

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

SEPTEMBER 1890.

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General Summary.—The month of September was for the most part fine, warm, and dry. Pressure and temperature were everywhere in excess of the average, the winds were chiefly South-westerly, and rainfall was considerably less than the normal, excepting in the extreme north-western parts of the kingdom. Bright sunshine was abundant, especially in the south. Thunderstorms occurred in many parts of Great Britain between the 17th and 23rd, and heavy rain fell in the west of Scotland and the north-west of England at the close of the period.

Pressure.—Mean for the month at 8 a.m. ranged from 30·15 ins. and upwards over the Channel, the south and south-east of England to a little below 29·90 ins. in the Shetlands, the values being everywhere above the average.* The excess was greatest (0·2 in. and upwards) in the south and east of England, and least (about 0·12 in.) on our extreme north and north-west coasts, the result being that the mean gradient, which was favourable for South-westerly rather than for Westerly winds, was considerably steeper than is usual at this season of the year. *Highest* readings were recorded very generally on the 6th or 7th, when the barometer rose to between 30·3 ins. and 30·5 ins. in all parts of the kingdom. *Lowest* were observed during the passage of the deep depression of the 20th–21st, when the mercury fell below 29·0 ins. in some parts of Ireland, and below 29·5 ins. in many parts of Great Britain. *Range* was somewhat large for the time of year in the west, but moderate in the east.

Depressions.—In the course of the month several large depressions travelled along to the westward and northward of our Islands, some in the definite tracks laid down on Map 2, Plate IX., and others in the directions shown by the generalized arrows marked A and B. In only one case did the centre of any disturbance advance over our Islands, and in that instance the path of the system lay over our extreme western and northern coasts.

Anticyclones.—Two such systems were observed. The first, a very persistent one, prevailed almost continuously from the 1st to the 14th, and embraced the greater part of western Europe. The second appeared over Spain on the 23rd, and subsequently spread northwards to France and the southern parts of the United Kingdom. After the 28th, however, the system moved away to southern Europe and the Mediterranean.

Wind was mainly South-westerly, but considerable local variations were shown. At several of our stations there was a fairly large proportion of winds from the South-eastward, while at Scilly and Jersey there were breezes from every point of the compass. Gales were rare, excepting in the extreme north-west, where they were somewhat numerous: at Mullaghmore there were five, while at Stornoway there were as many as nine.

Temperature.—*Mean at Sea Level* varied from 61° and upwards in the Channel Islands and over several parts of the southern and midland counties of England to a little below 54° in the Shetlands. The general distribution over England and Ireland was of an irregular and abnormal character, for although the mean values were in excess of the average* in all parts of our Islands, the amount of this excess varied greatly in different localities. The largest difference seems to have occurred over the central parts of all three kingdoms, where it amounted to from 3° to 4°; in other localities the excess was rarely more than 2°. *Highest* values were observed as a rule between the 6th and 8th, when the thermometer exceeded 75 in most parts of Great Britain. *Lowest* occurred pretty generally on the 1st, excepting in Ireland and the north of Scotland, where they were registered on irregular dates later in the month. Ground frosts occurred over the inland parts of England, but in only one instance (at Hillington on the 1st) did the sheltered thermometer fall to 32°. *Range* was somewhat large at the inland stations, the greatest amount being 50° at Llandovery, 46° at Hillington, and 45° at Loughborough. *Vapour Tension* ranged from a little below 0·38 in. in the Shetlands and east of Scotland to between 0·44 in. and 0·46 in. on the south and south-west coasts of our Islands. *Relative Humidity* was below 85 per cent. in the east of Scotland and south-east of England, but was as high as 91 per cent. at Sumburgh Head, 92 at Scilly, and 93 at Stornoway, Donaghadee, and Pembroke.

Rainfall was exceedingly slight over the eastern and central parts of England, where the aggregate amount was in many cases considerably less than an inch; at Cambridge there was only 0·18 in. and at Spurn Head 0·47 in. In the western and northern parts of the kingdom, however, the amounts were far larger, as much as 8·8 ins. being reported at Glencarron, 8·5 ins. at Laudale, 6·9 ins. at Fort William, 6·4 ins. at Belmullet, and 6·3 ins. at Hawes Junction. Owing mainly to a heavy fall which occurred on the 30th, the aggregate amount in the west of Scotland, the north-west of England, and the extreme north of Ireland was in excess of the average,* but in all other localities there is a considerable deficit, the amounts of over central and eastern England being less than one-third of the normal.

Bright Sunshine—The amount of bright sunshine was large, except over the extreme western and northern parts of the kingdom. At Southampton the per-centage of the possible amount of duration reached 50 and at Jersey 51, while at Geldeston and Hastings it is as high as 53. At Fort Augustus and Armagh, however, the per-centage value was only 26, at Glasgow 25, and at Valencia Island 22.

* The averages employed are—*Pressure* and *Temperature* for 20 years, 1861–80; *Rainfall* for 20 years, 1866–85.