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,

AND PUBLISHED FOR H.M. STATIONERY OFFICE BY WYMAN AND SONS, LTD., FETTER LANE, E.C.; OR OLIVER AND BOYD, EDINBURGH; OR E. PONSONBY, 116, GRAFTON STREET, DUBLIN.

THIRTY-FIFTH YEAR. *Vol. XXVII. (New Series) Weekly Weather Report.* } No. IV. APRIL, 1910. [*Price 6d.*

SUMMARY OF OBSERVATIONS.

Pressure, Winds and Weather.—The anticyclonic distribution of pressure which had prevailed over the United Kingdom during the greater part of March began to exhibit signs of a change on the closing day, when the barometer attained its highest level, above 30·7 ins., on the North Sea. By the evening of the 31st the mercury was already on the decline over Western Europe generally. Next morning it stood at 30·59 ins. at Shields, and 30·58 ins. at Liverpool, and these proved to be the highest readings reported in this country during the month. Afterwards the high pressure system was transferred eastward to Russia, and with the appearance of another anticyclone in the Greenland-Iceland district a very unsettled type of conditions was developed over the intervening region, embracing the Atlantic and Western Europe. Out on the ocean an extensive area of low pressure was centred in about 20° W. to 40° W., in the neighbourhood of the 45th parallel, for a period of nearly three weeks.* A shallow disturbance which was moving eastward off the south of Iceland at the beginning of the month filled up on the morning of the 3rd, on nearing the north coast of Scotland. At the same time another depression, coming up from the Western Mediterranean, was crossing Belgium and Holland for the North Sea. Arriving off the Yorkshire coast on the morning of the 5th the path of progression was altered, and taking a south-westerly course across England, Wales and the Bristol Channel the system dispersed on the 7th to the westward of Scilly. Between the 6th and the 10th the Greenland-Iceland anticyclone moved slowly southward across Scotland and Ireland to the Bay of Biscay. It was of slight intensity, barometer a little above 30·2 ins., but it served to temporarily modify to some extent the unsettled weather. With its passage eastward from the Bay across the Continent a long spell of disturbed conditions set in, the country being under the influence of a succession of depressions of varying degrees of intensity advancing from mid Atlantic or from the Iceland region, and in nearly every instance the central spaces of the systems visited the locality between the Faröe and the Norwegian coast. In one of these disturbances, which moved northward across the country on the 13th and 14th, the barometer fell below 29 ins. in many places, and on the morning of the 14th it touched 28·82 ins. at Wick. Again on the 24th, during the passage of a well marked depression which had passed some distance southward of Iceland, pressure decreased below 29 ins. over Scotland and the north of Ireland, to 28·81 ins. at Stornoway. From the 21st the conditions over Western Europe were largely determined by an extensive anticyclone, which from that day to the close of the month occupied the greater part of the Atlantic, while low pressure systems still prevailed from Iceland across to Southern and South-Eastern Europe. On the last day of the month the anticyclone attained its maximum pressure, above 30·7 ins., in about 48° N., 20° W., the system having by this time embraced the whole of the British Isles, the barometer exceeding 30·5 ins. at various Irish stations, reaching 30·55 ins. at Valencia.

Owing to the large number of depressions which visited our neighbourhood the mean pressure for the month was below the average at all stations, the deficiency being only nominal at Valencia, the station nearest the Atlantic anticyclone, but increasing eastward and northward, so that Nairn was 0·17 in., and Sumburgh Head 0·21 in. below the average. The range of pressure during the month was everywhere considerably greater than in March. At Dungeness it amounted to 1·2 in., and at Jersey and generally over the south-east of England it was 1·3 in., while it exceeded 1·5 in. at the great majority of stations, and was about 1·7 in. across the north of England, from Holyhead to Shields. The mean results ranged from 30·01 ins. at Horta, Azores, 29·93 ins. at Brest, and 29·90 ins. at Jersey to 29·68 ins. at Christiansund, and 29·65 ins. at Sumburgh Head, thence to the northward increasing again, the highest value being 30·01 ins. at Isafjord, in the north-west of Iceland. The mean pressure distribution was thus at variance with the normal for the season, the minimum, instead of lying to the south or south-west of Iceland, being found beyond the north-east of Scotland. Between Jersey and Shetland there was a difference of pressure amounting to 0·26 in., against a normal of 0·06 in., the gradient indicating the greater prevalence of North-Westerly types than usual. Westerly to Northerly winds predominated, but South-Westerly and North-Easterly were nearly as frequent.

With the exception of a North-Easterly gale at Yarmouth on the 1st the wind force rarely exceeded that of a strong breeze in the first twelve days of the month, but afterwards high winds were of daily occurrence. A notable feature which marked many of the disturbances was the elongated, narrow formation of the central spaces of those moving across the country, and the well-defined V-shaped secondaries which extended southward from depressions whose centres passed eastward in the far north. Many of the gale forces associated with the passage of line squalls were from West to East across the country. Considering the very disturbed character of the period the weather may be described as breezy rather than stormy, the instances of gale force registered at the telegraphic reporting stations being comparatively few. North-Westerly squalls of the force of a strong gale occurred at Scilly on the 13th and 16th, and at Roche's Point on the 24th, a whole gale at Wick on the 19th. The records of self-registering anemometers show that in gusts of short duration the wind attained a velocity at the rate of 60 miles an hour at Pendennis Castle, and 65 miles per hour at Roche's Point on the 24th.

