

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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.

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Wet in the North and West, Warm and Dry in the South-East.

The weather of May was somewhat variable and for the most part it was cool and rainy, there being no really hot weather until after the 20th. Sleet was reported at some of the southern stations during the early days of the month, but milder conditions gradually prevailed, and after the 11th the thermometer seldom fell below the freezing point. Soon after the 20th a warm, thundery type of weather became general and conditions for about a week, especially over southern and eastern England, became very fine, sunny, and warm. On four consecutive days (22nd–25th), Yarmouth had more than 14 hours of sunshine per day, and maximum temperatures between 29.4 and 30.0 were common in many localities. Subsequently there was a marked increase in the amount of cloud, and under the influence of shallow depressions the character of the weather deteriorated. On the 26th a long valley of relatively low pressure was stretched across England and the Netherlands, and within this belt on this and the day following some violent thunder storms occurred. On the 25th there were storms in the south of England, and on the 26th they were again experienced in many districts, notably in the western suburbs of London, particularly at Barnes and Ealing, where over 50 mm. of rain fell. Isolated thunderstorms again took place on the 27th, on this occasion in the North, 20 mm. of rain falling in twenty minutes at Mosley Hall, near Whaley Bridge, and 29 mm. at Marchmont, in Berwickshire. A cyclonic type of weather was also maintained over the British Isles during the last four days of the month, and thunderstorms, which in many places were accompanied by very heavy falls of rain, were again experienced over a wide area. On the 29th a depression, which had originated over France, moved northward and occasioned very heavy rain in the North of England, more especially in Lancashire and Lincolnshire, in which counties there were floods which caused loss of life and serious damage to property. On the rainfall day of May 29th, ending at 9h. on the 30th, practically no rain fell to the South of a line drawn from Plymouth, through Reading, to Lowestoft. In the North no rain was observed over the whole of the centre and West of Scotland and in Ulster. A great area in which the rainfall exceeded 13 mm. nearly everywhere occupied England and Wales north of Aberystwyth, Birmingham, and Skegness, and extended northward to Edinburgh. The centres of very heavy rainfall appear to have been near Preston and in the middle of Lincolnshire. At Leyland, five miles south of Preston, out of a total of 82 mm. 15 mm. fell in twenty minutes, the latter a shower of intensity very rarely attained in the British Isles. The Lincolnshire rainfall was even more severe, and more than 50 mm. fell as far West as Lincoln. In Louth the fall amounted to only 36 mm., but at Elkington Hall, three miles to the west, 119 mm. were measured, of which 117 mm. fell in three hours. More than one storm occurred during the day, and the flood which swept away many houses in Louth, was associated with the very heavy rainfall at about 14 h. 30 m. which was general over the basin of the little river Lud. (Further particulars will be found in the Meteorological Magazine, June, 1920, pp 83-86.) At Benson during a thunderstorm on the 29th, the tower which carries the anemometer was struck by lightning and some damage was done to the lightning recorder. The night of the 29th was unusually warm, and at Kew Observatory the minimum was as high as 28.8, this warm night being followed by further thunderstorms in the South and East of England on the following day.

In Scotland the temperature was low at the beginning of the month, rather variable during the second and third weeks, and high during the fourth week. The mean for the whole month, although above the normal, was much below that for May, 1918 and 1919. At Rothesay it was the wettest May for at least 120 years; and at Aberdeen and Cargen a wetter May has been experienced during the last fifty years only in 1906. A gale was general on the 13th, with a notable sandstorm on the southern shores of the Moray Firth.

