

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS.

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APRIL, 1923: COLD AND RATHER WET.

General.—The warmest weather of the month occurred during the first fortnight, in particular on the 4th and 12th, when the temperature rose to 60°F., or slightly higher, in the midland and southern counties. On neither occasion, however, were the records as high as those obtained on March 27th. Between the warm periods of the 4th and the 12th the Scandinavian anticyclone spread westwards towards Iceland and easterly winds prevailed over the whole of the British Isles. These winds were strongest on the 8th and 9th over the east coast of England and were accompanied by slight showers of snow in London and many other places. A cool "easterly" type of weather prevailed from the middle of the month until about the 25th when there was a change to a warmer "south-westerly" type. Gales occurred on the 25th in parts of the English Channel and in the north. During the cold period day readings of the thermometer seldom exceeded 55°F. while at night the temperature repeatedly fell below the freezing point on the grass. Rainfall was above normal in parts of the country but below normal in other regions. Thunder was heard on several occasions but was most general on the 11th and 12th. Sunshine was generally rather poor and in some instances the duration amounted to only about 75 per cent. of the average.

The general character of the month is illustrated by the following remarks taken from observers' notes and returns:—Alfriston (Sussex).—A very cold month, but snow fell only on the 9th. Severe frost on this date damaged fruit blossom considerably; 34mm. of rain fell on the 25th, this being the heaviest day's rainfall during the last 15 months. Bromyard (Herefordshire).—Plum blossom was injured by frosts on the 23rd, 24th, 27th and 28th. Copdock (Suffolk).—A very dry April with rainfall less than half the 20 year's average. Other elements were very close to their normal values. Southport.—The month was rather dull and wet. It was an even more strikingly "easterly" month than March had been and the sequence of the two was very exceptional. Torquay.—Typically April in character, showers of rain alternating with sunny periods. The duration of sunshine was much below the average and the month was one of the cloudiest Aprils during the past 23 years. Nevertheless April, 1923, was a considerably better month than April, 1922. Totland Bay (Isle of Wight).—During 37 years of observation there have never previously been more than 18 rain-days in April; this year the number was 20. Only once during this period, in 1907, has the April rainfall been greater. Cargen (Kirkeudbright).—Vegetation although less forward than March would lead one to expect was well up to the average. Five degrees of frost on the 24th, however, did considerable damage. Cranford (Aberdeenshire).—Cold with very little sunshine. Glenelg Manse (Inverness-shire).—Fine dry sunny weather during first three weeks. Last week wet and cold.

Pressure and Winds.—The mean pressure of the month was below normal generally. The departure of monthly means of pressure at fixed hours from the normal varied from +1.6mb at Lerwick to -7.5mb. at St. Ann's Head (Pembroke). The isopleths of mean pressure trended roughly north-west and south-east, Cornwall and the south of Ireland having the lowest mean pressure and the Shetland Isles the highest.

Three primary depressions traversed the British Isles, the first on the 13th—16th (Track I), the second on the 25th and 26th (Track S) and the third on the 30th (Track U). In addition three secondary depressions also crossed some part of the country. The lowest pressures occurred on the 13th—15th and on the 25th—26th.

The strongest winds generally were those of the 25th and 26th, on which dates several stations reported gales. The strongest recorded gust of the month was one of 67 m.p.h. at Valencia on the 9th, while gusts of 56 m.p.h. were experienced at Eskdalemuir on the 25th and at Lerwick on the 26th. Several other gusts exceeding 50 m.p.h. were recorded at various stations.

Temperature.—The mean temperature of Districts 1 to 10 was 45°F. The mean temperatures of England east, England south-east and the Channel Isles and Scilly were less than one degree above normal and those of all other Districts were below normal. The greatest deficiency of mean temperature was experienced in Scotland east, the mean of 41°F. being 1.8°F. below the normal. At a few Scottish stations the month was colder than January. In eastern and central Scotland the mean daily range of temperature at representative stations was the lowest recorded in April for at least 60 years, and the mean maximum has been lower only in 1879 and 1917; the mean minimum temperature differed little from the normal. In almost every part of the British Isles each week of the month was colder, relatively

to the normal, than the preceding one, and in the week 22nd—28th the deficiencies of mean temperature from the normal for the week ranged from 2.2°F. in England east and the Channel Isles and Scilly to 4.7°F. in Scotland north.

