

SUMMARY OF OBSERVATIONS.

JULY, 1905.

General Summary.—The atmospheric conditions experienced during the month of July were of a character appropriate to the season. The weather was much more changeable in the far western and northern districts than it was in the southern and eastern ones, rain being frequent in the former regions, and comparatively rare in the latter, but in all districts the precipitation was, with a few local exceptions, usually in the form of light passing showers. Thunderstorms occurred at various times during the month, but as a rule they presented no exceptional features, being rather of a moderate than a violent type. Two at New Barnet on the afternoon of the 9th were attended by heavy rain and hail (2·4 ins.), causing much damage to fruit and vegetables. There were numerous occasions, especially from the 10th onward, on which thick wet fog or mist was reported on many sections of our coasts, more particularly along the south and west of England. Although disturbances were fairly frequent they were generally of a very quiet, summer type, so that they were accompanied by winds of no great strength. As an indication of the unusual quietness of the season it may be stated that during the three consecutive months, May, June and July, no storm warning was issued, nor was a general gale (of force 8 at least) felt on any section of the coasts of the British Isles, a combination which had not previously occurred for 35 years, there having been neither warnings nor general gales in the three months June to August, 1870. Taking the month under review as a whole pressure and temperature were both in excess of the normal; the winds were for the most part Southerly to Westerly, light or moderate in force; rainfall was nearly everywhere deficient; and except at some south-western stations there was an excess of bright sunshine.

Pressure.—*Mean at 8 a.m.* ranged from 30·12 ins. at Jersey and above 30 ins. over the southern half of the kingdom to below 29·9 ins. in the extreme north of Scotland and to 29·86 ins. at Sumburgh Head. The values were in every instance above the average*, the excess being least, 0·05 in. at Sumburgh Head and Wick, and greatest, 0·12 in., at Liverpool and Roche's Point. The distribution of mean pressure did not differ to any material extent from the normal. *Highest* readings were recorded on the 4th, 30·35 ins. at Roche's Point, on the 13th and 14th, 30·30 ins. at Jersey, and on the 19th, 30·29 ins. at Oxford. *Lowest* readings occurred on the 29th and 30th, when Wick went down to 29·35 ins. The rest of the month had few values below 29·8 ins. *Range* was everywhere small, from somewhat less than 0·5 in. at the southern English stations to about 0·8 in. in the north of Scotland.

Depressions.—A shallow disturbance which appeared on the English Channel at the close of the preceding month, subsequently followed an irregular path northward across Britain, and eventually passed on to Northern Scandinavia and Russia. On the 22nd another moved eastward across Scotland, and on the next day it died out near Denmark. The other disturbances of the month were either on the Continent or travelling on a north-easterly course outside our north-western and northern coasts. They were of no great depth, nor were they possessed of much energy.

Anticyclones.—The Daily Weather Maps exhibit a very well marked persistency of anticyclonic conditions over the Bay of Biscay region, the central space of the system shifting about between the south of Ireland and the north of Spain throughout nearly the whole month. Occasionally the system threw off smaller secondary areas which moved eastward to Central Europe, and at times, as on the 8th, it expanded so as to embrace the whole of our islands. Our southern districts were nearly always under its influence.

Winds.—The type of pressure distribution favoured a great prevalence of winds from between South and West or North-West, but in the absence of steep gradients the air movement was usually weak. The force of a gale (force 7 and upwards) was attained at Malin Head on four days, and at Deerness, Cockle Park, Woburn, Laudale, Holyhead and Bettws-y-Coed on one day.

Temperature.—*Mean at sea level* ranged from slightly above 67° in the Thames Valley, and above 65° over the greater portion of the south-eastern quarter of England, to below 60° in the north of Ireland and the west and north of Scotland, 54° in the Shetlands. The general distribution was in fair agreement with the normal, but the values were in all cases above the average*, the excess being more than 4° at Killarney, Southampton, Geldeston, Yarmouth and Felixstowe, and as much as 5°·3 at Shoeburyness. Both the maximum and the minimum temperatures occurred on very varied dates. *Highest* readings were above 80° at a large number of stations, 87° at Maidenhead on the 26th, and 86° at Bawtry and Epsom on the 14th. *Lowest* values 38° at Wokingham (7th), Fort Augustus (19th), Cally (28th), and Braemar (29th), 37° at Crathes (28th), and 36° at Garforth (4th). *Range* varied from 45° at Wokingham, 44° at Bawtry and Garforth, and above 40° at a few other stations to 20° at Deerness and Pembroke, 19° at Blacksod Point, 18° at Scilly, and 15° at Sumburgh Head. *Vapour Pressure* ranged from 0·48 in. at Jersey and in London, and 0·47 in. at Dungeness, to below 0·40 in. over Scotland, 0·37 in. at Sumburgh Head. *Relative Humidity* ranged from 90 per cent. at Pembroke and 89 per cent. at Sumburgh Head to 75 per cent. at Aberdeen and Bath, and 73 per cent. at Leith.

Rainfall.—With the exception of a few isolated stations the rainfall throughout the country was below the average*, largely so in many localities, a number of places returning a deficiency of 2 ins. and upwards, 2·4 ins. at Cullompton, and 2·5 ins. at Shaftesbury. There were not many instances of aggregate totals of as much as 3 ins., but Glencarron had 6 ins. and Laudale 6·5 ins. On the other hand, there were numbers of stations in the southern counties of England which received less than 0·5 in., Clacton and Shoeburyness returning 0·22 in., Felixstowe 0·20 in., and Oxford 0·17 in. The number of days on which rain was measured ranged from 26 at Lairg, and 25 at Sumburgh Head, Stornoway and Laudale, to 5 or 4 in various parts of England, and 3 at Felixstowe. The only falls of more than an inch in a day occurred on the 9th, Laudale 1·7 in., and Liverpool 1·5 in., while Barnet, a station not included in the tables, had 2·4 ins.

Bright Sunshine.—The sunshine records at Scilly show a loss of 38 hours, and there was a small deficiency over the south of Ireland, the Isle of Man, Pembrokeshire, Cornwall and Guernsey, the duration in all other localities being above the average*, an excess of 52 hours at Cambridge, 53 at Rothamsted, 62 at Blackpool, and 69 at York. The percentage of possible duration ranged from 58 at Lowestoft, 56 at Cromer, and above 50 at several other stations, to 28 at Birr Castle, Valencia and Markree Castle, and 21 at Fort Augustus.

* 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.