Air Pressure.—As shown by the map on page 59, the mean monthly distribution of air pressure was of a normal type, that is, the pressure was high in the south and low in the north. As is usual in such cases, the gradient was much steeper than that of a map of normals, pressure being 2.9 mb. above normal at Scilly, 4.3 mb. below at Stornoway. The monthly track chart shows that there was no instance of a primary depression passing directly across the British Isles. On the 1st a depression of considerable extent advanced north-eastwards from the Azores, and intensifying as it moved, brought overcast skies and rainy conditions to a large part of the British Isles, as much as 26 mm. of rain falling at Loches Point and 20 mm. at Donaghadee. This depression advanced along the western coasts of the

British Isles during the following day, and was accompanied by a south-west gale in western districts and an easterly gale in the North-east and East of Scotland. This gale was very severe in the Irish Sea and in the Firth of Clyde, and at Southport on the 3rd gusts of 32 metres per second were recorded; much damage was done to trees at Leyland (Lancs.) and in Dublin. From the 3rd until the 10th the weather of the British Isles was mainly dominated by anti-cyclonic systems which drifted eastwards across western Europe from the neighbourhood of the Azores, the air pressure at the same time being comparatively low in the Iceland-Faroe region. During this period secondaries were formed in the general westerly circulation between these two systems and caused unsettled weather over a large area, with heavy falls of rain on the 5th and 6th, as much as 46 mm. falling at Didsbury (near Manchester) on the former day, 36 mm. at Cahirciveen, and 25 mm. at Holyhead. Frost also occurred on some of the days, a screen-minimum of 27.2 occurring at Eskdalemuir on the 8th, and at Benson, Eskdalemuir, and South Farnborough on the 10th. On the 11th an extensive low pressure system spread northwards from Madeira and caused a rainy type of weather all over the British Isles during this and the next two days. On the 14th and 15th an anticyclone passed eastwards across England and was accompanied by fine to dull weather, local thunderstorms, and a moderate temperature. As this anticyclone receded eastwards depressions followed it from the Atlantic, and during the next few days the weather over the British Isles was dull and rainy, with south-westerly gales in many places and a temperature below the normal. An anticyclone was situated over the Bay of Biscay on the 21st and moved over northern France the following morning; the weather near this system was fine to fair, but a depression centred near Iceland caused unsettled weather in our northern and western districts. Anti-cyclonic conditions extended during the next three days and at many stations there was uninterrupted sunshine, with a temperature much above the normal.

Temperature.—The mean temperature of the month was above the normal in all districts, the excess ranging from 1.7 in England East to 0.1 in Ireland North. During the first eleven days of the month the atmospheric conditions were decidedly chilly, and there was frost both in the screen and in the open at many inland stations. On the 1st at Eskdalemuir a shade minimum of 26.7 was recorded, with 26.2 on the ground. Very commonly the hottest day was the 25th, when 30.2 was registered at Cambridge and at Eye (Peterborough).

Precipitation.—The monthly aggregate of rainfall varied from 125 mm. in Scotland West to 34 mm. in England East, the departures from the normal ranging from +51 mm. in the former district to -12 mm. in the latter. The total fall was more than twice the normal in parts of the south-west of Scotland, and also in the neighbourhood affected by the thunderstorms of the 29th in the north of England. In parts of the Home Counties the total was less than 25 mm., and in the neighbourhood of the Thames Estuary was less than half the normal. Expressed as a percentage of the normal, the general rainfall over England and Wales was 116; over Scotland, 168; over Ireland, 145; and over the British Isles as a whole, 142.

Sunshine.—The mean daily amount of sunshine was as much as 7.64 hr in England East, but only 4.65 hr in Ireland North and 4.66 hr in Scotland West. In England East there was an excess of an hour per day, but in Scotland West there was a daily deficiency of an hour and a half.

Flying Weather.—In spite of a good deal of unsettled weather the month as a whole was favourable for aviation; except for some coastal fog towards the end of the period the visibility was mainly good. In the south-eastern area there was no really unfavourable day. The month was only moderately favourable for airships, the wind being strong and gusty on several days, particularly during the first six. There were thunderstorms on three days at Howden, the airship base, and hail on two days.

Optical Phenomena.—Solar halos were seen on a few days, but lunar halos were rare.

Aurora was seen at Deerness on the 2nd; at Tenbury on the 12th, 13th and 17th; at Arbroath on the 4th; and at Aberdeen on the 13th.

