

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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FORTY-FIFTH YEAR.
Vol. XXXVII. (New Series)

No. VI.

JUNE, 1920.

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

Many Thunderstorms, but few hot days.

Among the notable features of the weather of June were the frequent thunderstorms which occurred between the 10th and 20th and the almost entire absence of very hot days. Early in the month there was a spell of cold, dry weather, which set in on the 4th, and lasted until the 10th. During this period, with the wind mostly from the North, ground frosts occurred on several nights, and in some instances the temperature in the screen fell below the freezing point. In north Buckinghamshire allotment holders are reported to have lost this year's entire crops as a result of one night's frost. Between the 2nd and 5th the temperature fell rapidly, and at several stations a drop of as much as 11 a occurred, a shade minimum of 27.2 a being recorded at West Linton on the 5th, 27.4 a at Marlborough and Rhayader. On the 10th a secondary depression connected with a shallow "low" off the West of Ireland developed over the English Channel, and the spell of fine weather which had lasted since the beginning of the month came to an end.

Then followed a cyclonic type of weather which gave rise to thunderstorms and heavy showers of rain and hail in many parts of the Kingdom. Between the 11th and 18th many stations reported storms on five or six days, sometimes in succession, and on the 16th thunder was heard at 23 daily reporting stations. In some cases the thunderstorms were accompanied by heavy falls of rain, 37 mm. being registered at Kew Observatory on the 12th, when a very severe storm passed over London, during which many houses and a church steeple in Haggerston were struck by lightning. In Warwickshire during a severe storm two men were killed. The varied character of the weather during this day is illustrated by the snow which was reported from Carmarthenshire. Severe thunderstorms occurred at Benson about 13 h. 30 m. on both June 15th and 16th. On the 15th the thunder was continuous from 13 h. to 15 h. and of a very exceptional character from 13 h. 20 m. to 13 h. 30 m., when lightning within a mile or less distance occurred at about 30 second intervals. The precipitation almost entirely took the form of hail, and 11 mm. fell in 5½ minutes. The storm of the 16th was of a very similar character, though the lightning and thunder were not nearly so violent. Rain and hail fell, giving 10 mm. in 7 minutes, half of which fell in from one to two minutes. On the 17th during a thunderstorm at Reading 26 mm. fell in 45 minutes; and at York on the 18th there was a downpour of 14 mm. in 10 minutes, followed half an hour later by a fall of 20 mm. in 20 minutes, with hail measuring ¾ inch in diameter. During a thunderstorm at Blundellsands on the 12th 18 mm. of rain fell between 12 h. 50 m. and 13 h. 5 m. and 12 mm. between 14 h. and 14 h. 30 m., the total for the day being 39 mm. At Helensburgh during a thunderstorm on the 17th nine men were injured by the lightning and at least a dozen more were struck to the ground.

In Scotland during this thunderstorm period, owing to the influence of an anticyclone over the Icelandic-Faroe region, the weather was much finer than over England. At Deerness (Orkney) the sunshine recorded during the week which ended on the 19th was very remarkable, the total for the week being 112 hours, equal to 16 hours a day and 87% of the possible. During this week the mean range of temperature at Balmoral was unusually large and was as much as 17.5 a, the mean maximum being 29.4 a and the mean minimum 27.6.9 a. Mostly about this time the nights in Scotland were very cool and at Balmoral on the 14th, 15th and 16th the thermometer went down to 27.5 a. In some parts of Scotland the precipitation was scanty throughout the month, and at Aberdeen did not amount to half the normal for June. In this district sunshine records were good and the daily mean was more than 1½ hrs. in excess of the normal.

Air Pressure.—As shown by the map on page 73 the mean monthly distribution of air pressure was very abnormal. Over the North of Scotland the mean value was unusually high, and at Lerwick the mean value was 1016.6 mb. compared with 1014.2 at Malin Head. For the second month in succession there was no instance of a primary depression passing directly across the British Isles. During the opening days of the month the weather was dominated by an anticyclone which travelled North-Eastwards from the Azores and persisted until the 3rd. On the 4th a small secondary passed across the North of Ireland and the North of England and caused local rain. The influence of the anticyclone which spread to the Icelandic region from the Western Atlantic was felt during the next four or five days, a Northerly current of air which arose from it keeping the temperature low all over the Kingdom. On the 10th a secondary depression to a shallow low off the West of Ireland developed over the English Channel and the Bay of Biscay and was followed by a cyclonic type of weather, and from the 11th to the 19th thunderstorms and heavy showers of rain were experienced in many

parts of the Kingdom. On the 17th a belt of low pressure extended from Iceland across England and within it a sharp thunderstorm occurred, a line squall with thunder, lightning, hail, and rain passing over Richmond at 12 h. 30 m. During the 20th a large secondary passed from the West across the British Isles and brought continuous rain to eastern and southern England. 21 mm falling at Lympne and Portland Bill. Subsequently the conditions were anticyclonic accompanied by fine sunny weather which continued until the 25th, when a depression in the Icelandic region caused a deterioration in the weather over the British Isles and dull, rainy weather became general. On the 28th a depression was shown on the weather map to the North-west with a Southward V-shaped extension which crossed from the North of Ireland to Northumberland, its passage being accompanied by general falls of rain. During the closing days of the month the weather over North-west Europe was affected by a large depression over the Eastern Atlantic, which spread in a Northerly and Easterly direction, the accompanying weather over the United Kingdom being very generally unsettled and showery.

