

# SUMMARY OF OBSERVATIONS.

DECEMBER, 1904.

**General Summary.**—With the break up of the severe frost at the close of November, the weather over the whole of the United Kingdom became exceedingly unsettled. During the first seventeen days of December there was a succession of Atlantic disturbances, some passing up our western coasts, others moving on more easterly paths across the country. In many localities rain fell every day, and in some places hail, sleet or snow was reported at times. Various parts of England and Wales experienced thunderstorms, or thunder or lightning, towards the close of the first week. High winds and gales were of frequent occurrence, the gales of the 5th and 12th being felt very generally. Very rapid changes of the barometer occurred over the north of Scotland on the 5th. This disturbed period was succeeded by an exceptionally quiet spell, the barometer rising and the conditions becoming anticyclonic, the winds being very light and the weather all but rainless. In Ireland and Scotland the sky was often clear, but over a large portion of England the change to calm weather was attended by one of the worst fogs of recent years, lasting into the early part of the last week and interfering greatly with the Christmas traffic both by land and sea. On the withdrawal of the anticyclone to the southward, a deep depression crossed the north of Scotland early in the morning of the 30th, a fresh to whole gale from between West and North being felt very extensively. As the centre passed there was an extraordinary rise of the barometer of as much as 0·19 in. at Aberdeen, and 0·23 in. at Wick in one hour. The gale and low barometer produced a very high tide on the east coast of England and up the Thames. There were occasional frosts locally, but, as a rule, mildness prevailed. For the whole month pressure was a little below the normal nearly everywhere; temperature showed an excess in most places; the winds were mainly from between South and West; rainfall was deficient over the greater part of the country; and bright sunshine was somewhat irregular in its distribution.

**Pressure.**—*Mean at 8 a.m.* ranged from 29·98 ins. at Jersey and above 29·90 ins. over the more southern English counties to below 29·70 ins. over the north of Scotland, and 29·58 ins. at Sumburgh Head. At Stornoway the mean exceeded the average\* by 0·01 in., but in all other cases there was a small deficiency, the largest being 0·06 in. at Sumburgh Head. The distribution of pressure was in fair agreement with the normal. *Highest* readings were recorded on the 19th, 30·66 ins. at Oxford, and again at the close, 30·58 ins. at Jersey on the 29th. *Lowest* readings occurred on the 5th, 28·30 ins. at Stornoway, and on the 12th, 28·80 ins. at Pembroke. *Range* was large, and more than ordinarily uniform, from 1·5 in. at Roche's Point and Parsonstown to 2·15 ins. at Stornoway.

**Depressions.**—Most of the disturbances arrived during the first half of the month, moving on a general north-easterly course, either near our north-western coasts or across the south of England. On the 29th and 30th, however, two important systems appeared near the Shetlands and travelled quickly south-eastward to the Baltic and beyond.

**Anticyclones.**—It was not until the 17th that our islands came under the influence of a high-pressure system spreading northward from the Continent, which remained the principal feature for the rest of the month, its central space occasionally spreading to our southern and eastern districts.

**Winds.**—In all districts Southerly to Westerly winds prevailed, but there was a fairly large proportion of South-Easterly and Easterly winds at the south-western stations, from Jersey to Blacksod Point. Calms were unusually frequent at many stations. Gales occurred on 8 days at Dungeness, Pembroke, and Deerness, on 7 days at Portland Bill, Jersey, Valencia, Blacksod Point and Malin Head, and on 6 days at Holyhead and Donaghadee.

**Temperature.**—*Mean at sea level* ranged from 49° at Scilly and above 45° at all the more south-western stations to below 40° over the greater part of England and eastern Scotland, and to nearly 37° at Crathes, Morpeth, and Newton Rigg. The general distribution differed but slightly from the normal, and, with some local exceptions in England, the actual values were above the average,\* but the differences varied considerably, the excess at Eastbourne being 4·9°. At Aspatria the defect amounted to 2·4°, and at Newton Rigg to 2·9°. *Highest* readings occurred on very varied dates in England and Scotland, mainly on the 4th in Ireland, 60° being reached at Buntingford, Colly Weston, Lincoln, Llandudno, and Wokingham; 59° at Alnwick, Arlington, Hawarden, and round Dublin; and 58° at Leith, Strathpeffer, Shrewsbury, Jersey, and Glasnevin. *Lowest* values were recorded on the 11th at most stations in Scotland, on very varied dates in England and Ireland, many of the English ones being about the 23rd. At Braemar 6° was touched, at Lairg 10°, and at Crathes and Newton Rigg 12°. *Range* was considerable, exceeding 40° in several localities, and amounting to 45° at Braemar and Crathes. On the south-west coasts it was small, 16° at Scilly, 17° at Falmouth, and 19° at Portland Bill. *Vapour Pressure* ranged from 0·20 in. at Aberdeen and Liverpool to 0·28 in. at Jersey and Roche's Point, and 0·29 in. at Scilly. *Relative Humidity* ranged from 84 per cent. at Blacksod Point, and 85 per cent. at Valencia and Scilly, to 93 per cent. at Parsonstown, and 94 per cent. at Clacton-on-Sea.

**Rainfall.**—At various stations in Scotland and the extreme south and south-east of England there was an excess of rain, small in most cases, but over the country generally the amounts were below the average;\* the deficiency being less than an inch as a rule, but exceeding 2 ins. in a few instances, 2·5 ins. at Foynes. The largest totals of rain and melted snow were 10·7 ins. at Glencarron, 8·6 ins. at Laudale, and 7·8 ins. at Stornoway, the smallest 1·4 in. at Durham, York, and Trinity College, Dublin, and 1·3 in. at Spurn Head. Falls of as much as an inch in a day were very few in number, the largest 1·9 in. at Killarney on the 16th, and 2·4 ins. at Glencarron on the 29th. The number of days on which precipitation was measured ranged from 29 at Sumburgh Head, and 28 at Stornoway, to 12 at Brighton, Buntingford and Durham, and 11 at Spurn Head.

**Bright Sunshine** varied a great deal, even locally, the records ranging from 17 hours in excess of the average\* at Blackpool and Llandudno to a deficiency of 15 hours at Tenby. The percentage of the possible duration ranged from 27 at Cromer, and 26 at Balruddery, to 8 at Fort Augustus and in London, and 2 at Manchester.

\* The averages employed are—*Pressure and Temperature* for the 30 years 1871–1900; *Rainfall* for the 35 years 1866–1900; and *Bright Sunshine* for the 20 years 1881–1900. See Appendix III. "Weekly Weather Report," 1901.