

MONTHLY WEATHER REPORT.

JULY 1884.

SECTION I.

GENERAL SUMMARY FOR THE MONTH.

THE weather over the British Islands during July was very changeable. On several occasions it was bright and decidedly warm, maximum readings of 83° to 88° being recorded on the 4th, and 83° to 85° on the 8th; on other occasions, however, it was cloudy, showery, and very cold—the sheltered thermometer falling to 35° at Wick on the 21st, and to 39° in the east of Scotland and 42° in London on the 26th and 27th respectively. The mean temperature of the month was slightly below the average. Rainfall was frequent, and at times heavy. Thunderstorms were of very frequent occurrence, and in some cases severe. The winds were light and variable; pressure was about its normal value, and its range was small.

July 1–2.—The improvement in the weather, which had commenced on June 30th, continued during the first few days of July, pressure becoming very uniform (especially on the 2nd), while the sky cleared and temperature rose steadily. The daily maximum in London increased from 74° on June 30th to 76° on July 1st, and to 78° on the 2nd.

July 3–11.—During this period the winds and weather were of a complex southerly type, for while pressure was on the whole highest over the Continent and lowest over the Atlantic, there were generally two distinct high-pressure areas prevalent, one over northern and the other over southern Europe. From time to time some well-formed depressions passed northwards outside our extreme western coasts in a direction about parallel to the line marked "A" on Map 2, Plate XV. These brought with them cloudy, showery, thundery weather, and as during their passage subsidiary disturbances were developed in the "hollow" which separated the two high-pressure areas referred to above, a great intermingling of South-easterly and South-westerly currents of wind was produced over our Islands, with the result that the thunderstorms and showers spread over all parts of the kingdom. Three distinct disturbances of this kind occurred, the first being in connection with the depression of the 3rd, which extended to our eastern districts late on the 4th; the second on the 6th and 7th, and the third on the 10th and 11th. Between the showery and relatively cool spells, the thermometer at times rose decidedly, so that the whole period under notice was (so far as England is concerned) subdivided into warm and cool spells, the warm periods culminating on the 4th, when the maximum temperature in London was 86° , and on the 8th, when the maximum was 84° . In the cooler intervals the maxima were much lower, that on the 6th being only 71° , and on the 10th 72° . Although the effect of these disturbances in producing showery thundery weather was so decided, the centres of the main depressions lay too far to the westward of our Islands for their movements to be shown accurately on Map 2, while the movements of the subsidiaries were too fitful and ill-defined to be represented graphically on Map 2, Plate XV. This feature in the thunderstorm disturbances of summer is very common.

July 12-17.—The northern high pressure area now gave way, and a gradual change took place in the distribution of pressure, temperature, and wind over our islands. At first the tendency was favourable for Southerly winds, but after the 13th it changed gradually for winds from South-west, and depressions began to move in a north-easterly direction past our extreme north-western coasts. The first of these passed up between the 13th and 14th, but like its predecessors, was at too great a distance for its track to be shown accurately on Map 2; it brought with it, however, a decided freshening of the wind from South and South-west, a large amount of cloud, a great deal of rain to the western stations, a smaller quantity in the east, with such a reduction of temperature that the thermometer, which rose to 78° at York and 82° in London on the 13th, did not rise above 72° or 73° at either station on the 14th and 15th. The second disturbance, the centre of which lay off our north-west coasts on the 16th, moved at first in much the same track as its predecessors (see the Weekly Weather Report, No. 29), but after reaching the neighbourhood of the Farö Isles, it took a rather north-easterly course, and travelled away, outside the western coasts of Norway on the following day. Its movements are shown approximately by the broken arrow marked "B" on Map 2, Plate XV. During this period thunderstorms became less and less numerous, and on the 17th none were reported.

July 18th.—During this day the distribution of pressure was favourable for Westerly winds, owing to a rise of the barometer over our islands and the Bay of Biscay, accompanied by a fall over Norway. The wind veered Westwards and moderated, temperature again decreased (the maximum over England being all below 70°), but the weather remained cloudy and more or less showery in all districts. The conditions were, however, transitional from a spell of South-westerly to one of North-westerly winds.

July 19-29.—This was a period in which the isobars and winds over north-western Europe were, as a whole, of a North-westerly type, but in the British Isles the distribution of pressure was so complicated by the presence of several shallow local depressions, that the North-westerly winds were often mingled with winds from the South-westward and Westward, and the weather was consequently warmer than might have been expected. Most of the disturbances were very shallow, and their duration too brief for their characteristics to be tabulated in Section II., or their movements to be shown on Map 2, Plate XV. During the night of the 23rd, however, a more decided system was developed off the east coast of Scotland, and while its centre moved north-eastwards and northwards to Norway, a subsidiary "hollow" was formed over the North Sea; the result was that the wind veered to North-west and North all over our Islands, accompanied by a great fall of temperature (see Cyclonic System, No. XLIII.*), showery weather, and thunder and lightning in many places. As this system passed off the sky cleared, the thermometer in London fell to 42° in the shade early on the 24th, and to 32° on the grass. No sooner had this disturbance dispersed, than a new and somewhat complex system (No. XLIV.*) came over Ireland from the Atlantic on the 26th, and, moving in a south-easterly direction, reached North Germany early on the 28th. This also brought with it unsettled thundery weather and considerable oscillations of temperature, but in its rear the sky cleared for a time, and on the 28th the thermometer rose to 78° in London. The weather, however, remained unsettled and showery.

July 30-31.—The various disturbances just referred to now passed away to the Eastward of the North Sea, and pressure became more uniformly distributed over France and the United Kingdom, the readings at 8 a.m. on the 30th varying from a little above 30·2 inches at the French stations to somewhat below 30·1 inches off our north-west coasts. The winds became chiefly South-easterly and Southerly, temperature rose (the maxima in many parts of England ranging from 75° to 78° on the 31st), and the weather improved greatly.

* See Section II., and Map 2, Plate XV., for the history and tracks of depressions.