SUMMARY OF OBSERVATIONS.

AUGUST, 1906.

General Summary.—The period was marked by weather of a very variable character. In the western and northern districts it was generally unsettled, owing to the proximity of a number of disturbances nearly all of which kept out on the Atlantic, travelling on some north-easterly course. Much finer conditions prevailed over the southern, eastern and central counties of England, yet although there were many reports of a serious shortage of water for domestic and other purposes in these districts, and vegetation presented a parched and burnt appearance, there was no period of actual drought in any part of the country, but the falls of rain in many places were, as a rule, too slight to penetrate the soil. About the middle of the month there was a little coolness noticeable, otherwise there was an almost persistent warmth, and quite at the close the heat increased to an unusual extent, so that at a number of stations shade temperatures as high as 90° to 95° were registered, a further increase taking place in the opening days of September. At several stations the maximum values during this hot spell were the highest yet recorded. Thick mists and fogs were again very frequent on our coasts, more especially in the west and south. A fairly deep cyclonic system travelled swiftly on an east north-easterly course across Ireland and England early on the 25th, and over the western and southern portions of the kingdom North-Westerly to South-Westerly strong winds and gales were experienced, but the wind dropped quickly as the centre of disturbance passed to the North Sea. Thunderstorms occurred on numerous days, the majority being in various parts of England. In some cases the accompanying rainfall was very heavy, and hail was reported with a few. The thunderstorm of the evening of the 2nd was rather uncommon in its features. There was very little thunder, of a low rumbling type, and in few places was the rainfall very heavy, but the lightning was remarkable for its brilliancy, being almost continuous, and illuminating the country round for a long time. In the absence of any violent crashing thunder the barometer at Kew Observatory rose 0·10 in. in seven minutes, then fell 0·035 in. in thirteen minutes. An exceptionally destructive hailstorm swept the east Midland counties on this occasion, the value of the uninsured crops destroyed in the counties of Bedford, Cambridge, and Huntingdon alone being estimated at £55,000. For the month as a whole pressure differed but slightly from the normal; temperature was in excess; the winds were for the most part Southerly to Westerly in direction; rainfall was deficient over the greater portion of the kingdom; and bright sunshine was in excess at the majority of stations. According to newspaper reports, earthquake shocks were felt in north Donegal on the afternoon of the 22nd, and round Derby and Matlock Bath about 6 a.m. on the 27th. [These had been preceded by a great earthquake in the Valparaiso region.]

Pressure.—*Mean at 8 a.m.* ranged from 30·07 ins. at Jersey to 29·82 ins. at the more northern and north-western stations. The values were slightly below the average* in the north-western and central parts of Ireland; elsewhere they were above, but only Oxford and Dungeness had an excess of 0·05 in., and Jersey nearly 0·07 in. *Highest* readings were attained on the 28th, when several English stations reported 30·4 ins. and upwards, Oxford 30·45 ins. *Lowest* values occurred on the 13th or 14th, 29·3 ins. to 29·4 ins. at western and northern stations. On the 3rd Blacksod Point had a reading of 29·39 ins., and on the 25th Shields reported 29·40 ins. *Range* was small and fairly uniform, from 0·73 in. at Jersey to 1·00 in. at Blacksod Point and Shields.

Depressions.—On numerous days the weather was under the influence of disturbances whose centres were at some distance beyond the western and northern coasts. Of those that crossed the country the most important was the one of the 25th, which occasioned very boisterous conditions over a considerable area.

Anticyclones.—The central space of a high pressure system visited the eastern half of the English Channel on the 6th, another moved eastward across England on the 28th. All the other anticyclones of the month had their centres well outside these islands.

Winds.—With so many disturbances on the Atlantic winds from between South and West were largely prevalent over Ireland and England, but in Scotland they were much more variable in direction, North-Easterly to Easterly in the Shetlands. There was only one day on which gale force was recorded at a few stations.

Temperature.—*Mean at sea level* ranged from above 65° at Jersey and at several stations in southern England to below 55° beyond the north of Scotland, 53° at Sumburgh Head. The general distribution was in fair agreement with the normal, but the actual values were in nearly every instance above the average*, the excess amounting to between 3° and 4° at a number of stations. *Highest* readings occured on the 31st nearly everywhere, in Ireland and Scotland 85° at Dublin (Phœnix Park) and Leith; in England several exceeded 90°, Bawtry and Colly Weston 94°, and Maidenhead 95°. *Lowest* values were recorded on various dates, but in numerous instances on the 30th. Lairg registered 32° (23rd), Wokingham 34° (29th), Balmoral 35° (19th), and Marlborough 37° (30th). *Range* was in consequence very large, exceeding 45° at many stations, as much as 55° at Maidenhead and 58° at Wokingham. At Crathes the extremes for the month occurred on the 31st, range 42°, and there were many cases of the extremes being between the 28th and 31st. *Vapour Pressure* varied between 0·50 in. at Plymouth (9 a.m.) and 0·34 in. at Sumburgh Head (8 a.m. and 6 p.m.). *Relative Humidity* ranged from 94 per cent. at Cronkbourne (9 p.m.) to 64 per cent. at Westminster (6 p.m.). *Mean Earth Temperature* at 1 ft. depth ranged from above 64° at Bath and Plymouth to 57° at Garforth; and at 4ft. depth from 62° at Bath to 53°·5 at Garforth.

Rainfall was in excess at several stations, mainly in the northern half of the kingdom, by more than 2 ins. at Clathick, Dumfries and Pembroke, but generally it was below the average*, the deficiency amounting to more than 2 ins. at Birmingham, Guernsey, Cirencester, and Roche's Point. The largest aggregates were 6·7 ins. at Dumfries, 6·5 ins. at Glencarron, 6·2 ins. at Clathick, and 6·0 ins. at Pembroke, the smallest 0·3 in. at Shoeburyness, Portland Bill and Felixstowe, and 0·2 in. at Southend. Falls exceeding an inch in a day occurred on the 1st at Pembroke (1·9 in.) and Bettws-y-Coed (1·8 in.); on the 2nd at Aspatria (1·8 in.), Dumfries (1·7 in.), Llandudno (1·4 in.), Fort William (1·3 in.,) and Holyhead (1·1 in.); on the 8th at Hillington (1·7 in.), Rauceby (1·4 in.) and Yarmouth (1·3 in.); and on the 12th at Towyn (1·5 in.). Precipitation was measured on 28 days at Fort William, but only on 3 days at Southend.

Bright Sunshine.—The duration of bright sunshine was less than usual at several northern stations and at a few on the south-west coasts, the loss at Edinburgh amounting to 26 hours. Generally the records were above the average*, Oxford returning an excess of 66 hours, and Rothamsted 62 hours. The percentage of possible duration ranged from 60 at Bognor and Clacton-on-Sea to 19 at Fort Augustus.

Observations in the Upper Air.—Kite observations were obtained on the 1st—5th, 9th—11th, 13th, 14th, 15th (2), 16th—18th, 20th (2), 21st—24th, 25th (2), and 26th. An unmanned free balloon, liberated on the 31st, attained an altitude of 13,000 feet.

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* 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.

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