

# SUMMARY OF OBSERVATIONS.

NOVEMBER, 1906.

**General Summary.**—During the period under review the atmospheric conditions throughout the British Isles were of a very variable character. Several of the low pressure systems which affected our weather were unusually slow in their movements, and resulted in more rain than wind, the gales which were experienced being as a rule of no great strength. There were two separate anticyclonic periods, occupying, between them, nearly half the month, the earlier, and shorter one producing a cool North-Easterly to Easterly type of weather, the later one a very mild South-Westerly type. This period of unseasonable warmth was the most remarkable feature of the month. Down until the 20th there was nothing exceptional in the temperature records, but on the 21st occurred a decided increase in every portion of the kingdom, so that on four successive days, to the 24th, there were numerous instances of maximum day readings of  $60^{\circ}$  and upwards,  $66^{\circ}$  being registered at Strathpeffer and  $68^{\circ}$  at Lairg. Even in the Orkneys the temperature record on the 23rd was—maximum  $58^{\circ}$ , minimum  $51^{\circ}$ , both extremes being remarkably high for this northern locality. After the 24th there was a slight reduction of temperature generally, but the remainder of the month continued very mild, afternoon maxima of  $55^{\circ}$  and upwards being of daily occurrence. There was, practically, no frost during the last ten days, the nights being, relatively, as mild as the days. All over the country the effect upon vegetation of this unusual warmth was very marked—"The fall of the leaves has been much delayed in consequence of the warmth and moisture, and the grass on pasture lands has continued growing to a later date than usual."—(Belvoir Castle Observer.) The rainfall was very unequally distributed, over-abundant in the north and east of Scotland and over the eastern half of England, defective elsewhere, and especially so over southern Ireland. On several occasions hail, sleet or snow was experienced, but the falls were unimportant. Considering the period of the year fogs were both rare and of no great density. Auroral displays were witnessed at Stokesay on the 27th, and at Epsom on the 29th. For the month as a whole pressure was a little lower than usual; the winds were for the most part from between South and West; temperature was well in excess of the normal; rainfall differed very unequally from the normal; and the duration of bright sunshine was deficient in most localities.

**Pressure.**—Mean at 8 a.m. ranged from 29.95 ins. at Jersey and above 29.85 ins. over the southern parts England and Ireland to below 29.75 ins. in the north of Scotland, 29.69 ins. at Sumburgh Head. The values were everywhere somewhat below the average\*, by nearly 0.08 ins. at Spurn Head, but only by 0.004 in. at Scilly. The general distribution of mean pressure consequently did not differ materially from the normal. Highest readings were recorded between the 9th and 14th, Oxford reaching 30.55 ins. on the 11th, and between the 22nd and 29th, Jersey touching 30.60 ins. on the 25th. Lowest values occurred between the 2nd and 5th, 28.77 ins. at Jersey on the 4th, and on the 17th and 18th, 28.72 ins. at Wick. Range was, therefore, large, nearly everywhere between 1.4 in. and 1.6 in., but at Jersey it exceeded 1.8 in.

**Depressions.**—The disturbances of the month were not numerous for the time of year, but owing to their slow rate of progression some of them remained in our neighbourhood for several days. The first week was divided between two depressions, which pursued very irregular, complicated paths. Beyond our western coasts only one low pressure system, also a very slow moving one, could be detected going on a northerly course well out on the ocean, taking several days to pass Iceland. In the deep disturbance of the opening days the barometer was below 29 ins. when the system left the Mediterranean on October 31st, when it passed out to the Atlantic off the north of Ireland on November 3rd, and when it returned to the English Channel on the following day.

**Anticyclones.**—On the 9th an area of high pressure from the Greenland-Iceland region appeared off our north-western coasts, and moving slowly down across the country it passed to the Continent on the evening of the 13th, eventually disappearing across the Black Sea. Between the 22nd and 29th the anticyclone which embraced these islands had its central space on the Continent, between the Bay of Biscay and Russia.

**Winds.**—In all districts winds from Southerly to Westerly points prevailed, but there was a fair proportion of North-Easterly and Easterly breezes, due to the pressure in the early part of the month being higher in the north than in the south. Gale force was attained on 6 days at Blacksod Point and Portland Bill, and on 5 days at Deerness and Bettws-y-Coed.

