

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, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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THIRTY-NINTH YEAR.
Vol. XXXI. (New Series)

No. VI.

JUNE, 1914.

[Price 6d.]

MOSTLY BRIGHT AND DRY.

The generally fine, dry weather was broken at times by thundery periods during which the accompanying rainfall was very heavy locally, but a considerable portion of the Kingdom experienced a continuation of the droughty condition of the two months preceding.

The mean pressure distribution differed greatly from the normal for June, and also from that for all other periods of the year. As will be seen on map 1 on page 63 the average June isobars (the dotted lines) run from south-west to north-east across Ireland and Scotland, while over England their course is from west to east. Last month, however, the barometer was highest along the west coast of Ireland and lowest in the north-east and east of Great Britain, and the isobaric lines ran in a general northerly to southerly direction—from north-west to south-east in Scotland, and from north to south, with a tendency to go south-west, in England. The mean height of the barometer was rather above the normal, and the mean gradient somewhat steeper. The highest pressure for the period occurred in the south of Ireland on the 25th, and the lowest at the Scilly Isles on the 10th, the respective values being 1033 and 999 millibars.

From the 1st to the 6th the general distribution of pressure over these Islands was **anticyclonic** of a North-Westerly type, the temperature moderate or rather low, and the weather mostly dry. A shallow depression which made a brief appearance on the 2nd caused a little local rain, and further rains accompanied the passage of slight pressure irregularities moving southward over the North Sea. On the 7th and onward for several days the general condition was **cyclonic**, the cause in the first instance being a well marked depression, track A on map 2, that moved over these Islands and France from the Icelandic region. The first general fall of rain for the month occurred with this system, and in its rear, on the 8th and 9th, thunderstorms were experienced at numerous stations. In many parts of England and Wales the quantity of rain was large. At Ridlington (Rutland) 1.12 in. fell on the 8th, and 1.08 in. on the 9th; at Oundle the aggregate for the two days was 2.08 in., and at Chopwellwood (Durham) as much as 2.04 in. fell on the 9th. Meltham and Ross-on-Wye had 1.42 in. on the 9th, Malvern 1.55 in., Bethesda, Abersychan, and Durham rather more than 1.7 in., West Witton 1.83 in., Ushaw 1.90 in., while stations with measurements exceeding an inch were very common. On the 8th, in the rear of the depression, the wind increased to a **gale from the Northward** in Scotland, Ireland, and on the north-west and south-west coasts of England, and continued in places during the following day. At Eskdalemuir the gusts attained a velocity of 25 m/s, at Quilty 23 m/s, Holyhead 22 m/s, and at Southport, South Shields, and Scilly 21 m/s. This gale, the only one experienced during the month, sprang up rather suddenly, the steepening of the barometric gradient being due to an increase of pressure in the rear of the disturbance.

By the morning of the 10th the centre of lowest pressure lay over the Scilly Isles, whence it travelled southward, and the distribution became **anticyclonic** in a band extending across the north of the United Kingdom. Shallow complex depressions were, however, prevalent in central Europe and France, and the chief outcome of these was the **thunderstorm** which broke over a large portion of southern England on the afternoon or evening of the 14th. The storm was one of great severity in several localities, various parts of the south and south-west of the Metropolis and the adjacent districts experiencing its most disastrous violence. The quantity of rain varied greatly. At Westminster there was only 0.16 in., while at Richmond Park 3.7 in. fell in 2½ hours—as much as half of it in ¼ hr. At Wimbledon the fall was 2.40 in.; at Wandsworth Common, where the lightning caused serious loss of life, there was 1.89 in., at New Malden 1.75 in., and at Isleworth 1.31 in. At Staines the downpour amounted to 3.47 in., and at Ashford, Middlesex, to 3.3 in. In the north of London there was little or no rain, and only 0.32 in. at Greenwich. On the same day thunderstorms yielded 1.83 in. at Westbourne (near Havant), and about 2 in. in South Somerset. At Westbourne, where 0.73 in. of rain and hail fell in ten minutes, there was a remarkable fall of temperature, the thermometer decreasing from 75° to 64° in five minutes. Thunderstorms, with heavy local rains, were again reported in many places on the 18th and 19th, and a serious railway accident at Carr Bridge, Inverness, was directly due to the unusually heavy rain. About this period of the month sea fogs were very prevalent on the coasts, causing several shipping casualties in the Channel on the 17th and 18th. Much of the fog was developed after the pressure distribution had become anticyclonic. After the 20th, when a **large depression** of moderate intensity, track E on the map, had encroached on these Islands and brought a decided current of air from the Southward, it dispersed. This depression gave further rain in all parts

