

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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A Warm Month with many Thunderstorms.

The great improvement in the weather over the British Isles and Western Europe generally, towards the close of April, was maintained during May without any very striking interruptions. The month was warm and fine, often brilliantly fine, a notable feature of the period being the absence of the severe and destructive frosts which have occurred with almost unbroken regularity at this season in the past. There was but one night of sharp frost, and it was experienced early in the month, before there had been time for vegetation to make much progress. Owing to the prolonged wintry weather, vegetation had been at a standstill until the end of April, but the end of May found the face of the country presenting its normal aspect. A Derbyshire observer noted "Cannot remember so rapid growth; at the end of the month all the trees in full leaf, except the oak"; Norfolk, "Vegetation very backward at beginning of month, but almost normal at the end"; Yorkshire, "Wonderful growing weather"; Middlesex, "Finest and warmest May for 33 years at least. Very favourable in gardens."

For three weeks from the opening of the month the general situation in our neighbourhood was of an anti-cyclonic type. The centre of the high pressure system was at times over these islands, more frequently between Iceland and Norway. At our home stations the barometer attained its highest level for the month during the night of the 5th-6th, with a reading of 1031 mb. at Stornoway. The only well-defined depressions which visited our area during this period of high pressure were offshoots from an extensive depression which occupied the Atlantic in the vicinity of the Azores. In the case of the first one marked A (map 2, p. 51), the centre did not approach nearer than the west of France, where it arrived during the night of the 5th, but it brought about a sufficient increase in the pressure gradient over our south-eastern districts to cause a strong to high North-Easterly wind on our own and the neighbouring Continental coasts, Dungeness reporting the force of a gale from 11 p.m. to 2 a.m., the sole instance of a gale at the telegraphic reporting stations throughout the whole month. With the arrival of depression B over the north of France on the 8th, the **Drought**, which had set in over an extensive area about April 17th, began to break up, though so slowly that it was May 17th before the rain had spread to all districts. The duration of the absolute drought ranged from 21 to 27 days at a large number of stations in England and Wales, and at some of the Irish ones. Depressions C, D and E followed very similar paths, coming up from the south-west to the Bay of Biscay, then bearing off to the north-westward near our south-western coasts. Depression C on passing outside the Kerry coast changed its course to the north-eastward for Scotland and Finland.

From the 22nd to the 26th a large area of low pressure was indicated well outside our western coasts and a high pressure system was situated over the western half of Europe, the pressure-gradient over British Isles being very small. Subsequently a shallow ill-defined depression moved irregularly across this country for three days and the month drew to its close with the approach of a large depression to the north-eastern Atlantic, between our western coasts and Iceland. These disturbances were of no great depth, the lowest barometer readings registered being about 997 mb. at the mouth of the Channel on the 18th, and on the coast of Mayo on the 31st.

Air Pressure.—The distribution of mean pressure for the month was of a very unusual character, being unlike that of any other May in a period of 30 years, the nearest approach, and that a distant one, being in 1890 and 1915. The results were influenced to a great extent by the persistency of the conditions during the first three weeks, and it will be seen from map 1, page 51, that pressure was highest towards Norway, and lowest outside our south-western coasts. The depression over the Atlantic covered a wide region, the mean pressure at the Azores was about the same as at our south-western stations, whereas it is normally about 5 mb. higher in May. If reference be made to map 1, page 39, it will be seen that the May pressure results were a complete reversal of those for April.

The May distribution favoured light winds with an Easterly component. There were remarkably few instances even of gusts attaining gale force, the highest gust velocities registered being 22 m/s. at Dover on the 5th, and at Dover, Pendennis and Scilly on the 6th, associated with the gale at Dungeness, noted above.

