

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

SEPTEMBER 1891.

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General Summary.—The weather of September, although somewhat changeable, was, upon the whole, fair and warm, the temperatures registered between the 10th and 13th being higher than those observed at any time during the three preceding months. Pressure was below the average in all but the extreme southern districts; temperature was everywhere in excess of the normal; the prevailing winds were Westerly or South-westerly; and rainfall was less than the average excepting in the northern parts of Great Britain. Bright sunshine was more abundant than usual. Thunderstorms, however, were somewhat frequent over Great Britain.

Pressure.—*Mean for the Month at 8 a.m.* varied from between 30·00 ins. and 30·08 ins. over the south of England and the Channel to very little above 29·65 ins. in the Shetlands and Hebrides, the distribution being favourable for winds from the Westward and South-westward. In the south of England the values were slightly above the average,* but in all other parts of the kingdom there was a deficit, and as this was greatest in the north, the mean gradient was unusually steep for the time of year. The difference between the mean readings in the far north and those in the extreme south was in fact twice as great as that shown by the average values for September. *Highest* readings occurred as a rule on the 10th or 11th when the barometer rose to between 30·1 ins. and 30·2 ins. in most districts; at our extreme southern and south-western stations, however, slightly higher readings were observed on the 15th or 16th. *Lowest* readings were recorded on the 1st, when the mercury fell to between 28·5 ins. and 29·0 ins. in Scotland and to below 29·5 ins. in all other parts of the kingdom. *Range* was small in the south, but rather large in the north.

Depressions.—The tracks of the large depressions which approached Europe lay as a rule to the northward of our islands, but shallow secondary disturbances occasionally appeared further south. The only clearly marked system which passed over our islands was formed near the mouth of the channel on the evening of the 19th. After advancing across England to our north-east coasts the system entirely altered its course, the centre travelling southwards across the east and south-east of England to the north-east of France where it ultimately dispersed.

Anticyclones.—These lay as a rule well to the southward of our islands. Between the 8th and 10th an anticyclone which had passed over central Europe spread westwards until it embraced the greater part of the United Kingdom, but on the 11th and 12th the system again receded over the Continent.

Winds.—The prevailing winds were South-westerly, but in the extreme north there was a considerable admixture of breezes from the Westward. Gales were rather frequent in the extreme west and north-west; at Stornoway and Valencia Island there were 8, and at Mullaghmore 10. At the Channel stations, however, there were not more than 3 or 4.

Temperature.—*Mean at sea level* ranged from 62° at Jersey and from 60° or more over the Channel and south-east of England to 53° or less in the Shetlands and Hebrides, the distribution over our islands being irregular, though fairly normal for the time of year. The values were in excess of the average* in all parts of the kingdom, the difference from the mean being greatest (two and a half to three and a half degrees) at stations situated in the north of Ireland and the northern and central parts of England. *Highest* readings were observed between the 10th and 13th when the thermometer rose to a higher level than at any time in the three preceding months; over the inland parts of England and the east of Scotland the thermometer exceeded 80°, the highest values of all being 86° at Loughborough and 85° at Stamford. *Lowest* readings were recorded on varying dates; towards the close of the month slight frost was registered in some parts of Scotland, but in other districts the thermometer did not fall much below 40°. *Range* was large, amounting to 40° or more in many places; at Llandovery it was as much as 49°, at Stamford 48°, and at Loughborough 47°. *Vapour Tension* ranged from 0·36 in. or less in the east of Scotland to 0·44 in. or more in the extreme south of England. *Relative Humidity* was below 80 per cent. in the east of Scotland and also in the Channel Islands, but amounted to between 90 and 92 per cent. in the Shetlands and Hebrides, as well as in some portions of the extreme south of England.

Rainfall amounted to less than an inch in the east of England and to less than an inch and a half over the greater part of our midland and southern counties. In the western and northern portions of the kingdom, however, the amounts were much larger, the heaviest of all being 12·9 ins. at Fort William and 12·3 ins. at Glencarron. The values were in excess of the average* over the greater part of Scotland and also in the extreme north of England, but elsewhere a deficit was shown, the amounts over our eastern, midland, and southern counties being in many cases less than half the normal. The large excess which occurred place in the north of England and the east and south of Scotland was due to the heavy and continuous rainfall which occurred during the progress of the depression of the 19th–22nd (shown in Map 3, Pl. IX.); between the 19th and 21st as much as 4·1 ins. fell at Marchmont, 3·6 ins. at Aberdeen, and 3·0 ins. at Douglas (Isle of Man). The number of rainy days was large in the extreme north and north-west, as many as 26 being reported at Stornoway, Fort William, and Glenlee, and 27 at Lairg. Over the eastern and central parts of England the number varied between 8 and 15.

Bright Sunshine was in excess of the average,* especially over Ireland and the eastern and central parts of England. The per-centage of the possible amount of duration was as high as 51 at Geldeston, 50 at Jersey, 48 at Guernsey, and 46 at Hastings. In the north of Scotland, however, there was less than 30 per cent., the lowest per-centage of all being 19 at Fort Augustus.

* The averages employed are—*Pressure* and *Temperature* for the 20 years, 1871–90; *Rainfall* for the 25 years, 1866–90; *Bright Sunshine* for the 10 years, 1881–90.