**Temperature.**—Mean at sea level ranged from slightly under  $51^{\circ}$  at Guernsey and Scilly, and above  $48^{\circ}$  at most of the south and south-west coast stations to below  $46^{\circ}$  in various parts of the kingdom,  $43.5^{\circ}$  at Crathes. The general distribution agreed fairly with the normal, but in nearly every instance the actual values were above the average\*, by more than  $3.5^{\circ}$  at some Scottish stations,  $3.9^{\circ}$  at Eastbourne, and  $4.2^{\circ}$  at Strathpeffer. Highest readings were recorded generally on the 22nd, 23rd, or 24th, and were unusually high,  $68^{\circ}$  at Lairg,  $66^{\circ}$  at Strathpeffer (23rd),  $65^{\circ}$  at Dublin (Trinity College) (24th), and  $64^{\circ}$  at Shrewsbury (22nd), values above  $60^{\circ}$  being common to all districts. Lowest readings occurred on very varied dates, but mainly between the 10th and 21st,  $21^{\circ}$  at Llangammarch Wells (13th),  $22^{\circ}$  at Wokingham (12th),  $23^{\circ}$  at Marlborough (13th), and  $25^{\circ}$  at Markree Castle (10th), Bath (13th), Shrewsbury (14th), and Maidenhead (19th). Range was as much as  $42^{\circ}$  at Lairg,  $39^{\circ}$  at Shrewsbury and Wokingham, and  $37^{\circ}$  at Llangammarch Wells, but  $20^{\circ}$  or less at a few south-western coast stations, only  $13^{\circ}$  at Scilly. Vapour Pressure ranged from 0.24 in. at Sumburgh Head (6 p.m.) and Strathpeffer (9 p.m.) to 0.32 in. at Scilly (6 p.m.). Relative Humidity ranged from 81 per cent. at Trinity College, Dublin (9 a.m.), to 95 per cent. at Skegness (8 a.m.) and Malin Head (8 a.m. and 6 p.m.). Mean Earth Temperature at 1 ft. depth ranged from slightly under  $45^{\circ}$  at Bettws-y-Coed, Sheffield, and Newton Rigg, to a little over  $48^{\circ}$  at Bath; and at 4 ft. depth from  $46.5^{\circ}$  at Aberdeen to nearly  $53^{\circ}$  at Bath.

**Rainfall.**—Generally over the north and east of Scotland and eastern and southern England the rainfall exceeded the average\*, elsewhere it was mainly deficient. Lairg had an excess of 4.4 ins., Balmoral 4.2 ins., and various stations in the south-east of England from 3 ins. to 4 ins., while in the west there was a deficiency of 2.1 ins. at Foynes and Waterford, 2.6 ins. at Valencia, and 2.9 ins. at Killarney. The largest aggregates for the month were 11.4 ins. at Glencarron, 8.7 ins. at Arlington, and even in Kent and Sussex from 6 ins. to 7 ins. The smallest totals were all in the west, 1.4 in. at Trinity College, Dublin, and 1.3 in. at Rhyl and Kilkenny Castle. Falls of more than an inch in 24 hours occurred on a number of days, on the 8th 1.7 in. at Oundle, 1.9 at Woburn, and 2 ins. at Arlington. The days on which precipitation was measured numbered 30 at Stornoway, and 29 at Lairg and Glencarron, but only 14 at Whitby, Kingstown, Kilkenny Castle, and Waterford, and 12 in the Forest of Dean (200 ft.).

**Bright Sunshine.**—Nearly everywhere the duration of bright sunshine was below the average\*, by 27 hours at St. Leonards, and 28 hours at Tunbridge Wells. The percentage of the possible duration varied from 8 at Fort Augustus, and 9 at Manchester, Newcastle-on-Tyne and Nottingham to 29 at Tenby and 31 at Newquay.

**Observations in the Upper Air.**—Kite observations were obtained on the 1st (2), 2nd–4th, 7th, 10th (2), 15th (2), 22nd, 26th, 27th and 29th (2), and a balloon ascent was made on the 6th.

\* The averages employed are—Pressure, Temperature and Rainfall for the 35 years 1871–1905; and Bright Sunshine for the 25 years 1881–1905. The values will appear in Appendix III. to the Weekly Weather Report for 1906.