

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE. To be purchased directly from H.M. STATIONERY OFFICE at the following addresses: ADASTRAL HOUSE, KINGSWAY, LONDON, W.C.2; 120, GEORGE STREET, EDINBURGH; YORK STREET, MANCHESTER; 1, ST. ANDREW'S CRESCENT, CARDIFF; 15, DONEGALL SQUARE WEST, BELFAST; or through any Bookseller.

VOL. 46. No. 9.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

Price 9d. net, Post free, 10d.
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SEPTEMBER, 1929. Unusually warm and dry.

Anticyclonic conditions prevailed generally throughout the greater part of September, 1929. The weather was mainly fine and warm, particularly during the first half of the month. There was a notable scarcity of rainfall, except in the extreme north-west of Scotland, which was practically the only area to be affected by Atlantic depressions, whose tracks lay well to the north-west of the British Isles, and in this area precipitation exceeded twice the normal locally.

At the beginning of the month a depression centred between the Faeroes and Scotland was moving north-eastwards and slight rain or showers were experienced in Scotland and Ireland. On the 2nd an anticyclone had established itself over England and Ireland and with it was associated warm brilliant weather; 12.3 hours' sunshine was recorded at Felixstowe and Cattewater, and 12.2 hours at Leafield on the 2nd. Associated with a shallow depression off the south-west coasts, thunderstorms occurred locally on the 3rd. From the 5th to the 12th anticyclonic conditions extended to most districts and precipitation was confined to the extreme north-west. The days were very warm and sunny, temperature in the eastern and midland districts of England rising above 80° F. on several days; 89° F. was reached in London on the 4th and 8th, and 90° F. at Newport (I. of Wight) on the 5th.

Abundant sunshine was recorded in several districts on the 4th, 7th and 8th. Associated with a shallow trough of low pressure, thunderstorms occurred on the 12th and slight to moderate amounts of precipitation were recorded in northern districts and in the south-west of England. Further slight precipitation occurred in Scotland and north-west England on the 14th. A deep depression centred near Iceland caused fairly heavy falls in Scotland during the night of the 17th to 18th and secondaries associated with this depression were responsible for local thunderstorms and scattered showers; 18 mm. fell at Shoeburyness during a thunderstorm on the 18th. At Jersey thunder and lightning were experienced for the most part of four days, from the 15th to the 18th, and 71 mm. fell during the 24 hours commencing at 17h. on the 16th. Cooler and cloudier weather prevailed from the 19th to the 21st. Heavy rain occurred in Scotland on the 19th (42 mm. at Achnashellach) and strong winds and gales were general on the 20th and 21st. In most English districts precipitation amounted to only a trace. From the 25th to the 28th fine warm weather was again experienced in most districts, temperature rising above 70° F. in many parts of England. On the 29th a trough of low pressure moved eastwards over England and was accompanied by general rain on the 29th and 30th, the first rain to be experienced during the month in places in the Midlands and the south-east of England.

Pressure and Winds.—Conditions during the month were mainly anticyclonic, the tracks of depressions keeping so far to the north-west that almost the only districts affected by them were those in the extreme north-west. In these parts monthly means of atmospheric pressure were below the normal, but elsewhere they exceeded the normal. Winds were mostly south-westerly to westerly. Strong winds occurred on the 17th, 20th, 21st, 28th and 29th, and in exposed places the wind attained gale force. Gusts of 50 mi/hr. and over were recorded in many places on the 20th or 21st, the highest velocity in a gust, 69 mi/hr., being recorded at Liverpool (Bidston) on the 20th.

Temperature.—September, 1929, was unusually warm, particularly during the first half of the month when temperatures in the neighbourhood of 80° F. were frequently recorded in parts of the southern Midlands and south-east of England. Even towards the end of the month 70° F. was frequently exceeded. The hottest days occurred generally during the period 4th to the 9th and on the 12th. In London maximum temperatures of 80° F. and over were recorded at Greenwich and Camden Square on the 4th, 5th, 7th, 8th, 9th and 12th, the temperature rising to 89° F. on the 4th and 8th. The highest temperature reached during the hot spell was 90° F. at Newport (I. of Wight). Minima were, as a rule, above the normal, and during the first few days of the month did not fall below 60° F. in several southern districts. Ground frosts occurred locally about the 16th and on the 25th and 26th. In all districts the mean temperature for the month was above the normal, the departures exceeding 5° F. in most districts in the east and south-east of England. In some places the present month was the warmest September experienced in over 50 years. Thus, the mean maximum temperature and the mean temperature for September, 1929, was the highest since at least 1871 at Richmond (Kew Observatory), Oxford, Dungeness and Falmouth, and since at least 1872 at Yarmouth.

