

SUMMARY OF OBSERVATIONS.

JUNE, 1902.

General Summary.—Until the closing week, when a very decided improvement occurred, the weather of June was extremely cool and unseasonable, with frequent rains, and occasional thunderstorms in most districts. During the second and third weeks slight ground frosts occurred at several of our northern and eastern stations. Pressure was below the average, except in the north of Scotland; temperature was low, but owing to the warm spell which occurred towards the end of the month the deficiency shown by the mean values was small, excepting on our north-east coasts; the winds were rather variable, but most commonly from some Easterly point; rainfall was very irregularly distributed, but was mainly in excess of the average in the eastern and southern, and in defect in the western and northern districts; bright sunshine was deficient, especially in the north-eastern and south-western parts of the kingdom.

Pressure.—*Mean at 8 a.m.* ranged from 29·95 ins. and upwards over the Shetlands, the Orkneys and the north-east coasts of Scotland, to a little below 29·85 ins. in the south-west of Ireland, and to very little above that point in the Scilly Islands. The general distribution over our islands was therefore quite abnormal, the slight south-westerly gradient usually prevalent in June being replaced by one for easterly and south-easterly winds. In the north of Scotland the mean values were a trifle above the average,* but in all other districts they were below it, the deficit being greatest (0·10 in. to 0·15 in.) in the south-western portions of the kingdom. *Highest* readings were recorded mostly on the 24th, when the barometer rose to 30·2 ins. and upwards in nearly all parts of Great Britain and to 30·1 ins. and upwards in Ireland; on our north-east coasts, however, the highest readings were observed on the 26th or 27th, the mercury rising in some places to 30·3 ins., or even a trifle above it. *Lowest* readings were recorded as a rule between the 11th and the 13th, when the barometer fell below 29·4 ins. in the south and east of England, and below 29·6 ins. in all other parts of the United Kingdom. *Range* was moderate in the south, but slight elsewhere.

Depressions.—These were rather numerous for the time of year, but were as a rule of little importance, the most interesting case being that of a well-marked system which moved slowly and in a very erratic course between the 11th and the 15th. Appearing originally over the extreme south of Ireland, the disturbance travelled in the first place south-eastwards to the western part of the English Channel, and afterwards north-eastwards across the south-east of England. On reaching the North Sea it pursued a more northerly track until it reached the north-east coast of Scotland, when the system entirely changed its course, the centre moving southwards on the 14th and 15th to the south-east of England, where the depression gradually dispersed. At the beginning and in the latter half of the month the centres of low-pressure systems occasionally advanced to our south-west coasts, and threatened to move eastwards, but ultimately passed away again over the Atlantic, mostly in a north-westerly direction.

Anticyclones.—Three such systems were observed. The first extended from Northern Europe over the northern and eastern parts of Great Britain on the 1st and 2nd, but receded north-eastwards on the 3rd. The second advanced from the northward on the 17th and spread temporarily over the greater part of Western Europe, but moved away to the north-eastward on the 18th, and dispersed. The third advanced north-eastwards from Spain and the adjacent parts of the Atlantic on the 22nd, and during the next two or three days extended over nearly the entire Continent, its central area being situated as a rule over Norway, Denmark, and the eastern portions of the North Sea. On the 25th and 26th its borders were temporarily broken into by a cyclonic disturbance which appeared off our south-west coasts, while on the 29th the entire system drifted northwards and apparently dispersed.

Winds showed considerable variability, but in nearly all places there was an undue proportion of breezes from some Easterly quarter (North-east to South-east). Gales were rare and of little importance, an entire absence being reported on all the more northern coasts of Great Britain.

Temperature.—*Mean at sea level* ranged from a little below 60° in London, from 58° and upwards at most inland stations in the southern half of England and Wales, and from 56° and upwards over the inland parts of Ireland and the south of Scotland, to 51° or less on the north and north-east coasts of Scotland, and to 49° or less in the Shetlands. The general distribution over our islands agreed very fairly with the normal, excepting in Scotland, where the cool Easterly winds from the North Sea sweeping through the Moray Firth and along the shores of Loch Ness reduced the mean temperatures in those regions to a lower level than in other inland parts of the country. The mean values were in nearly all cases below the average,* the deficit varying greatly in extent in different places (at a few isolated stations there was even a slight excess), but being upon the whole greatest on our north-east coasts, where it amounted to between three and three-and-a-half degrees. *Highest* readings were recorded mostly between the 28th and 30th, excepting in the extreme northern and north-western parts of the kingdom, where they occurred a day or two earlier; at most of the inland stations the thermometer about this time rose to 80° or more, the highest readings reported being 90° at Hereford, 87° at Cambridge, and 86° at Bawtry. *Lowest* readings occurred as a rule between the 9th and the 11th, when the sheltered thermometer fell to 35° or less at many inland stations in the northern and eastern parts of Great Britain, to 33° at Newton Reigny and to 32° at Braemar. On the night of the 9th the thermometer on the surface of the grass fell to 28° at Harrogate and to 29° at Fulbeck. *Range* was large, especially in the inland districts, where it amounted in many places to more than 40°; at Loughborough, Fulbeck, and Colly Weston it was as much as 50°, and at Cambridge 52°. *Vapour Pressure* ranged from between 0·38 in. and 0·41 in. on our southern coasts to 0·32 in. or less on the north and north-east coasts of Scotland, and to 0·29 in. at Sumburgh Head. *Relative Humidity* varied from 95 per cent. at Portland Bill, and 85 per cent. or more at the coast stations generally, to a little below 80 per cent. in the south-west of Ireland and in inland parts of the south of England.

Rainfall varied greatly in amount in different places. At many of our western and northern stations there was a deficiency—slight as a rule, but large in the west of Scotland. In most other parts of the kingdom the amount was in excess of the average,* the excess being large in inland portions of the south of England. The largest aggregates reported were 5·4 ins. at Arlington, 4·4 ins. at Swarraton, and 4·2 ins. at Valencia; the smallest being 1·1 in. at Malin Head and Chester, 1·2 in. at Bawtry and Prestwich, and 1·3 in. at Fort Augustus, Aspatria, Blackpool, and Stonyhurst. A heavy fall occurred over the south and south-east of England on the 13th, more than an inch being registered in many places (including London), and as much as 1·4 in. at Swarraton and Felixstowe.

Bright Sunshine was less than the average* in most places, the deficiency being large at many of our north-eastern and south-western stations, and especially in Edinburgh, where the total duration was little more than half the average. The per-centage of the possible duration ranged from 48 at Lowestoft, Felixstowe, and Westbourne, and 40 or more on several other scattered parts of our south and east coasts to 24 at Aberdeen and Armagh, 23 at Glasgow, 21 at Newcastle-on-Tyne, and to only 16 in Edinburgh.

* 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.