The spell of dry weather which set in about the middle of March lasted until April 3rd over a great part of England, the duration of the drought at a large number of stations being sixteen days, at Dursley (Gloucester) and Isleworth seventeen days, at Worcester Lodge (Forest of Dean) twenty-two days. With the break-up of the drought the weather conditions assumed a typically April character, the numerous disturbances producing rapid alternations of sunshine and showers, but the latter were very frequently made up of hail, sleet or snow. As a general rule the individual falls were not very heavy, but on the 6th a few stations in the south of England registered more than an inch, up to 1·4 in. at Salisbury. Similar amounts were recorded in western Scotland on the 11th, and in a more general fall over the northern districts on the 13th the amounts ranged up to 1·7 in. at Ardross Castle. In many parts of England on this day thunderstorms occurred, and again on the 15th, but these were exceeded in violence and in the extent of the area affected by the storms of the 16th, which raged in nearly all parts of England, the rain in numerous instances being accompanied by very heavy falls of hail. This was especially noticeable in some of the southern and northern suburbs of the Metropolis, where the hail lay about 2 ins. deep. There were not, however, many large rainfall records, which were of the usual local thunderstorm character. At Muswell Hill 2·2 ins. fell, at Greenwich 1·5 in., other London stations ranging down to 0·2 in. or less. At Camden Square 0·24 in. fell in eight minutes. Thunderstorms were subsequently of almost daily occurence, principally on the 24th and 25th, but there were not great rainstorms. The snowfalls of the month were as a rule slight, but at Fort Augustus 4½ ins. fell on the 17th.

Temperature was generally below the normal, there being a marked absence of warm days. Maxima above 60° were uncommon, but on the 14th Whitby registered 67°, and on the 21st Greenwich, Camden Square and Maidenhead rose to 66°. On the other hand there were numerous afternoon values below 45°, as low as 37° at Glencarron and Stornoway on the 14th, and 35° at Marchmont on the 15th, and Stonehaven on the 16th. Severe night frosts occurred on various dates, the shade minima being 25° and under in many districts. On the morning of the 1st Garforth touched 17°, and Llangammarch Wells 20°; and on the 3rd Cambridge and Wokingham 21°, but from the 19th to the 21st the nights were very mild, with minimum temperatures of 50° and upwards, as high as 54° at Killarney and Tottenham.

Fog was very prevalent on the southern and western coasts from the 17th to the 22nd, dense in places on the 17th, 18th and 19th, involving the wreck of the Atlantic liner *Minnehaha* at Scilly. On the east coast fog was moderately frequent during the first half of the month.

The temperature of the sea water round the coasts was about the same as, or a little higher than, in March. On the east coast of England it was about 2° colder than the air on shore, but elsewhere it equalled or slightly exceeded the shore temperature.

Rainfall.—Jersey returned a deficiency of an inch in the month's precipitation, and Guernsey lost more than an inch, but generally over the British Isles there was an excess, as a rule not large, but at some stations in Scotland it was more than 3 ins., as much as 4·2 ins. at Fort William, and 5·5 ins. at Glencarron. At a number of stations in eastern England and on the Channel the total for the month was less than 1·5 in., 1·1 in. at Kew, Jersey and Guernsey (Villa Carey), an inch at Shoeburyness, and 0·9 in. at Southend, while the largest aggregates were 8 ins. at Kinlochewe, 9 ins. at Plynlimmon, 10·8 ins. at Glencarron, and 14·8 ins. at Glenquoich. There was measurable precipitation at Dundee and Sandgate on eleven days, and at Yarmouth on twelve days, against twenty-six days at Balta Sound, Stornoway and Poltalloch, twenty-seven at Foynes, and twenty-eight at Glencarron.

Bright Sunshine.—All districts had less sunshine than usual, the deficiency in several instances exceeding 30 hours, 43 at York, 46 at Strathpeffer, and 49 at Prestwich. The total duration ranged from 77 hours (19 per cent. of the possible) at Whitworth Park and Prestwich, 80 hours (19 per cent.) at Manchester (City), and 82 hours (20 per cent.) at Hull and Newcastle-on-Tyne to 175 hours (41 per cent.) at Castlebay, 177 hours (43 per cent.) at Scilly, 189 hours (46 per cent.) at Guernsey, Cromer and Yarmouth, and 195 hours (48 per cent.) at Jersey.

* NOTE.—Commencing with April 7th, daily weather maps covering Europe, Algeria, the Atlantic and North America are now published on the weekly issues of the "Monthly Meteorological Charts of the North Atlantic and Mediterranean," issued by Authority of the Meteorological Committee.

600. 5/10. Wy. & S. 8600r.