Temperature.—For a month marked by fairly stable pressure conditions temperature presented some singular variations—a mixture of cool and very warm weather. Round the 4th maxima above 294a occurred

in many localities, passing 296a at Killarney and Whitworth Park, Manchester. Between the 6th and 10th many maxima were below 283a, as low as 278a at Glasgow and Nairn. High readings were again common round the 13th, 299a in several places. Again came a decided drop, many values being below 283a about the 16th, 279½a at Ushaw, Co. Durham. Afterwards warmth was general, the highest readings being reached on the 26th, 27th and 28th, when 300a was recorded at New Malden, Wallington, and Woking in Surrey, and also at Eye, near Peterborough, and at Manchester. There was much greater uniformity in the mildness of the nights, the only sharp cold of any note occurring on the 7th when frost was felt over a wide area, a number of stations having shade temperatures below 269a, the lowest being 267a at Kingussie, and 264½a at Garforth, on the Yorkshire moors. On the mornings of the 26th and 27th numerous shade minima exceeded 286a. The results for the whole month show an excess of temperature in all districts, slight in the north and east of Scotland, but by more than 2a over the eastern half of England.

The contrast between the temperatures near the coast and inland is the most conspicuous feature of the map of mean temperatures.

Sea Temperature.—The coastal sea water was considerably warmer than during April, by as much as 4a in places, but it was everywhere colder than the air on shore, by as much as 4a off East Anglia. Sea fogs were extensively prevalent on the western coasts almost daily, dense in many localities. From about the middle of the month they were becoming more frequent along the southern and eastern coasts.

Precipitation and Thunderstorms.—The various shallow barometrical disturbances were favourable to electrical developments rather than to strong winds. Thunderstorms consequently were frequent—on about 20 days. From the 10th to the 14th, 19th to 21st, and 26th to 29th, they embraced extensive regions of England, and on the 26th many parts of Ireland were affected. But while the records are numerous, few of the storms are noted as characterised by unusual violence, those at Chopwell-wood (County Durham) on the 13th, at Oundle (Northants) and Warlingham (Surrey) on the 20th, and at Oundle and in Herefordshire on the 29th. There were some reports of casualties, but these were comparatively unimportant. Neither was the precipitation—rain and hail—as heavy as might have been anticipated, even in the severest of the storms, there being few records of as much as 25 mm. in a day. The largest measurements were—on the 12th, Newport (Mon.), 46 mm.; on the 14th, Scaleby, near Carlisle, 39 mm., causing floods; on the 26th, at Dunfanaghy (Donegal), 43 mm.; Belfast, 50 mm., and Lisburn 52 mm.; on the 27th, Rochford (Essex), 42 mm.; and on the 29th, 27 mm. in half-an-hour at Liphook (Hants), and 31 mm. in 50 minutes at Crieff, causing floods. At Liphook there was a tremendous fall of hail, which was swept by the rain into heaps over two feet deep in places, and remained even in the heat for three days. Snow fell in the north of Scotland between the 8th and 10th, and at Fort Augustus on the 8th the hills were covered with snow down to the edge of Loch Ness. The aggregate totals for the month were in excess of the normals in the western and southern districts, the percentages of the average ranging from 58 in Scotland North and 59 in England East to 129 in Ireland North, and 138 in Scotland West, and at individual stations from 20 at Yarmouth, 31 at Rounton, and 34 at Little Massingham, to 188 at Belfast, 190 at Holyhead, and 210 at Gwernnyfed Park.

There was very little difference between the rate of fall of rain during the day time and during the night time, the latter being slightly greater. As many as 31 stations registered their rainfall twice daily, but the results at individual stations varied greatly.

Bright Sunshine.—In nearly all districts the duration of insolation was less than usual, the loss amounting to about an hour daily in Scotland East, Ireland and the English Channel, and 1½ hour in Scotland West. Scotland East, however, exceeded the normal by 1½ hour per day.

Solar Halos were reported at a number of places on various dates; a **Sun Pillar** at Seskin on the 4th; **Parhelia** at Oxford on the 10th. **Visibility** was noted at times in places. A notable instance of visibility and of high refraction was reported from Portland Bill lower Lighthouse, the light at St. Catherine's, Isle of Wight, at a distance of 48 miles, being clearly visible from midnight till 3 a.m. during the night of the 13th-14th.

The heights of the two lights are 136 ft. and 134 ft. respectively. If placed at such heights on a globe without any atmosphere they would only be visible from each other at about 28 miles; with the atmosphere in its usual condition they would be in sight if placed 36 miles apart.

