

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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June, 1933.—Mainly sunny and warm with frequent thunderstorms in Great Britain: dull on the whole in Ireland

A depression on the Atlantic and shallow secondaries over the Bay of Biscay caused rather unsettled weather in the west and north during the first few days of the month. Meanwhile an anticyclone over Germany and Scandinavia maintained fine, warm weather in the eastern districts of England. By the 4th the fine weather had spread throughout the country under the influence of an extension of the continental high pressure system: in many parts of England and locally in Scotland temperatures of 85° F. or over were registered between the 4th and 7th. A trough of low pressure off the western seaboard moved north-east on the 7th and caused some rain and local thunder in the west and north. In the rear of this trough an anticyclone off our south-west coasts spread north-east and subsequently a spell of cooler northerly winds was experienced with pressure continuing high westward of Ireland. Temperature fell rapidly around the 9th and 10th and weather became rather unsettled with local thunderstorms. On the 12th and 13th a depression over north Germany moved west and caused appreciable rain in east and south-east England.

A change occurred around the 15th when a depression over Iceland began to move south-south-east. Strong, squally winds and local gales prevailed between the 16th and 18th and the disturbance eventually filled up over eastern England but a complex area of low pressure remained over the country until the 25th. The period 14th–26th was notable for the thunderstorms which occurred daily in England. The approach of an anticyclone from the Atlantic caused a spell of northerly or north-westerly winds and mainly fair weather after the 26th.

Pressure and Wind.—Pressure was everywhere below the normal for the month, the deficiency at 7h. varying from 2.1 mb. at Valentia Observatory to 5.1 mb. at Spurn Head. Northerly or north-westerly winds were rather frequent, particularly from the 8th to 12th and from the 25th to 29th. Strong, squally winds prevailed from the 16th to 18th, with gales at times in the west and north. Among the highest velocities recorded in gusts were 65 m.p.h. at Butt of Lewis on the 16th, 57 m.p.h. at Scilly Isles on the 18th and 56 m.p.h. at Bidston on the 17th.

Temperature.—Mean temperature for the month was above the normal in all districts, particularly in Scotland, E. and Scotland N., where the excess amounted to 3.5° F. and 3.3° F. respectively. In some places it was notably high: for example, at Aberdeen the 0–24 hr. mean temperature 56.2° F. was the highest for June since observations commenced in the north wall screen in 1869; at Southport so warm a June has only once previously (in 1896) been experienced since records began in 1871 and at Totland Bay it was the warmest June since 1889. The mean sea temperature at Eastbourne was the highest since 1896.

The warm southerly or south-easterly current which formed part of the circulation of the continental anticyclone was the initial cause of the unusual warmth experienced in the British Isles during the first week but the long periods of bright sunshine recorded in many places contributed to the excessive heat. The warmest days occurred between the 4th and 7th and temperatures of 85° F. or above were registered in many parts of England and locally in Scotland, while 88° F. was reached at Rickmansworth and 89° F. at Camden Square (London) on the 5th. Other warm days occurred round the 15th and 25th and 80° F. was recorded locally in the west of Scotland on the latter day. The coldest days were experienced on the whole around the 11th and 18th, day temperature failing to pass 52° F. at Tynemouth on the 11th and 51° F. at Buxton on the 18th. Among the coldest nights were the 12th, 18th and 22nd: on the 12th temperature at Dalwhinnie fell to 28° F. in the screen and to 22° F. on the grass.

The extremes for the month were:—(England and Wales) 89° F. at Camden Square (London) on the 5th, 32° F. at Rickmansworth on the 12th; (Scotland) 86° F. at Gordon Castle on the 4th and at Forres on the 7th, 28° F. at Dalwhinnie on the 12th; (Ireland) 78° F. at Malin Head on the 4th and at Hazelhatch on the 4th and 7th, 41° F. at Aldergrove and Hillsborough on the 12th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881–1915 was 90, the values for the constituent countries being England and Wales 92, Scotland 85 and Ireland 94. Over the greater part of Scotland rainfall totals were below the normal, the wettest areas being confined to the north-west and south-west districts. The south-west of Ireland was also dry, while rainfall in England was variable owing to the numerous thunderstorms.

One of the most distinguishing features of the weather of the month was the unusual frequency of thunderstorms in England and Scotland, thunder occurring somewhere in the British Isles on no fewer than 20 days. From the 14th to the 26th storms were reported daily in England and the observer at Copdock said he recorded thunderstorms on seven consecutive days, from the 16th to the 22nd, which is unique during his 33 years experience. At Kew Observatory the number of days of thunder, seven, is one more than the previous June record for the period 1881–1932.

Among the more severe thunder storms were those on the 8th, from the 15th to 22nd inclusive, and on the 26th. In Manchester much structural damage was caused by lightning on the 8th and 22 mm. of rain was recorded in 2 hours at Whitworth Park. On the 15th, 60 mm. of rain fell in 1 hour at Ovington, Hants and on the 16th 13 mm. of rain and hail fell in less than half an hour at Ipswich. Widespread storms occurred on the 17th and 18th with heavy rain while hail stones at Thetford on the 17th measured $\frac{1}{2}$ inch in diameter. On the 19th two men were killed by lightning in Epping Forest and one at Woolwich and on the 20th a cyclist was drowned at Bootle as a result of floods caused by heavy rain. On the 20th, also, 20 mm. of rain fell in 30 minutes at Bidston, Liverpool. Storms were again widespread on the 22nd, when two men were killed by lightning in the London area and one at Gloucester. On the same day torrential rain fell in east Devon and in Kent; 60 mm. fell in less than 1 hour at Poltimore, Devon and 43 mm. fell in 1 hour 5 minutes at Dartford, Kent. Fairly widespread thunderstorms occurred in the Midlands and south-east England on the 26th: at Bromyard the hail stones were $\frac{1}{2}$ inch in diameter and at Winchester 10 mm. of rain fell in four minutes.

Snow was recorded at Chopwellwood on the 11th and at Giggleswick and Bellingham on the 17th.

Among the heavier falls of rain in 24 hours were 47 mm. at Dunoon and 37 mm. at Bolton on the 17th, 47 mm. at Whaley Bridge, Cheshire, 41 mm. at Buxton and 39 mm. at Macclesfield and Balerno on the 18th, 82 mm. at Poltimore, Devon, on the 22nd and 40 mm. at Crickhowell, Dan-y-Park, Brecon on the 24th.

Sunshine.—Sunshine aggregates were above the normal except in Ireland, the percentage of the normal ranging from 130 in England, N.E. to 81 in Ireland, S. A daily average of 10.05 hours was registered at Jersey, and a little more than 9 hours at some coastal stations in south-east England. In parts of western and central Ireland, however, the average was less than 5 hours a day.

The first eight days were exceptionally sunny in the eastern districts of England: at Croydon 112.2 hours were recorded from the 1st to the 8th, a daily average of 14 hours; from the 4th to the 8th Cambridge had 73.2 hours and Norwich 74.9 hours, the latter being an average of 15 hours a day. The 12th was sunny over a wide area, a few places recording 16 hours or slightly more, while Lerwick had 17 hours on the 24th.

Fog.—Fog occurred rather frequently particularly from the 1st–9th, 13th–16th, and 20th–25th. During the first 8 days fog was reported mainly at coastal stations in the west and south-west. Thick fog occurred locally in the Shetlands and north-east Scotland between the 13th and 15th, and early on the 25th. It was thick in the Firth of Forth on the 1st and 14th.

Miscellaneous Phenomena.—Solar haloes were noted at Oxford on 16 days, the one on the 17th having very bright parhelia.