

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

**NOVEMBER 1890.**

(Issued as a Supplement to the Weekly Weather Report, 1890.)

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PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER STREET, EDINBURGH, and 21, DRURY STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

**General Summary.**—The weather of November was very changeable and unsettled; heavy gales occurred in many districts on the 6th and 7th, and snowstorms at the close of the month. Lightning was seen in various parts of the kingdom about the middle of the period, and bright aurora in the north of Scotland. Pressure was below the average, excepting in the extreme south and south-west; temperature was a little above its ordinary height; the winds were mainly Westerly; and rainfall was greatly in excess in all localities excepting the inland parts of Southern England. Bright sunshine was fairly abundant in the west and south, but somewhat deficient in the north and east.

**Pressure.**—*Mean for the Month at 8 a.m.* varied from between 29·90 ins. and 29·95 ins. over the extreme south and south-west of our Islands and the English Channel, to a little below 29·65 ins. in the Shetlands and Hebrides. In the localities first mentioned the values did not differ much from the average,\* but in other districts they were below it, and as the difference was greatest (0·10 in. to 0·12 in.) in the extreme north, the mean gradient was steeper than usual. *Highest* readings were recorded on the 19th or 20th over the southern parts of the kingdom, but on the 26th or 27th in the more northern districts. In the former case the barometer rose to between 30·4 ins. and 30·5 ins., but in the latter it was not much above 30·3 ins. *Lowest* readings were observed as a rule during the passage of the deep depression of the 6th–7th, when the barometer fell below 29·0 ins. in nearly all parts of the country. In the extreme north, however, the lowest readings were recorded on the night of the 1st. *Range* was somewhat large.

**Depressions** were numerous in the early part of the month, the most important being that of the 6th–7th, in which case the centre passed directly across Ireland and England to the Dutch coasts. During the latter part of the period the weather was somewhat quieter, a striking exception being observed, however, between the 22nd and 25th, when a large and very complex depression advanced over Scandinavia from the north-westward and travelled across Europe to the south of Russia. The system was marked by the prevalence of strong winds or gales over nearly the whole Continent, and exceedingly heavy rains in Germany and Austria.

**Anticyclones.**—Two only were observed in the neighbourhood of our Islands. Between the 15th and 18th one of these systems extended over the United Kingdom from the southward, and ultimately spread north-eastward to Scandinavia; on the 19th and 20th it gradually receded in a southerly direction. In the second instance a large high-pressure area extended over us from the north-eastward in the rear of the depression of the 22nd–25th. At the close of the month it was moving south-eastwards, and breaking up.

**Winds** varied greatly in direction, but were, as a rule, from some Westerly point (South-west to North-west). Gales were numerous, 10 or more being reported at several of our northern, western, and southern stations; at Stornoway there were 19 and at Mullaghmore 20. The gale which occurred with the depression of the 6th–7th was severe in the north and north-west.

**Temperature.**—*Mean at sea level* varied from 49° and upwards in the Scilly and Channel Islands to a little below 41° in Lincolnshire and many of the inland parts of Scotland, and patches of relative cold being shown over South Wales and some parts of Central Ireland. The relative distribution agreed fairly well with the normal, but the actual values were a little above the average\* excepting in isolated parts of England, where there was a slight deficiency. In the majority of cases the excess did not amount to more than one degree. *Highest* readings were observed on somewhat irregular dates, but over the kingdom generally they occurred on the 19th. *Lowest* readings were recorded very generally between the 27th and 30th, and were exceptionally low; hard frost occurred in nearly all districts, and in Kent and Surrey it was particularly severe. At two of our stations the thermometer fell to 14°, and at Braemar to 10°. The daily maxima at this time were unusually low for the season. *Range* was large, especially over the inland parts of Great Britain; at Southampton and Cullompton it amounted to 43°, at Braemar to 44°, at Geldeston to 45°, and at Cambridge to 46°. *Vapour Tension* ranged from less than 0·22 in. in the east of Scotland to 0·30 in. at Valencia and to 0·32 in. at Scilly. *Relative Humidity* was least over the Channel Islands, the north of Ireland, and the north-east coasts of Great Britain, the lowest per-centage of all being 83 at Mullaghmore and Jersey. Over the greater part of England, however, and on our extreme south-western, western, and northern coasts there was rather more than 90 per cent.

**Rainfall** was considerably in excess of the average,\* except over the inland parts of southern England, where the total amount for the month was less than two inches. In Ireland, Wales, and the north-west of England the aggregate varied from four to eight and a half inches, while in the Isle of Man and the west of Scotland it exceeded ten ins., the heaviest amount of all being 13·1 ins. at Glenlee. The largest falls in 24 hours were 2·6 ins. at Douglas (Isle of Man), 2·2 ins. at Stonyhurst, and 2·1 ins. at Glenlee. The number of rainy days was very large; at Laudale, Holyhead, and Edgeworthstown there were 28, and at Valencia 29.

**Bright Sunshine** was fairly abundant in the western and southern parts of the kingdom, the per-centage of the possible amount being as high as 33 at Falmouth and Dublin, and 32 at Pembroke. In the northern and eastern districts, however, the per-centage was in many cases below 20; at Fort Augustus the value was only 13, and at Fort William 14. In London, also, the per-centage was (locally) as low as 14.

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