

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

(Supplement to Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, AND AT GIBRALTAR AND MALTA, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANIZATION.

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 and other Foreign Countries of T. FISHER UNWIN, LTD., LONDON, W.C.

FORTY-FIRST YEAR.

Vol. XXXIII. (New Series)

No. V.

MAY, 1916.

[Price 6d., Post free, 7d.]

Wet except in East and South East of England, Sunshine deficient generally.

Until about the 15th the general character of the weather was dull, wet, and cold. Subsequently, the conditions improved greatly; rain became much less frequent in the north and west, and was seldom experienced in the east and south, while the sky cleared and temperature rose very appreciably.

Many depressions passed over the United Kingdom or its immediate neighbourhood, and, as will be seen on map 2, p. 51, several travelled in unusual tracks. Few of the disturbances were of much intensity, many were very shallow, while some dispersed after a brief period of mild activity. The first two, marked A and B on the map, had little effect on the force of the wind, and yielded no heavy falls of rain, although they produced thunder or thunderstorms over a wide area in southern England and at some Irish stations. Their successor, track C, however, which travelled slowly in a general northerly and north-easterly direction from the Bay of Biscay to Scandinavia, brought the lowest barometer of the month to these Islands generally, caused gales on several parts of the coast, and gave a considerable quantity of rain. Whilst its centre still lay over the Bay, on the 5th the wind rose to a gale from East North-East at Holyhead, and through the 6th and for many hours on the 7th North-Easterly gales were felt on the north and north-west coasts of Ireland. On the latter day a North-Westerly gale blew for some hours at Scilly, when the barometric minimum lay over the Irish Sea. In the gusts the anemometrical records showed 23 m/s at Pendennis Castle on the 6th; 24 m/s at Weaver Point and 26 m/s at Scilly on the 7th. Thunderstorms were experienced in many parts of the Kingdom on the 5th and 6th, and various localities in the west and north received heavy rains. On the former date some of the largest amounts were 31 mm. at Broadford (Co. Clare), 44 mm. at Birr Castle and Newtownforbes, 57 mm. at Newcastle (Co. Wicklow), and 61 mm. at Kingstown and Shankill. These unusual falls at Newcastle and Kingstown were followed on the 6th by 41 mm. and 28 mm., respectively. At Lisburn, where rain was more or less continuous during the 5th, 6th, and 7th, the total was 69 mm. The arrival of further depressions prolonged the unsettled weather for some days after the disappearance of "C," but none caused any important increase in the wind force, nor, except in Snowdonia, any heavy downpours of rain. On the 16th, and for several days subsequently, the greater part of the Kingdom was under the direct influence of an anticyclone that came up from the southward, and the general condition of the weather was fine, dry, and warm. Between the 19th and 21st, however, some very shallow, local irregularities in pressure were accompanied by desultory thunder or thunderstorms. By the 24th the anticyclone had drifted away to the eastward, and on the day following a shallow depression, moving north north-westward over the country, track H, brought about a less settled condition over the Kingdom generally. Thunderstorms occurred in many districts, and heavy rain fell in Wales and locally in Ireland and western England. At Llangammarch Wells on the 24th there was 39 mm., and at Belmont, Hereford, 32 mm. On the 25th Llandrindod Wells had 43 mm., and Lisburn and Donaghadee 28 mm. Other shallow depressions continued to produce local thunderstorms over England, but over a considerable portion of the country the general conditions remained dry. Quite at the end of the month a large and rather deep depression appeared to the westward of Ireland, and the South-West wind increased to a gale on some parts of our north-west coast, while some places experienced heavy rain; at Kirkby Lonsdale the fall was 32 mm., at Fort William 39 mm., and at Seathwaite as much as 114 mm.

Air Pressure.—The barometer was everywhere below the normal, the mean height being about 2 mb. below in the north and west, and about 4 mb. below in the south-east and south. The mean distribution of pressure differed considerably from the normal but more widely from that of May in last year, when, for the first time on record, it was favourable for Easterly winds over the whole of England and Ireland. As will be seen on chart 1, page 51, the mean isobaric curves showed a distribution favourable for winds from the Southward over the major portion of Britain, and from the Westward over Ireland and the south of England. The lowest readings were all associated with the depression marked C, the barometer falling to 986 mb. in England South-West and the English Channel. Pressure reached its highest point on the 18th or 19th, when the readings were about 1030 mb. generally, and as high as 1033 mb. in England East and North-East. The extreme range of the barometer was greater than during May of last year, but the mean barometric gradient was less, and differed little from the normal.

