

SUMMARY OF OBSERVATIONS.

OCTOBER, 1905.

General Summary.—Taken as a whole the month of October proved an abnormally quiet period, for the gales which were experienced on our coasts were neither so frequent nor so violent as usual at this time of the year. This was due to the persistency of a high pressure type of conditions, which occupied the greater part of the country during a considerable portion of the month, while the central spaces of the disturbances which influenced our weather were, in nearly every instance, at some distance from our shores. The only depression which left the sea for the land was that of the closing days. It was one of the deepest thus far this season, but it turned out to be possessed of very little wind energy, and in the night of the 31st it was completely dispersed, after occasioning a fair amount of rain over the country generally. Low temperatures prevailed most of the time, and especially after the middle of the month when severe night frosts were felt in many localities. During the third week the mean temperature over the whole Kingdom was 7° below average; hail, sleet or snow showers occurred in the north and east from the 14th to the 16th. Dull weather, with very little sunshine, was in the ascendant through the first half of the month, but afterwards, although there was a good deal of morning mist or fog, the days were very bright, the duration of sunshine during the third week being generally the best October record since the introduction of automatic recorders in 1881. Only a few unimportant thunderstorms were reported. For the entire month pressure was decidedly in excess of the normal; the winds were mainly from between West and North, with a fair proportion in the South-West and North-East quarters also; there was a considerable deficiency of temperature in all districts; the rainfall was less than usual in nearly all places; and with few exceptions the duration of bright sunshine was in excess.

Pressure.—*Mean at 8 a.m.* ranged from 30·13 ins. at Valencia, and above 30 ins. over the western and southern districts to 29·87 ins. at Sumburgh Head. The distribution of mean pressure, instead of being of the normal southerly to westerly, was of a distinctly north-westerly type, the actual values being in all cases above the average*, the excess being greatest, 0·24 in., over the south-west quarter of Ireland, and least, 0·06 in., at Yarmouth. The gradient was moderate. *Highest* readings were registered on the 11th, 30·56 ins. at Donaghadee and Roche's Point, the mercury being above 30·5 ins. at many stations between the 9th and the 12th. On numerous other days values above 30·2 ins. were reported in various parts of the country. *Lowest* values occurred on the 4th, 28·78 ins. at Sumburgh Head, and below 29 ins. over Scotland and the north of England; and on the 29th and 30th, 28·84 ins. at Blacksod Point, and below 29 ins. over northern Ireland and Wales. With these exceptions the readings were mostly above 29·5 ins. *Range* was considerable in all districts, from 1·1 in. in the Channel Islands to 1·7 in. in the Shetlands and the north-west of Ireland.

Depressions.—On the 3rd and 4th the centre of a deep disturbance occasioning Westerly to Northerly strong wind and gales, passed round the outer northern islands, eventually reaching the Baltic and Russia. A shallow depression which appeared across the mouth of the English Channel on the 18th was accompanied by much rain as it moved down the west of France for the Mediterranean. Another shallow wet weather system formed on the Danish coast on the 20th, and after following the coast to the mouths of the Rhine it recurved for the Baltic and Russia. From the 25th to the 27th our northern districts were to some extent affected by a moderately deep disturbance travelling north-eastward at some distance beyond our coasts. The last four days of the month were marked by a deep cyclonic area which moved slowly across Ireland to the north of England, thence back to Ireland and dispersing.

Anticyclones.—During the greater part of the period high pressure conditions ruled, but with the exception of the 8th to the 12th, the 19th and 20th, and the 25th, the central spaces of the systems were outside our coasts, mainly to west and south, but sometimes to north and north-east.

Winds.—Under the influence of the persistent high pressure areas Westerly to Northerly winds prevailed, but in some localities South-Westerly or North-Easterly breezes were rather frequent. As a rule the strength was not great, gale force being reached on 8 days at Deerness and Holyhead, on 6 days at Blacksod Point and Portland Bill, and on 5 days at a few other stations.

Temperature.—*Mean at sea level* ranged from 50° and upwards at a few of the south-western coast stations, (52·2° at Guernsey), to below 45° in various parts of England, Ireland and Scotland, and to below 43° at Sumburgh Head. The general distribution of temperature resembled the normal, but the actual values were in all cases below the average*, the deficiency being from 4° to 6° in many places, 5·2° at Tunbridge Wells, 5·7° at Wisley, and 5·9° at Dungeness. *Highest* readings occurred on the 9th generally, 69·5° at Killarney, 68° at Waterford, 67° at Ballinacurra and Clathick, and 66° at Leith, but many localities failed to touch 60°. *Lowest* values were recorded on varied dates, but mainly between the 17th and 23rd, 16° at Llangammarch Wells, 19° at Marlborough and Markree Castle, 20° at Swarraton and Wokingham, and 22° at Maidenhead, Birr Castle, Edenfel and Kilkenny Castle. *Range* was 40° and upwards at numerous stations, 45° at Llangammarch Wells, 43° at Killarney, and 42° at Maidenhead and Waterford, while at Guernsey it was 20°, and at Scilly and Malin Head only 17°. *Vapour Pressure* ranged from 0·30 in. at Blacksod Point and Jersey to 0·23 in. at Sumburgh Head, Wick, Nairn, Shields and Oxford. *Relative Humidity* was as high as 94 per cent. at Birr Castle, and 90 per cent. at Roche's Point, Stornoway and Spurn Head, against 79 per cent. at Scilly and 77 per cent. at Valencia.

Rainfall.—At a dozen stations, nearly all on the east coast of Britain, there was an excess of precipitation, otherwise the amounts were all under the average*, the deficiency being more than 2 ins. in several localities, 3·4 ins. at Roche's Point and Waterford, and 3·6 ins. at Valencia. The aggregate totals ranged from 8·8 ins. at Glencarron, 7·2 ins. at Laudale and 5·2 ins. at Deerness to less than an inch over the south-east coast of Ireland and at some of the English stations, 0·7 in. at Shoeburyness, Kingstown, Ballinacurra and Kilkenny Castle, and 0·5 in. at Waterford. There were very few stations at which as much as an inch fell on any one day, but on the 29th, 30th or 31st an inch was measured at Foynes, St. Leonards and Braemar, 1·1 in. at Arlington and Cullompton, 1·2 in. at Worthing, 1·4 in. at Dungeness, and 1·6 in. at Falmouth. The days with rain numbered 30 at Glencarron, 29 at Deerness and Wick, and 28 at Sumburgh Head, Stornoway and Lairg, but 10 or less at some stations in the south of England and of Ireland, 8 at Kilkenny Castle and Waterford.

Bright Sunshine.—There was a deficiency of sunshine in several parts of Scotland, a loss of 40 hours at Strathpeffer, but elsewhere the duration was above the average*, by 33 hours at Pembroke, 38 hours at Blackpool, and 40 hours at Tenby. The percentage of possible duration ranged from 46 at Tenby and 43 at Pembroke and Salcombe to 21 at Stornoway, 20 at Deerness and 17 at Strathpeffer.

* 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.