At Southampton and Douglas the mean temperature was the highest recorded in any September since at least 1871 and 1878 respectively. The extremes of temperature for the month were:—(England and Wales): 90° F. at Newport (I. of W.) on the 5th and 30° F. at Newton Rigg on the 14th, and at Marlborough on the 26th; (Scotland) 77° F. at Gordon Castle on the 11th, and 29° F. at West Linton on the 14th; (Ireland) 80° F. at Newcastle (Wicklow), and Kilkenny on the 8th and 35° F. at Kilkenny on the 17th.

Precipitation.—An outstanding feature of the weather of the month was the pronounced deficiency of rainfall. The general precipitation of the British Isles, expressed as a percentage of the normal for the period 1881–1915, was 47; the values for the constituent countries were:—England and Wales, 37; Scotland, 73; Ireland, 38. During the last 60 years there have been only four drier Septembers; of these, 1907 and 1910 were appreciably drier, and 1894 and 1895 slightly drier.

In all districts of England and Wales monthly totals were below the normal, the drought being most intense in the Midlands and in the south-east, where some places had no measurable rain until the 28th, 29th or 30th, when rain became general over the whole country. At Richmond (Kew Observatory) the rainfall for the month, 4 mm., was the smallest September total since at least 1866 and with the dry spell during the latter part of August the drought had lasted there for the exceptionally long period of 37 days. At Ross-on-Wye the month was the driest September since 1865.

A notable exception to the general deficiency of rainfall occurred in the northern and north-western districts of Scotland, where there was a particularly large excess. In parts of Sutherlandshire the rainfall exceeded twice the normal, and at Melvich was as much as 290 per cent. of the normal. Deerness had slightly more than twice the normal and Stornoway more than one-and-a-half times the normal. During the month there was only one day without rain at Loch Carron (Ross-shire) and Portree, and only two at Kyleakin and Loch More (Achfary). Over the greater part of Scotland, however, there was a deficiency and in the border counties less than 10 per cent. of the month's normal rainfall was recorded. The smallness of the rainfall total in the south and east may be gleaned from the smallness of the following monthly totals:—Drygrange, 3 mm.; Swinton House, Belhaven, Galashiels, Gorebridge, Marchmont, and Fairniee, 5 mm.; Newbattle and Inchkeith, 6 mm.

In all parts of Ireland rainfall totals were considerably below the normal, the deficiency being most pronounced in the neighbourhood of Dublin, where locally less than 20 per cent. of the normal was recorded. In Dublin City rain in substantial amount fell only on the 28th and 29th and the combined precipitation on those two days represented nearly 73 per cent. of the total for the month.

Thunderstorms occurred locally on the 1st, 3rd, 12th, 17th, 18th, 20th, and 29th. The number of thunderstorms reported in any one district did not as a rule exceed three. The observer at Goodleigh, Barnstaple, reported the occurrence there of a very severe thunderstorm on the 3rd: at Brayford, which was also affected by the storm, it is stated that one man was killed and three injured by the lightning. On the 17th the storms were very severe in the Channel Islands and accompanied by heavy rain, Jersey reporting 71 mm. during the 24 hours ended at 17h. on the 17th.

Sunshine.—Except in the extreme north-west of Scotland, sunshine aggregates were considerably above the normal. Representative aggregates for Districts, expressed as a percentage of the normal for the period 1881–1915, varied from 80 per cent. in Scotland N. to 139 per cent. in the Midland Counties, and 134 per cent. in England S.E. Daily records of between 11 and 12 hours bright sunshine were obtained frequently in many districts during the first half of the month, while during the last week abundant sunshine was recorded in the south and east of England. Amongst the largest daily records were 12.4 hours at Hastings and 12.1 hours at Falmouth on the 8th, and 12.0 hr. at Brighton on the 2nd, and at Jersey on the 4th.

Fog.—Favoured by the persistence of anticyclonic conditions, mist occurred frequently during the month and on occasions developed in intensity to fog, generally during the period 3rd to 5th and about the 17th.

Miscellaneous Phenomena.—At Oxford a solar halo with parhelion was observed on the 3rd, 28th and 29th, and a moon pillar on the 16th. Aurora was observed in northern districts of Scotland on the 5th, 9th, 10th, 12th, 13th, 14th, 15th, 22nd and 27th.