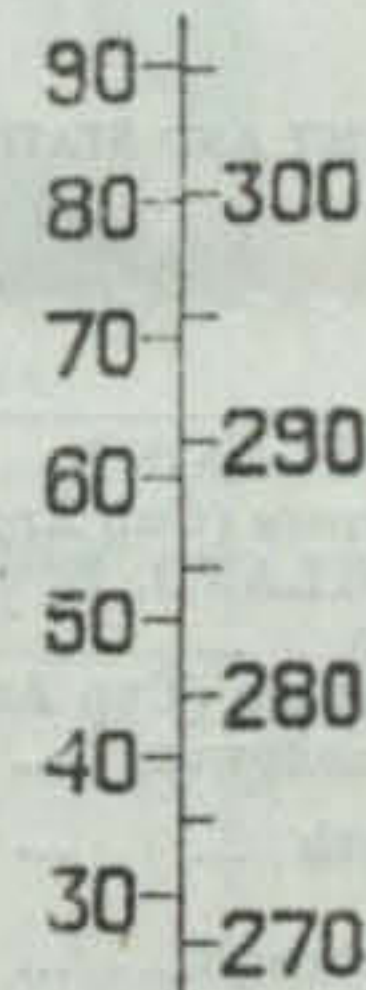
Temperature.—The mean temperature of the month was above the normal in all Districts, the excess ranging from 0.1 a in Scotland East and 0.2 in Ireland South to 0.8 a in Scotland North and in England North-east and East. Very commonly the warmest day of the month was the 17th, when a few stations in the Midlands recorded maximum temperatures of 30.0 a and above, among the highest readings being 30.1 a at Raunds (Northants) and 30.0 a at Eye (Peterborough). In Ireland at the majority of the stations the highest temperatures recorded during the month were below 29.4 a. In Scotland the range of temperature was large, from 27.0 a at Braemar on the 5th to 30.0 a at Nairn on the 18th.

Precipitation.—The monthly aggregates of rainfall in the various Districts ranged from 71 mm. in Scotland West to 29 mm. in Scotland East, the departures from the normal ranging from -29 mm. in Scotland North to +12 mm. in the Midlands. Over the British Isles as a whole for the first time in 1920 the total monthly rainfall was generally deficient, and exceeded the normal only in small isolated areas, particularly in the South of England and in Wales. The general rainfall expressed as a percentage of the normal was: England and Wales 99; Scotland 65; Ireland 78; and the British Isles as a whole 82. Falls of more than 25 mm. in a day were not very numerous, among the largest being 52 mm. at Senny, near Brecon, on the 17th; 44 mm. at Kilmarnock on the 27th; and 42 mm. at Hoylake, Cheshire, on the 12th.

Sunshine.—The anticyclonic weather which was experienced over the Northern and Eastern parts of Scotland and the cyclonic conditions prevalent over the North of Ireland were reflected in the month's sunshine figures. Thus in Scotland North the mean daily amount of sunshine was as much as 8.07 hrs., but only 5.50 hrs. in Ireland North, the former district having an excess of 2.90 hrs. per day. In Scotland East also the sunshine was abundant and amounted to 7.59 hrs. per day, a mean daily excess of 1.56 hrs. At Inverness the daily mean was as much as 8.47 hrs. At Deerness (Orkney) the aggregate (233 hrs.) was the largest in June for the 40 years of the record. The Campbell-Stokes trace for the 14th gave 17.1 hrs. of sunshine as compared with the previous best of 16.8. At Baltasound (Shetland) on two consecutive days, 14th and 15th, the amounts recorded were 17.4 and 17.5 hrs. respectively. At Fortrose the total was 253 hrs., an aggregate only once surpassed during the past nine years.

Flying Weather.—The weather of the month was generally favourable for aviation. Visibility was mainly good and at times very good, though there was some fog on the North-West and South coasts towards the end of the month. In the South-East Area the only really unfavourable day was the 20th, when rain and low clouds were persistent. There were also low clouds and some rain on the 30th.

Optical Phenomena.—Solar and lunar halos were not numerous reported, but a parhelion was seen at Eye (Peterborough) on the 16th; and an exceptionally fine solar halo, with arcs of contact, was seen at Baltasound (Shetland) on the 17th. Sun pillars were observed at Eskdalemuir on the 7th, at Aberdeen on the 8th, and at Seskin (Carrick on Suir) on the 10th. A moon pillar was seen at Eskdalemuir on the 8th.



Temperature Scales.