

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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SEPTEMBER, 1927: VERY WET.

General.—Apart from a few fine warm days at the beginning of the month, the weather during September was unsettled, extremely wet and rather cold.

During the first few days of the month a belt of high pressure extended over the British Isles; mainly dry, warm weather prevailed and in most districts temperature rose above 70°F. From the 5th to the 10th, unsettled weather associated with low pressure systems and accompanied by frequent rain and high winds, reaching gale force locally on the 8th and 9th, was experienced widely. Heavy falls of rain occurred in several districts during this period and over 1.5 in. fell in parts of Scotland and north-east England between the mornings of the 6th and 7th. Thunderstorms developed locally in southern England on the 10th.

The passage of a wedge of high pressure across the British Isles resulted in a temporary improvement on the 11th and 12th. Heavy and persistent rain in southern and eastern England from the 13th to the 15th was associated with a complex system of depressions covering Ireland and England (*see under* Precipitation). In many districts in Scotland and Ireland good sunshine records were obtained on the 14th and 15th. From the 16th to 19th the rainfall was smaller and occurred chiefly at night, the 17th and 18th being fine, warm days with over 10 hours sunshine in many parts except in the extreme south on the 18th. Further heavy rain again occurred from the 20th to the 24th notably in northern districts while, associated with a secondary depression which developed off our south-western coasts and deepened rapidly as it passed to the north sea, gales occurred at exposed places on the 23rd. After the 24th, unsettled conditions continued but there were many bright periods. Rainfall amounts were moderate except on the 28th and 29th when heavy rain and high winds, reaching gale force locally in the south on the 29th, were associated with a secondary trough to a very deep depression centered near Iceland.

The general character of the month is illustrated by the following notes taken from observers' notes:—Southport—A dull and wet month, though by no means unprecedentedly so, but daily range extremely small owing to a rarely equalled excess of westerly winds. West Kirby—The wettest September since 1918. Much flooded ground. Huddersfield (Oakes)—A cool and very wet month. Halstead—A rather cold month with an exceptionally wet period from the 9th to the 23rd. The total rainfall for the month has been exceeded only once in September during the past 35 years. Berkhamsted—The month was the wettest September since 1918. It was also rather cold, without a spell of warm, fine weather. Malvern—The month was noteworthy for lack of sunshine, excess of rainfall and humidity above the average. Eastbourne—The total sunshine duration for the month is the second lowest total for September in 40 years, the lowest September total on record being 114.9 hours in 1905. The rainfall has been exceeded only twice in September during the last 40 years, viz., 5.92 in. in 1896 and 6.18 in. in 1918. Newport (I. of W.)—A remarkably wet month. Teignmouth—The dullest September since 1913. The last eight days formed about the coldest period ever experienced in September since at least 1902. Redruth—The wettest September since 1918. Cork—A dull, cold month with light winds principally between N.W. and S.W. Rainfall in excess of average and rather persistent, maintaining a wet ground throughout the month.

Pressure and Winds.—The mean pressure was below the normal at all stations. The general trend of the isobars was from west to east, the prevailing winds being westerly. High winds occurred frequently from the 6th until the end of the month. Gales occurred in exposed places on the 8th, 9th, 23rd, 24th and 29th. A gust of 70 m.p.h. was recorded at Dunfanaghy (Donegal) during the gale on the night of September 8th–9th. During the gale which affected the south-west of England on the 29th, the wind in a gust attained a velocity of 66 m.p.h. at Pendennis and 65 m.p.h. at Scilly (St. Mary's).

Temperature.—The mean temperature of Districts 1–10 was 53.9°F. and was 1.1°F. below the normal. In all Districts the mean temperature was below the normal, the greatest deficit from the normal, 2.1°F. occurring in Scotland E. (mean temperature 50.2°F.) and the smallest deficit, 0.3°F. in England E. (mean temperature 55.9°F.). During the first few days of the month temperature was above the normal, the highest readings of the month occurring generally during this period but after the 6th it was moderate or below the normal, the lowest readings in the screen occurring from the 15th to the 20th in Scotland and widely on the 27th and 28th.

The extreme temperatures for the month were:—(England and Wales) 76°F. at several stations in England E. and S.E. on the 2nd, 29°F. at St. Albans, Bromyard and Marlborough on the 27th; (Scotland) 75°F. at Ruthwell on the 6th and 30°F. at West Linton on the 16th; (Ireland) 73°F. at Killarney on the 5th, and 34°F. at

Kilkenny on the 23rd, at Birr Castle on the 27th and at Newtownbarry on the 28th.