Temperature.—The general height of the thermometer was below the normal during the dull, unsettled period before the 14th, and above it with the drier, brighter conditions of the last fortnight. The excess of warmth outbalanced the deficiency in England, where, for the month as a whole, the temperature exceeded the normal, the greatest deviation being 1°·3 A. (2°·3 F.) in England East. In Ireland and Scotland the increase of heat was less marked, and the mean temperature was below

the normal, the difference being about 0°·4 A. (0°·7 F.). The mean temperature in England South-East and the English Channel was 285°·3 A. (54° F.), and in England East 285° A. (53°·6 F.), but it decreased to about 281°·5 A. (47°·3 F.) in the north and east of Scotland. The lowest minimum readings occurred early in the month, 271° A. (28° F.) being recorded on the 4th at Burnley and Garforth, and 271°·5 A. (29° F.) or 272° A. (30° F.) at some other places. Readings equally low were registered locally in the midlands on the 9th, and at Wokingham the thermometer fell to 271°·4 A. (29° F.) on the 27th. In Scotland the lowest reading was 271° A. (28° F.) at Cally, Balmoral, and Braemar, recorded on the 10th, 11th, or 14th. Some of the dull, rainy days early in the month had unusually low maxima. At several places in the north on the 5th and 6th there was no reading as high as 280° A. (45° F.), and at others in the south no value as high as 283° A. (50° F.). The maximum readings that occurred during the almost cloudless anticyclonic weather on the 21st were 299°·7 A. (80° F.) or above in most of the English districts, the highest readings being 301°·4 A. (83° F.) at some stations in the south-eastern and midland counties, and 302°·4 A. (85° F.) at Camden Square (in a Glaisher screen). A higher maximum has been recorded at this station on only four occasions in May since 1858. About the time of the greatest daytime warmth, the nights were also warm. At Rauceby, on the 22nd, the minimum reading was 288°·5 A. (60° F.); at Eye, Fulbeck, Nottingham, Macclesfield, and Ruthin 288° A. (59° F.), and at many other stations only a degree or two lower.

Sea Surface Temperature and Coastal Fog.—The temperature of the sea surface water exceeded that of the air in the Bristol Channel region, and was a little lower off the north-east coast of England. Fog was reported from some part of the coast daily, but it was more widespread in the west than elsewhere. It prevailed at numerous places on the western seaboard between the 1st and 7th, and also at a few stations on the north-east coast. Between the 11th and 21st it was very general in the west, and covered a wider area along the eastern seaboard. Subsequently it was more local in the west than in the east and north-east. The south coast and the Channel Islands had little fog, but it prevailed from time to time, mostly early in the month or between the 11th and 17th. At Belper the mean temperature of the Derwent was 284°·6 A. (52°·9 F.), and that of the air 284°·1 A. (52° F.).

Rainfall.—The aggregate exceeded the normal in all districts except the English Channel, but while the excess was large in Ireland, Scotland, and the north-west of England, it was generally slight elsewhere. At several stations in the southern half of England and at a few further north the fall was less than the normal. Over a large portion of Ireland there was at least twice the normal. At Kilkenny the percentage of the normal was 202, at Dublin 219, Belfast 245, and at Armagh 253. At Douglas, I. of Man, the rainfall was also very heavy, 237 per cent. of the normal, and in some parts of the north-west of England, North Wales, and Scotland the percentage was about 200. At Buxton it was only 75, Falmouth 59, and Guernsey 54. At 31 stations measuring the rainfall twice in 24 hours, the hourly rate of fall during the day was very slightly higher than that of the night. At a number of stations in England there was only 1 or 2 mm. of rain measured after the 14th. At Hull, Jersey, and Canterbury the weather was quite rainless after that date. At Kew the underground water level varied from 311 cm. above M.S.L. on the 1st to 261 cm. on the 31st.

Bright Sunshine.—The bright, anticyclonic spell was too brief to allow the sun to make good the accumulated deficiency due to the dull, unsettled periods except very locally in the south-east, and the total sunshine for the month was considerably less than the normal. Until the 13th the mean daily deficiency in some of the English districts was as much as 4 or 5 hours. For the month as a whole the mean daily loss over a large portion of the west and north exceeded an hour, and at a few stations in the south-west was about 2 hours. At Stornoway, Scilly, and Bath the percentage of the normal was only 70, Falmouth 73, Woolacombe 75, and York and Scarborough 76. The only places with more than usual were Eastbourne and Hastings, where the percentage was 102, and Westminster, where it was 110.

Sun pillars were observed at Oxford on the 20th, 22nd, 23rd, 24th, and 29th. At Carrick on Suir a vertical pillar of rainbow colours was observed about 11° to the North of the Sun from 7.15 to 7.45 p.m. on the 20th. A Mock Sun was seen at Kew on the 23rd. At Exmouth on the 20th a Meteor was observed travelling north to south at 16 h. At Princetown and Tavistock another Meteor was reported later on the same day. At Tavistock, "Meteor observed at 20·6 h. travelling north-west to south, leaving a trail of luminous, greenish smoke." At Princetown, "a very large, brilliant Meteor observed passing north to south at 20·15 h. Magnificent tail." An Auroral glow was witnessed at Paisley on the 26th and 28th.

N.B.—At 2 a.m. on May 21st, the numbering of the hours for general purposes in the United Kingdom, was changed in accordance with the Summer Time Act, 1916. Special caution is therefore required in regard to the times given in this Report, which are according to Greenwich or Dublin Mean Time, (see M.O. Circular No. 1).