

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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SEPTEMBER 1930. Wet. Dull in Great Britain.

September, 1930, was chiefly remarkable for its excessive and persistent rainfall in all districts except the north-west of England and west of Scotland and for the general and pronounced deficiency of sunshine in Great Britain. Monthly mean temperatures exceeded the normal in most places owing to the prevalence of mild nights.

Anticyclonic conditions prevailed during the first three days and warm, sunny weather was general, maximum temperatures of 70° F. and over and daily sunshine totals of between 11 and 12 hours being recorded in several districts during this period; 72° F. was recorded on the 3rd as far north as Dumfries and Kilmarnock. On the 4th rain fell in the west and north but in the south and east of England the fine weather continued, 10 hours or more sunshine being recorded in several places (e.g. London, Manston, Falmouth). By the 5th the anticyclonic spell was broken and a period of unsettled weather ensued which continued with little interruption until the end of the month. Heavy rain with thunderstorms in places occurred widely on the 6th or during the night of the 6th to 7th (47 mm. at Haverfordwest on the 6th). On the 10th heavy rain accompanied severe thunderstorms in the south-east of London and in Glasgow. The temperature during this period was high and in parts of south-east England 75° F. and over was recorded on the 5th. There were many bright periods, between 10 and 11 hours' sunshine being recorded in some places on the 7th, 8th and 11th.

On the 13th widespread and in places heavy rain was associated with a depression which moved rapidly east-north-east across England and Wales. In the rear of this depression a ridge of high pressure brought welcome sunshine to most places on the 15th; York had 11.5 hours bright sunshine, Aspatria and Jersey 11.3 hours and Clacton, Rothesay and Rhayader 11.1 hours. Heavy rain with gales in the north-west during the night of the 17th to 18th were associated with an intense secondary which on the morning of the 18th was centred over south-east Scotland; 33 mm. fell at Renfrew and 32 mm. at Donaghadee whilst the wind in a gust attained 72 m.p.h. at Liverpool on the early morning of the 18th. A new depression which followed track E gave rise to heavy rain in the south-west during the night of the 18th to 19th (28 mm. at Cahirciveen, 23 mm. at Roches Point, 21 mm. at Falmouth and 24 mm. at Plymouth) and more general rain on the 19th and 20th. Strong winds or gales occurred in several places notably in the south-west, the wind attaining a speed in a gust of 80 m.p.h. at Pendennis on the evening of the 19th and 72 m.p.h. at St. Mary's, Scilly, on the early morning of the 20th.

A change occurred on the 25th when a belt of high pressure extended from Greenland to the Bay of Biscay. In the rear of a depression off north-east Scotland cold northerly winds spread southwards and on the 26th day temperatures only slightly exceeded 50° F. in places. Strong northerly winds and local gales prevailed for several days. During the last three days of the month a large anticyclone off north-west Scotland maintained cloudy weather with bright periods in the north-west and west generally but in eastern and south-eastern England the weather continued dull with heavy rain at times and thunderstorms during the night of the 27th to 28th; at Manston 59 mm. were recorded during the three days 26th to 28th, or more than half the total amount for the month.

Pressure and Winds.—Cyclonic conditions prevailed during the greater part of the month and in all districts monthly means of pressure were below the normal. Strong winds reaching gale force locally in exposed positions occurred widely during the period 18th to 20th and 23rd to 27th. Severe gales occurred in the north-west in the rear of a depression which was centred over the south-east of Scotland on the 18th, the wind attaining a momentary velocity of 72 m.p.h. at Liverpool and 71 m.p.h. at Southport on the early morning of the 18th. High velocities were again recorded, especially in the south-west, in association with an intense depression which crossed the British Isles on the 19th to 20th (track E); 80 m.p.h. was recorded at Pendennis on the 19th and 72 m.p.h. at Scilly on the 20th.

Temperature.—The first five days were generally warm, the maximum temperature exceeding 70° F. on most days during this period in the inland parts of England and reaching 81° F. in London (Camden Square) on the 5th. Thereafter day maxima were mostly about or below the normal, a notable exception being the 23rd when 70° F. and over was recorded in several parts of Great Britain (75° at Gordon Castle, 73° F. at Sealand, 71° F. at Cranwell, Gorleston and Cardington). The 26th was generally the coldest day when under the influence of cool northerly winds the temperature in many places only slightly exceeded 50° F. A notable feature was the prevalence of mild nights; the mean minimum temperature was 3.2° F. above the normal at Richmond (Kew Observatory) and 2.8° F. above the normal at Ross-on-Wye. At the former station the minimum 62° F. on the 23rd was a record for the last ten days of September. At Ross-on-Wye the month was the first September since 1881 during which the screen temperature failed to fall below 43° F. The coldest nights occurred generally on the 2nd, about

the 9th and on the 16th and 26th. At West Linton and Balmoral on the mornings of the 9th and 16th respectively the temperature fell to 30° F. whilst at Braemar 29° F. was recorded on the 16th. In most districts the mean temperature for the month exceeded the normal.

