THE WEATHER OF 1912.

THE almost complete absence of summer weather and the frequent rains at almost all seasons have rendered 1912 memorable. The bad weather was more noticeable by contrast with the magnificent weather of 1911. The summer contrast for the two years was dealt with in NATURE for September 19, 1912, pp. 71–73.

LONDON RESULTS.

1912	Temperature Means						Rainfall			Sunshine	
	Max.	Min.	Max. and Min.	Diff. from average	Days above average	Frosty nights	No. of rainy days	Total fall In	Diff. from average In.	Daily mean Hours	Diff. from average Hours
	°	°	°	°							
January .	44·9	36·0	40 4	+2·0	19	8	18	3·03	+1·15	0·89	−0·51
February	48·6	38·6	43·6	+3·8	23	7	21	1·73	+0·25	1·33	−0 78
March .	53·3	40·5	46·9	+4·4	26	1	19	2·58	+1 06	2·97	−0·39
April . .	59·8	39.4	49·6	+1·5	17	2	2	0·04	−1·53	7·47	+2·44
May . .	67·5	46·5	57·0	+3·2	24	—	12	1 29	−0·63	6·15	−0·26
June . .	69·5	49·3	59·4	−0 9	11	—	18	2·35	+0·31	7·29	+0·81
July . .	74·9	54·4	64·6	+0·9	15	—	11	1·24	−1·16	5·34	−1·91
August .	66·7	50·1	58·4	−4·5	1	—	26	4·27	+1 93	3·69	−3·09
Sept. .	60·8	46·5	53·7	−4·5	4	—	5	2·11	−0·04	3·96	−1·26
October .	57·1	39·3	48·2	−2·2	9	2	14	1·88	−0·90	3·96	+0·88
Nov. .	48·3	39·3	43·8	+0·4	17	6	16	1·55	−0·67	0·89	−0·83
Dec. . .	50·5	40·7	45 6	+5 8	26	2	21	2·82	+0·99	0·86	+0·07
Year .	58·5	43·4	50·9	+0·8	192	28	183	24·89	+0·76	3·73	−0·40

The Greenwich observations given in the foregoing table are taken from the reports of the Meteorological Office. The mean temperature for the year is 50·9°, which is 0·8° in excess of the average. From June to October inclusive July was the only warm month. In both August and September the deficiency was 4·5°, and in the two months combined there were only five warm days. December, with the mean of 45·6°, was 5·8° in excess of the average. There have only been two Decembers since 1841 with a higher mean; these were 46·2° in 1852, and 45·8° in 1868. The excess of temperature in March was 4·4°, and the month in some districts was the mildest during forty years. There were only twenty-eight days with frost during the year.

The wettest months of the year were August, January, December, and March. There were only five days without rain in August, and only ten dry days in December. The driest month was April, with a total rainfall of 0·04 in., and at some places in the south-east of England the month was rainless.

The year's sunshine was 1364 hours, and the sunniest month was April, with a duration of 225 hours, which is 85 hours in excess of the average, and it was double the duration registered in August, which, with its 114 hours, was the least sunny month of any from April to October inclusive.

The summary for the year given by the Meteorological Office from the results for the fifty-two weeks ended December 28 shows that the greatest excess of rain in any district was 9·57 in. in the south-west of England, whilst in all the English districts, except the north-west, the excess was more than 5 in. The west of Scotland was the only district with a deficiency of rain and there it was less than an inch short of the average. The duration of bright sunshine was deficient over the entire kingdom; the greatest deficiency amounted to 0·9h. per day for the year in the north-east of England, and 0·8h. per day in the east of Scotland, the south-west of England, the south of Ireland, and the Channel Islands.

CHAS. HARDING.

SCIENCE TEACHING IN PUBLIC SCHOOLS.[1]

IN the period of more than sixty years during which I have watched the progress of education in this country, no feature seems to me to stand out more prominently in that progress than the entrance and establishment of science in a recognised place in the tuition of our public schools. At the beginning of the period the teaching of even the rudiments of a knowledge of nature formed no part of the ordinary curriculum of study. Here and there, indeed, there might be found an enlightened headmaster or other teacher who, impressed with the profound interest and the great educational value of the natural sciences, contrived to find time amid his other duties to discourse to his pupils on that subject, and sought to rouse in them an appreciation of the infinite beauty, the endless variety, the ordered harmony, and the strange mystery of the world in which they lived. He might try to gain their attention by performing a few simple experiments illustrative of some of the fundamental principles of physics or chemistry, or by disclosing to their young eyes some of the marvels which they might discover for themselves among the plants and animals of the countryside. Such broad-minded instructors, however, were rare, and were far ahead of their time.

There were then no special science teachers, no school laboratories, no proper school museums. The range of instruction in the public schools still lay within literary lines, pretty much as it had existed for centuries; excellent, indeed, so far as it went, but somewhat out of date, and no longer in keeping with the modern advance of knowledge and culture all over the world. Boys left school, for the most part, profoundly ignorant of nature, save in so far as they had been able to pick up information by the way, from their own observation, reading, or reflection. At the universities they fared little better. Chairs for the cultivation of various branches of science had indeed been founded there. But the duties of the professors were usually considered to consist chiefly or solely in the delivery of lectures, which were sometimes dull enough, and, where not required in reading for degrees, would attract but scanty audiences. An enthusiastic or eloquent professor might gather around him a goodly company of listeners as, in geology, Buckland used to do at Oxford and Sedgwick at Cambridge. But the laboratory work and experi-

[1] From the presidential address delivered to the Association of Public School Science-masters on January 8 by Sir Archibald Geikie, K.C.B. Pres.R.S.