

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

**DECEMBER 1889.**

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**General Summary.**—The month of December was cloudy, changeable, and unsettled, but no gale of any general severity was experienced. In the eastern and southern parts of England the weather was in fact exceptionally quiet. Pressure was above the average in all places. Temperature was in excess of the normal over Scotland, but below it over the greater part of England. Rainfall was less than the average in all but the extreme western and northern districts. The amount of bright sunshine was generally small.

**Pressure.**—*Mean for the month at 8 a.m.* varied from a little below 29·8 ins. in the Shetlands and Hebrides to a little above 30·2 ins. over the greater part of the English Channel. The general distribution was of a fairly normal character, but the values were everywhere in excess of the average, the difference varying from about a tenth of an inch on our extreme north and north-west coasts to rather more than two tenths of an inch in the south and east of England. The mean gradient was therefore rather steeper than usual. *Highest* values, 30·5 ins. to 30·7 ins. or a little above, were recorded generally on the 5th, but pressure was almost equally high (30·3 ins. to 30·6 ins.) again on the 27th. *Lowest* values, which ranged from about 28·6 ins. in the extreme north to about 29·4 ins. in the south, were registered in the course of the 10th. *Range* was large (nearly 2 inches) on our extreme north and north-west coasts, but moderate duration elsewhere.

**Depressions.**—The only well-defined depression which advanced directly over the United Kingdom was a small and shallow system which moved eastwards across the south of England on the 7th. During the greater part of the month, however, large disturbances travelled north-eastwards outside our extreme north-western and northern coasts; and in many instances the main systems were accompanied or followed by "V-shaped" secondaries, which moved eastwards across our Islands.

**Anticyclones.**—Between the 1st and the 5th a large anticyclone of considerable height extended over the kingdom from northern Europe, while at the close of the month another large area spread over us from the eastward. The central portion of the system was in each case at a considerable distance from our Islands.

**Wind** was chiefly South-westerly or Westerly, but at some of the extreme southern stations there was a fair proportion of breezes from the South-eastward. Gales were somewhat frequent in the west and extreme north; at Valencia there were 10, at Stornoway 12, and at Mullaghmore 17. In several of the more eastern parts both of Great Britain and Ireland, however, there were none reported.

**Temperature.**—*Mean at Sea Level* ranged from a little below 37° over the eastern parts of central England and a little below 41° over the inland parts of the north of Ireland to a little above 47° at Valencia and Scilly. In Scotland the values were from one to two degrees above the average,\* and in the eastern and central parts of England they were about two degrees below the normal, but elsewhere no great divergence was shown. *Highest* readings occurred as a rule either on the 17th or 18th, but at some of our southern stations they were registered between the 22nd and 24th. *Lowest* were recorded in Ireland and Scotland between the 11th and 13th, but over England they were observed mainly between the 28th and 30th. *Range* was large at the inland stations; at Lairg and Cirencester it amounted to 37°, at Hillington to 38°, and at Rothamsted to 41°. *Vapour Tension* ranged from about 0·20 in. over the central and eastern parts of Great Britain and 0·24 in. over central Ireland to 0·28 in. at Valencia and Scilly and 0·29 in. at Belmullet. *Relative Humidity* varied from 84 per cent. at Shields and Mullaghmore and 85 per cent. at Aberdeen and Scilly to 96 per cent. at Stornoway and 98 per cent. at Hawes Junction.

**Rainfall** varied from between an inch and an inch and a half in the east of England and the south-east of Scotland to 6·7 ins. at Valencia, 6·8 ins. at Glenlee, 9·6 ins. at Glencarron, and 11·7 ins. at Laudale. The values were slightly in excess of the average\* in the extreme west and north, but considerably less than the normal in the east and south.

**Bright Sunshine** was upon the whole extremely deficient. At Glencarron the amount was equal to only 1 per cent. of the possible duration, at Fort Augustus and in London to 6 per cent., and at York and Stonyhurst to 9 per cent. At Hastings and Falmouth, however, the per-centage was 25, and at Dublin 26.

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