The extreme temperatures were for the month:—England and Wales 81° F. at Camden Square, Tottenham and Wisley on the 5th, and 32° F. at Castleton on the 16th. Scotland, 71° F. at Linlithgow and Gordon Castle on the 23rd and 29° F. at Braemar on the 16th. Ireland, 75° F. at Hazelhatch on the 3rd and 34° F. at Markree Castle on the 1st.

Precipitation.—For the third consecutive month the general precipitation exceeded the normal over England and Wales and Ireland. Over the British Isles as a whole, the general precipitation expressed as a percentage of the normal for the period 1881–1915, was 165: the values for the constituent countries were:—England and Wales 179, Scotland 144, Ireland 154. In several districts rain was reported daily after the 3rd, the heaviest falls occurring generally on the 6th, 13th, 17th to 20th and about the 23rd and in the east and south-east of England on the 26th and 27th.

There was a decided excess of rainfall over almost the whole of England and Wales, a notable exception, however, being the north-west where a deficiency was recorded; at Aspatria, the month's total rainfall amounted to only about three quarters of the normal. Outside this area monthly totals exceeded one and a half times the normal and more than twice the normal in the Midland and eastern districts. Associated with thundery conditions in the east of England on the 27th to 28th, 78 mm. rain was measured at Campsea Ashe (near Saxmundham, East Suffolk) during the 24 hours commencing 18h. on the 27th; extensive floods occurred in the neighbourhood and in many places roads became impassable. Other heavy falls were 69 mm. at Princetown and Douglas and 53 mm. at Dean Prior on the 17th, 61 mm. at Telegraph Hill (London, S.E.) in association with a severe local thunderstorm on the 10th, 47 mm. at Haverfordwest on the 6th and 40 mm. at Cantref on the 19th. At Princetown the rainfall during the three days 17th to 19th amounted to 133 mm. or 54 per cent. of the total for the month. At Copdock and Gorleston the month was the wettest September on record. At Strelley (Notts) there have been only three wetter Septembers in 50 years and at Halstead (Essex) only two wetter Septembers in 38 years.

Over the greater portion of eastern and southern Scotland the rainfall was well above the normal, but in the north-west and west there was a slight deficiency. The wettest period of the month was from 17th to 19th and on or around the 23rd when, associated with a deep depression from the Atlantic, a severe rainstorm swept over Scotland. The most noteworthy falls within this period were 57 mm. at Forest Lodge, Dalry, 56 mm. at Carsphairn, 54 mm. at Pintry, 57 mm. at Milnathort and 53 mm. at Pinmore, all of which falls occurred on 17th. In certain western districts there were further heavy falls on 23rd and 24th.

In the north-west of Ireland there was a moderate deficiency of rainfall but elsewhere there was an excess, especially in the east where more than twice the normal rainfall was recorded. In Dublin the month was the wettest September on record.

Thunderstorms occurred locally on several days during the first half of the month, on the 19th in Scotland and on the 27th to 28th in the south-east of England. Serious flooding in the Glasgow neighbourhood accompanied a severe thunderstorm on the 10th. A severe thunderstorm accompanied by hail occurred in the Norwich district in the early morning of the 7th but precipitation was not remarkable.

Sunshine.—A prominent feature of the weather of the month was the general deficiency of sunshine in Great Britain, only a few places on the Channel Coast west of Selsey Bill reporting an excess. In the south and west of Ireland sunshine aggregates exceeded the normal. Representative totals for districts expressed as a percentage of the normal ranged from 106 per cent. in Ireland N. to 68 per cent. in Scotland N. and E. At Edinburgh the month was the most sunless September since 1913.

From 10 to 12 hours or more sunshine were recorded widely during the first three days and in the south on the 4th (12.6 hr. at Hastings, Southport and Armagh on the 2nd). Good records were obtained in several places on the 7th, 8th, 10th, 11th, 15th, 18th, 21st and 24th. Amongst the largest amounts recorded were 11.6 hr. at Scilly on the 7th, 11.3 hr. at Cahirciveen on the 11th, 11.5 hr. at York on the 15th, 10.5 hr. at Lympne on the 18th, and 10.3 hr. at Scilly on the 24th.

Fog.—Fog occurred locally in the early morning during the first few days, between the 10th and 12th, and about the 22nd.

Miscellaneous Phenomena.—Aurora was observed in Scotland on the 1st, 3rd, 18th, 21st, 24th and 26th, the display of the 18th being particularly brilliant and visible as far south as Renfrew. Solar halos were observed at Oxford on several days. The observer at Ross-on-Wye reports having seen a waterspout on the 10th.