred at Jersey on the 3rd; and in the north, 30.58 in., at Stornoway on the 25th. Sumburgh Head had the lowest value in the north, 29.01 in. on the 1st; Dungeness the lowest in the south, 29.16 in. on the 13th. The mean results were below the normal in the south, by 0.07 in. at Dungeness, above elsewhere, by as much as 0.18 in. at Sumburgh Head, and 0.23 in. at Stornoway. The distribution of mean pressure thus differed widely from what is usual at this season, so that there was a great preponderance of polar winds—North-Westerly to Northerly in the earlier days, afterwards Northerly to Easterly.

Taken as a whole the month was rather windy, the force of a gale being reached at one or more of the telegraphic reporting stations on 20 days. A strong South-Westerly gale was felt at Malin Head and Sumburgh Head on

the 1st; North-Westerly at Scilly on the 5th and 6th; South-Westerly on the 11th, and Northerly on the 13th; a whole Northerly gale at Malin Head on the 13th, and at Spurn Head on the 14th and 15th; a strong Easterly gale at Scilly on the 18th, and at Spurn Head on the 19th; North-Easterly at Yarmouth on the 25th, Yarmouth and Nottingham on the 26th, Dungeness on the 27th; and a whole Northerly gale at Dungeness on the 26th. The anemometrical records disclose a few instances of gusts in which the velocity was at the rate of 60 or more miles per hour, up to 64 miles at Dover on the 26th. There were several shipping casualties about the southern and eastern coasts during the North-Easterly gale of the 25th and 26th, and the cross Channel Services were delayed considerably.

Although the unsettled and windy type of conditions was general, the weather itself presented varied features. Rain was much more frequent in the south and east than in the north and west, unusual dryness prevailing in the latter districts after the 12th. In many neighbourhoods this period was not an absolute drought owing to the occurrence of one or two trifling showers, but Glenarm (Antrim), Blacksod Point, Kinlochewe and Loch Awe had 16 consecutive rainless days, Oban 17 days, Gruline (Mull) 18 days, and Cargen (Dumfries) 24 days, the drought continuing well into April. There were very few records of as much as an inch of rain on any day during the month:—On the 1st an inch at Glencarron, 1.7 in. at Arncliffe, and 2.4 in. at Seathwaite; on the 10th, an inch at Haverfordwest and Plymouth, 1.2 in. at Whitchurch, 1.3 in. on Loch Torridon, and 1.5 in. at Sheepstor; and on the 12th, when heavy rain was general in the south, an inch at Brighton, Portland Bill, Rousdon and Sheepstor, 1.1 in. at Ventnor, and 1.2 in. at Eastbourne. Snow was experienced on several days, the greatest depths noted being 4 $\frac{3}{4}$ in. at Heathfield (Sussex) on the 12th, 4 in. at Mareham-le-Fen (Lincs.) on the 14th, and 6 in. at Heathfield in the night of the 25th. Thunderstorms occurred on the 13th in various parts of England, causing some structural damage at Rothamsted. A thunderstorm visited many of the southern counties on the 22nd.

The keen North-Easterly winds gave an impression of great cold, but the temperature of the air preserved a fairly uniform level about, or rather above, the normal during the greater part of the month. Afternoon maxima of 60° and upwards were uncommon, 62° on the 21st at Epsom, Greenwich and Margate, and on the 22nd at Camden Square and Guernsey, 63° at Tottenham on the 22nd, and at Arlington on the 30th. As a rule the frosts of the month were slight, the shaded thermometer descending to 24° at a few stations on various dates, to 23° at Cromer on the 26th, and to 22° at Llangammarch Wells on the 17th, Balmoral on the 21st and 29th, Fort Augustus on the 22nd, and Markree Castle on the 26th.

Aurora was reported at Nairn on the 1st, Baltasound on the 5th, Stornoway on the 20th, Deerness on the 23rd, and Nairn on the 29th.

Fog was a rare visitor through the greater part of the month, but on the morning of the 29th the atmosphere became very foggy over an extensive area, embracing a considerable portion of England, the neighbouring parts of the Continent, and the adjacent seas, from the Bay of Biscay to Norway. The fog lasted five days, to April 2nd, and was very dense at times, especially at sea, so that shipping movements were greatly delayed, and there were some casualties.

Compared with February the temperature of the sea water round our coasts showed scarcely any change, but off Margate and Usan (Montrose), it was 3°, and off Eastbourne 4° warmer. At nearly all points the water was warmer than the air on shore, by as much as 3° locally in the west and north.

Rainfall.—There was an excess of precipitation over the south-eastern quarter of England and in the Channel Islands, Hillington returning more than double the usual amount. Over the rest of the Kingdom there was a deficiency, which was more and more marked in the north-west and north, and amounted in western Scotland to 2.38 in. (62 per cent.), and in northern Scotland to 1.39 in. (31 per cent.). Few of the aggregates for the month exceeded 4 in., even at Seathwaite the fall was only 6.2 in., a loss of 4.5 in. The smallest totals were 0.9 in. (41 per cent.), at Malin Head, 0.9 in. at Edinburgh and Cargen, and 0.6 in. (44 per cent.) at Hawarden Bridge. The frequency was irregular, the falls being very small in most cases. Roche's Point and Caragh Lake returned 27 rain days, Cahir, Sheepstor and Cromer 25, against 8 at Cally and Colwyn Bay, and 4 at Cargen.

Bright Sunshine.—The distribution of insolation presented most unusual features, the smallest records being in the Thames watershed, increasing westward and northward to the highest values in Western Scotland and the neighbouring islands. The duration was below the average at Cullompton, 39 hours, at Kew 35, at Torquay 33, at Oxford 32, and at Margate 31, while it was above the average at Fort Augustus, 39, and at Stornoway 69 hours. Oban totalled 192 hours (53 per cent. of the possible), Castlebay 179 hours (49 per cent.), and Stornoway 172 hours (48 per cent.), against Westminster 60 hours, and Plumstead 58 hours (16 per cent.), and Bunhill Row 52 hours (14 per cent.)