of the Kingdom, while some places experienced thunderstorms either as it approached or when it lay directly over the country. The rain was not, as a rule, heavy, but at Aberdovey there was 1.04 in., and at Pembroke 1.32 in. on the 20th. Over a considerable portion of the Kingdom the fall was very slight. The pressure distribution continued cyclonic until the 25th, when the Azores high-pressure system extended an arm over these Islands, and from this date until the **end of the month** the type was **anticyclonic** except in the north, which was affected at times by depressions passing eastward over the Icelandic region.

Until the month was far advanced the pressure distribution was of such an unusual character that all parts of the country experienced a wind current from between North-West and North-East, and the temperature was generally below the normal. Maxima below 60° were common in various parts of the Kingdom and 70° was seldom touched even in the warmest districts. It was not until the 18th that the thermometer rose much above 70° except very locally, but on that date the maxima were 77° or 78° in some parts of England and Ireland, and subsequently, when the wind was either light and variable or from South or South-West, the temperature was generally above the average. Readings of 80° or a little higher were reported from different parts of the Kingdom between the 17th and 20th, the greatest heat, 88°, occurring at Balmoral. The mean temperature at that station for the week ending the 20th was 6.4 above the average. At some other Scottish stations and at a few in the north-west of England the excess was 6°, while over the Kingdom generally it was between 3° and 5°. Locally on the coast of Caithness, where there was much sea fog, the temperature was below the normal. During the cyclonic period after the 20th the temperature was only moderately high, rarely rising above 70° even in the south, while some of the nights were cold. At Wisley the minimum on the grass on the 24th was as low as 31°. With the anticyclonic conditions prevalent over the southern half of the Kingdom towards the end of the month the thermometer again rose to a high level. Readings above 75° were recorded over a large area in England, many places registering 80° for the first time during the month, and some 85° or higher. Over the southern half of England the 30th was the hottest day; in London the maximum was 89°. At Edgbaston the reading, 82.9°, was the highest June temperature during the past 27 years, although on June 16th, 1893, the maximum was only slightly lower.

As a whole temperature was nearly a degree above the normal except in the north of Ireland and the English Channel district, where it was a little below. The **temperature of the sea surface water** differed little from that of the air, but it was slightly below it on the north-east coast of Scotland and on the south-west coast of England. **Coastal fogs** were experienced at times after the 9th in the west, south-west, and east, and increased in area and intensity until about the 20th. From the 20th till the 27th the air was clear, but much fog developed on the west and south west coasts and on the north-east coast of Scotland with the increasing temperature of the 27th.

Rainfall was, with a few exceptions, again **below the normal**. The deficit was large generally, and strikingly so in some districts of Scotland and southern England, the aggregate fall being less than 0.5 in. At Perth there was no more than 0.37 in. At Portland Bill, where rain fell on only four days, the total was 0.28 in., at Ventnor 0.30 in., and at Southampton 0.37 in. At King's Somborne, Hampshire, there was only 0.26 in., and the total fall since April 11th has amounted to no more than 0.46 in. At Wilton, Ventnor and Dumfries the percentage of the average was as low as 16, at Crieff 17, and at Southampton 18. At Glasgow it was 19 per cent., at Southend-on-Sea 24 per cent., and at Roche's Point 25 per cent. Locally in the north-east and east of England the corresponding figure was high; 229 per cent. at Durham, 174 at North Shields, 158 at Alnwick Castle, 171 at Rounton, and 157 at Little Massingham. There was also a local wet patch in Flintshire, the percentage at Hawarden Bridge being 156.

Except in Scotland N., Ireland N., and the Channel Islands, **bright sunshine exceeded the normal**, the excess being very marked. Over a large tract, including some of East Anglia, all the Home Counties, and extending as far as South Devon and Tenby, the total number of hours was above 240, while along the stretch of coastline from Felixstowe to the Isle of Wight it was 270, and a similar aggregate was recorded at Cardiff. Very few places had more than a slight deficiency, the most marked instances being Stornoway, where the percentage of the normal was 83, Pembroke, where it was 88, and Woolacombe with 89 per cent. At Westminster the percentage was 150, at Marchmont and Hodsock 137, Strelley 136, and at Rothamsted 129.