

SUMMARY of the OBSERVATIONS made at the STATIONS included in the DAILY and WEEKLY WEATHER REPORTS for the CALENDAR MONTH.

SEPTEMBER 1901.

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General Summary.—The weather of September was for the most part cloudy and changeable, with frequent heavy falls of rain in the western parts of the kingdom. Thunderstorms occurred in the north and east of England on the 10th and 11th, and again on the 23rd. A smart shock of earthquake was experienced over the northern and central parts of Scotland early on the morning of the 18th. Pressure was below the average in most districts; temperature was above the normal; the winds were rather variable over England, but mainly Southerly in Ireland and Scotland; rainfall was very deficient in all but the western districts; bright sunshine was in excess of the average in the north, but was less than the normal elsewhere.

Pressure.—*Mean at 8 a.m.* ranged from 29.90 ins. and upwards over all the more eastern and central parts of England to 29.75 ins. and less in the west of Ireland, the gradient being therefore favourable for winds from the Southward instead of the Westward and South-westward, as is common in September. In the north-east of Scotland the values were slightly above the average,* but in all other parts of the kingdom they were below it, the deficit being greatest (0.16 in. to 0.22 in.) on our extreme west and south-west coasts. *Highest* readings were recorded on the 2nd and 3rd, when the barometer rose to 30.2 ins. and upwards in Scotland and the north of England, and to 30.1 ins. and upwards on all but our south-west coasts. *Lowest* readings occurred on the 21st or 22nd, when the barometer fell below 29.1 ins. in the south-west of Ireland, and below 29.5 ins. in all other parts of the kingdom. *Range* was moderate in the extreme west and south-west, slight elsewhere.

Depressions were rather numerous, especially in the latter half of the month, but were mostly of little intensity. The centres of the larger disturbances travelled as a rule in paths lying well to the westward and northward of our islands, but on the 17th the nucleus of a well-marked system passed north-eastwards directly across Scotland, while on the 22nd and 23rd a depression which had appeared in the first case off our extreme south-west coasts moved south-eastwards to the Bay of Biscay, where it quickly dispersed. Between the 14th and 16th a depression, which appears to have been originally developed over Central Europe, travelled north-westwards and northwards over Germany and Denmark to the Skager Rack, where the system filled up.

Anticyclones.—Four such systems were observed. The first spread over our islands from the north-westward at the close of August, and in the course of a day or two extended over nearly the whole of North-western and Northern Europe. After the 6th it moved eastwards and ceased to affect the weather in the western countries, the system remaining, however, over Northern Europe for some considerable time. The second extended from the Bay of Biscay over the western parts of our islands on the 11th and 12th, but soon passed away over the Atlantic. The third moved steadily across France from the westward on the 18th and 19th, its borders extending on the former date over the greater part of England. The fourth appeared over the Bay of Biscay on the 26th, and, increasing greatly in size, moved eastwards and north-eastwards, and became united with another system lying over the northern and central parts of the Continent. At the close of the month the combined area covered practically the whole of Europe.

Winds varied considerably in direction over England, but were mainly from some Southerly point (South-east to South-west) in Ireland and Scotland. Scarcely any gales were experienced on our east coasts, but in the west they were rather frequent, the number of days affected being as large as 7 or 8 in several places. The gales reported were, however, of no great severity.

Temperature.—*Mean at sea level* ranged from 61° at Jersey, and 60° or more at several of the other English Channel stations to 55° or less over the north-west of Ireland and the north-east of Scotland, and to a little below 53° in the Shetlands. The general distribution over our islands, though somewhat irregular, agreed fairly with the normal, but the actual values were in all cases above the average,* the excess being greatest in the north; at Lairg and Stornoway it amounted to nearly 4°. *Highest* readings were recorded at very irregular times in Scotland, but mostly between the 8th and 10th in Ireland and the west of England, and on the 29th over the eastern and central parts of England. On one or other of those dates the thermometer rose to 70° and upwards in most districts, the highest readings reported being 79° at Colly Weston and 78° in London. *Lowest* readings also occurred on various dates—mainly on the 1st or 2nd at the northern stations, but on the 15th or 16th in most other districts. At several places in the northern and central districts the sheltered thermometer fell below 35°, the lowest readings of all being 31° at Lairg and Newton Reigny, and 32° at Markree Castle. *Vapour Tension* ranged from 0.45 in. at Scilly, and 0.40 in. or more on most parts of the English and Irish coasts to between 0.32 in. and 0.34 in. over western and central Scotland. *Relative Humidity* ranged between 85 and 90 per cent. in most places, and amounted to 91 per cent. at Donaghadee; at Jersey, however, it was only 79 per cent., and at Stornoway only 78 per cent.

Rainfall was considerably less than the average* over nearly the whole of Great Britain, but was largely in excess in Ireland, and appreciably in excess in the south-west of England, and at a few stations in the southern parts of Scotland. The largest aggregates reported were 8.1 ins. at Valencia, 7.7 ins. at Laudale and 7.4 ins. at Roche's Point; the smallest being 0.7 in. at Wick and Scarborough, and 0.8 in. at Spurn Head, Yarmouth and Birmingham. The number of days with rain was small in the eastern, central and southern parts of England, but larger in other parts of Great Britain; in Ireland it was mostly in excess of the average. Falls exceeding an inch in 24 hours were rather common in Ireland and the west of Scotland, the largest of all being 1.8 in. at Valencia on the 7th. On the 16th heavy falls were also experienced in the south-western parts of Great Britain, 1.5 in. being registered at Plymouth and 1.3 in. at Shaftesbury.

Bright Sunshine was in excess of the average* at many places in the northern parts of Great Britain, but was deficient elsewhere. The percentage of the possible duration ranged from 49 at Felixstowe and between 40 and 44 on many parts of the English and Welsh coasts to 25 or less at several of the Irish stations, and at Glasgow and Sheffield, and to only 21 at Armagh.

* The averages employed are—*Pressure and Temperature* for the 30 years 1871–1900; *Rainfall* for the 35 years 1866–1900; and *Bright Sunshine* for the 20 years 1881–1900. (The averages will be published shortly as an appendix to the "Weekly Weather Report.")