

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

DECEMBER 1891.

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General Summary.—The weather was mostly changeable and unsettled, with frequent rain over England and Ireland and with some heavy falls of snow in Scotland. During the third week, however, the conditions were dry and quiet, and thick fogs prevailed over the inland parts of Great Britain. Pressure was below the average excepting in the south and south-east, and gradients were steep; temperature was mostly in excess of the normal; the winds were Westerly or South-westerly; and rainfall was more than the average on all but our eastern coasts. Bright sunshine was upon the whole unusually abundant for the time of year.

Pressure.—*Mean for the month at 8 a.m.* varied from 30·0 ins. and upwards over the English Channel to very little above 29·5 ins. in the Shetlands and Hebrides. Over the south and south-east of England the values were slightly in excess of the average,* but in all other districts they were below it, the divergence from the normal amounting to as much as 0·15 in. in the north of Ireland and 0·17 in. in the north of Scotland. The mean gradient over our Islands was nearly twice as steep as that shown by the chart of average pressure for December. *Highest* readings were observed on the 20th or 21st, when the barometer rose to between 30·4 ins. and 30·5 ins. on our extreme northern coasts and to between 30·5 ins. and 30·7 ins. in other parts of the kingdom. *Lowest* readings occurred on the 10th, when the barometer fell below 28·0 ins. in the Shetlands, below 28·5 ins. over Scotland generally, and to between 29·0 ins. and 29·3 ins. over the southern parts of the United Kingdom. *Range* was very large,—between 2·0 ins. and 2·5 ins. in all districts.

Depressions.—During the early part of the month several depressions travelled either directly across our Islands or along our north-western and northern coasts, the most important being those of the 7th, 9th, and the 10th. During the third week the conditions were anticyclonic, after which a new series of depressions skirted our northern coasts on their way from the Atlantic to Scandinavia.

Anticyclones.—The only one observed was a large system which was formed over north-western Europe on the 16th and 17th, and which subsequently spread eastwards and southwards until it embraced the greater part of the Continent. On the 23rd and 24th it gradually became reduced in height, and moved in a south-easterly direction towards Asia Minor.

Winds were mostly Westerly or South-westerly, but a considerable per-centage of South-easterly breezes was shown at the extreme south-western stations. Gales were very numerous on all but our east coasts, the number being more than 12 in many places, 21 at Mullaghmore, and 17 at Valencia.

Temperature.—*Mean at sea level* ranged from 48° and upwards in the extreme south-west of England to 38° or less in the east of Scotland and to 37 or less over the inland parts of the north of Scotland and the north-east of England. The general distribution agreed fairly well with the normal, but the actual values were above the average* in all localities excepting the north of England, the excess being greatest (two to four degrees) in the western and southern districts. *Highest* readings were recorded mostly on the 3rd or 5th when the thermometer rose to above 55° in most parts of the kingdom and reached 59° at York, Liverpool, Llandudno, and Killarney. *Lowest* readings were observed as a rule between the 21st and 25th, excepting in Scotland where they occurred mostly about the 17th; hard frost was experienced in nearly all districts, the lowest readings in the shade being 9° at Churchstoke and 11° at Stamford and Llandovery. *Range* was very large, especially over the inland parts of England; at Loughborough, Bawtry, Hereford, and Llandovery it amounted to 44°, at Stamford to 45°, at York to 46°, and at Churchstoke to 47°. *Vapour Tension* ranged from about 0·18 in. in the east of Scotland and about 0·20 in. over the northern and central parts of England to 0·30 in. at Scilly. *Relative Humidity* varied from 81 per cent. at Aberdeen and 84 per cent. at Mullaghmore to 95 per cent. at Spurn Head and to 96 per cent. at Stornoway.

Rainfall was in excess of the average* at all but a few of the east coast stations, the excess being greatest in the south of Ireland, the west and north of England, and the south-west of Scotland. At Leith and Newton Reigny the aggregate amount was more than double the average. Over the eastern, central, and southern parts of England the largest daily fall occurred on the 1st, but in other districts it was recorded at various times,—mostly between the 6th and 12th. The number of days with rain was large, being above 20 in most districts and as great as 26 at Glen Carron, Fort Augustus, and Belmullet, and 27 at Stornoway.

Bright Sunshine.—The amount of bright sunshine was above the average* in most districts, but a little below it at one or two stations situated in the northern parts of the United Kingdom. The per-centage of the possible duration was as low as 5 at Fort William, 7 at Blackpool, and 8 at Fort Augustus, while it was as high as 33 at Aberdeen and Hastings, to 34 at Eastbourne, and to 40 at Jersey.

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