Ground frost occurred on a few occasions in most districts, the maximum number reported being nine at Boghall and Thorntonhall. A grass minimum temperature of 25°F. was recorded at Renfrew on the morning of the 12th.

Precipitation.—The outstanding feature of the weather of September 1927 was its extreme wetness, monthly totals exceeding the normal everywhere. The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881–1915 was 209; the values for the constituent counties were: England and Wales 233; Scotland 200; Ireland 159. Although monthly totals greatly exceeded the normal, September 1927 was not unprecedentedly wet. Over the British Isles as a whole, September 1918 was wetter with a general precipitation amounting to 242 per cent. of the normal. The general precipitation over England and Wales in September 1918 amounted to as much as 286 per cent. of the normal. September 1924 was wetter over Ireland, the general precipitation in that month amounting to 216 per cent. of the normal. Over Scotland in general the month was the wettest September since at least 1881.

In England and Wales monthly totals ranged from one and a half times the normal to about three times the normal and in some places, *e.g.*, Brighton, Oxford, and Norwich exceeded three times the normal. Southern and eastern England experienced a period of recurring heavy rains from September 13th to 15th. The largest daily totals occurred between the mornings of September 14th and 15th and in most places were well above an inch. Amongst the largest measurements were 63mm. at Brighton, 61mm. at Portsmouth, 59mm. at Grayshott and 58mm. at Long Sutton. In many places, *e.g.*, Norwich, Yarmouth, Marlborough, Brighton, Southsea, Bognor and Lowestoft, the total rainfall for the three days September 13th, 14th and 15th was well in excess of the normal for the month.

Heavy rain in the north of England around the 22nd was responsible for extensive flooding, causing considerable damage to crops and property and seriously affecting all agricultural work. The corn crop in particular suffered severely.

Heavy rain fell in Scotland from the 6th until about the 10th, particularly in the north-western and northern districts (*e.g.*, 42mm. at Inchkeith, 46mm. at Kirkealdy, and 71mm. at Fairniee on the 6th and 31mm. at Fortrose and 27mm. at Stornoway on the 8th). Exceptionally heavy falls occurred over widespread areas in the east on the 22nd and in the west on the 28th. Amongst the largest measurements were 83mm. at Stonehaven, 78mm. at Boghall and Abroath, and 72mm. at Montrose on the 22nd and 62mm. at Greenock on the 28th. At Edinburgh (Blackford Hill) where the total for the month was 201mm. (or more than four times the normal), September was the wettest month on record since August 1877 and the wettest September since 1785.

In Ireland, except for a small coastal strip in Wicklow and Wexford where the rainfall was slightly below the normal, monthly totals generally exceeded one and a half times the normal and in a few places amounted to slightly more than twice the normal.

Thunderstorms occurred on several days. The thunderstorm which visited south and south-east Scotland on the morning of the 7th was the worst in severity experienced for many years—it was accompanied by torrential rain which caused extensive flooding, particularly in the Lothians and border counties.

Snow fell on the Cairngorms on the 17th; Deerness and Llandudno had each one day on which snow or sleet fell.

Sunshine.—A notable feature of the weather during September was the scantiness of the sunshine aggregates for the month. Except at one or two stations in Scotland and southern Ireland sunshine aggregates were below the normal everywhere. The Channel Isles experienced the greatest deficiency, the mean daily duration of sunshine, 4.10 hr. being 2.01 hr. below the normal. The mean daily deficiency was least in Ireland S. amounting to 0.22 hr. (mean daily duration of sunshine 4.23 hr.). Good sunshine records were obtained in various parts of the country on the 2nd, 7th, 14th, 15th, 17th, 18th, 24th, 27th and 28th. Amongst the largest measurements were 12.0 hr. at Torquay and 11.7 hr. at Bude and Paignton on the 7th, 12.1 hr. at Tirree on the 14th, 11.2 hr. at Berwick-on-Tweed on the 17th, 11.1 hr. at Rams-gate on the 24th and 11.2 hr. at Jersey on the 27th.

Fog.—Fog occurred locally on various days during the month.

Miscellaneous Phenomena.—Halos of 22°F. were observed at many stations on various dates. Aurora was observed at Baltasound, Shetland, on the 9th and 29th and an active display at Lerwick on the 29th, at Deerness, Orkney, on the 8th, and 30th, at Nairn on the 10th and at Aberdeen on the 25th, 29th and 30th.