The extreme temperatures for the month were:—(England and Wales) 69°F. at Eye and Norwich on the 12th, 24°F. at South Farnborough on the 10th and at four stations on the 24th; (Scotland) 61°F. at Ruthwell on the 11th, 17°F. at Leadhills on the 9th; (Ireland) 63°F. at several stations on the 30th, 25°F. at Markree Castle on the 24th. Ground frosts were numerous, especially between the 22nd and 28th; the lowest readings of thermometers exposed over grass being 12°F. at Blackpool and 13°F. at Renfrew on the 24th and 14°F. at Rhayader on the 23rd.

Precipitation.—The general precipitation in the British Isles expressed as a percentage of the average was 128; the values for the several countries were:—England and Wales 126, Scotland 126, Ireland 139.

The precipitation of the month was above the average in all Districts with the exception of Scotland north, England north-east and England east. Two large areas had precipitation below normal, the first comprising north-western and part of central Scotland, and the second comprising the east coast of England with part of Cumberland and the whole of East Anglia. Eastern Suffolk was the driest part of the British Isles, with less than 50% of normal rainfall; the wettest region was southern Hampshire and part of the Sussex coast where over 200% of the normal fall was registered.

Except in Scotland north the week April 8th—14th was the wettest period of the month. The largest recorded rainfalls were 46mm. at Burnley on the 12th, 38mm. at Tongue (Sutherland) on the 30th and 33mm. at Eskdalemuir on the 12th and Valencia Observatory on the 17th. The period from the 15th to the 22nd was rainless at many Scottish stations. During a severe thunderstorm at Alfriston (Sussex) on the 11th 14mm. of rain fell in about a quarter of an hour. Slight falls of snow occurred at many English stations on one or two days, mainly on the 9th and 10th. Snow occurred on several days in Scotland, notably on the 9th and 10th and during the period 20th—25th. In the early morning of the 25th it lay to a depth of several inches over a large area, but quickly melted during the day.

Thunderstorms occurred very generally in England and Wales and in southern Scotland on the 12th; they were also widely experienced in Scotland on the 28th. Local thunderstorms were not infrequent. A magnificent display of lightning was observed in Sussex and parts of Kent during the evening and night of the 11th in connection with a thunderstorm in the Brighton neighbourhood. Some hail fell during the month mainly near its latter end but no severe storms were reported.

Sunshine.—With the exception of Scotland north the duration of sunshine was appreciably below normal in all Districts. The largest mean daily deficiency (-1.47 hr.) occurred in Scotland east. Aberdeen had a total of only 90 hours. The Channel Isles and Scilly had 36 per cent. of the possible duration and England east 35 per cent., while Scotland east has only 24 per cent. The first three weeks of the month constituted the dull period; during the last week sunshine was above the normal in the majority of Districts and several daily records of 13hrs. and over were obtained. On the 4th there was a very steep sunshine gradient in southern England, Weymouth having 1.6hrs., Bournemouth 3.4hrs., Portsmouth 6.8hrs., Brighton 8.9hrs. and Hastings, Tunbridge Wells, Margate, etc., about 11hrs. This gradient was associated with a large V-shaped depression, the trough of which extended from the Hebrides to Ushant at 7h. on the 4th and which was slowly moving in an easterly direction and gradually filling up.

Fog.—Fog occurred locally but was much less prevalent than during March. It was experienced on the east coast of Scotland about the 12th and 15th.

Miscellaneous Phenomena.—Solar and lunar halos were of frequent occurrence. Sun pillars were seen at Oxford on the 2nd and 9th and a parhelion on the 28th. At Renfrew a solar halo was observed nearly all the afternoon of the 27th and in the early evening the circumzenithal arc was seen. At Skegness a moon pillar was observed on the evening of the 3rd. No observations of auroræ have been received. The zodiacal light was seen at Clacton on the 14th and 30th, at Oxford on the 8th, 13th, 14th, and 16th, at Redruth on the 7th, at Ross-on-Wye on the 8th, 13th and 14th, at Tenbury on the 14th and at Wadhurst (near Tunbridge Wells) on the 4th, 7th, 8th, 14th, 15th, 19th and 20th.