

to him, "Be careful, and remember that work kills," had been, perhaps of necessity, neglected. The day after they were spoken the great naturalist had been stricken to death by paralysis. They were equally prophetic in the case of Agassiz, for by his sixty-seventh year even his vigorous constitution was worn out.

Agassiz was a born teacher. As one of his admirers says, "His greatest work in science was his influence upon other men." Surely this is one of the best of epitaphs. This memoir contains some pithy sayings worth remembering in our generation. These are a few samples—"It is a false idea to suppose that anybody is competent to learn or to teach anything;" "The mind is made strong not through much learning but by the thorough possession of something;" "Learn to read the book of Nature for yourself;" "Train your pupils to be observers;" "It is better to have a few forms well known than to teach a little about many hundred species;" "The study of Nature is an intercourse with the highest mind." A remark, also of his, has a lesson for this age of many books, when he said, commenting on his early difficulties in obtaining them, that "he believed it had been really an advantage, for it prevented him from relying too much on them, their absence forcing him to investigate for himself."

Dr. Holder compares the influence of Agassiz in America with that of Darwin in England. It was in many respects very different, as were the men; yet they had much in common: the same intense love of nature, the same thirst for knowledge, the same indomitable energy in the pursuit of it. They were alike in being seriously hampered: Agassiz by poverty, at any rate in the earlier part of his life, for many a time his mind had to be fed at the expense of his body; Darwin by ill health in the larger and later part. Yet they were very different: the one in constant intercourse with his fellow men, the enthusiastic leader of a band of students, the centre of a society; the other compelled to lead a recluse life. They looked also upon nature from different standpoints. Agassiz was unable to accept Darwin's views as to the origin of species, though it is curious to see what concessions he was prepared to make in regard to a progression from an embryonic stage to one of high development. This, however, must be by successive creations, not by evolution. In regard to the latter he apparently shared the fears of not a few other religious men, and failed to see that the vision of Mother Carey in Peacepool, "making things make themselves," may be as full an expression of the operation of a Divine Mind as any scheme of creation.

Agassiz, though he had a hard struggle, was fortunate in many respects: in the possession of good parents, a vigorous frame, and a sound constitution; above all, in acquiring the friendship of such men as Cuvier and Humboldt at the age when their help was most needed. He was happy, like Darwin, in his family life, with a wife who was a helpmate, and a son who followed his footsteps, and still does honour to the name. Like Darwin also, he was *felix opportunitate vitæ et mortis*. Both had their obstacles to overcome, and their difficulties to conquer, but they would have found these more formidable, because more insidious, in the present generation. Is an Agassiz or a Darwin any longer a possible product?

NO. 1229, VOL. 48]

Natural science is now sometimes in danger of becoming a department of literature or a branch of physics. These men went to nature for their teaching rather than to books: now they would find it hard to avoid being smothered with "the literature of the subject," and being choked with the dust of libraries. To read the life of the genuine lover of out-door nature such as Agassiz or Darwin, is like a breath from a glacier in the valley of the Rhone; to study the record of a life so simple, so earnest, so pure, so reverent, is a lesson for all time.

T. G. BONNEY.

OUR BOOK SHELF.

Beiträge zur Biologie und Anatomie der Lianen, im Besonderen der in Brasilien einheimischen Arten. Von Dr. H. Schenck. Zweiter Theil. Beiträge zur Anatomie der Lianen. 8vo. pp. 271, tt. 12. (Jena: Gustav Fischer, 1893.)

IN a brief notice of the first part of Dr. Schenck's "Beiträge" (NATURE, vol. xli., p. 514), the fact that it was only the first part was overlooked; hence the remark that all the plates of that part were devoted to the illustration of the external morphology of chiefly woody climbers loses the force it would have had, had it referred to the whole work. The second part has now appeared, and this treats of the anatomy, whilst the first treats of the biology of this class of plants. The two volumes form a valuable book of reference on this subject; and the illustrations include examples of the anatomy of the stems of climbing plants belonging to about twenty-five natural orders. There are twelve large folded plates containing 178 figures, all very laboriously and carefully drawn. The Sapindaceæ and Leguminosæ are most numerous represented, and present some highly curious structures.

W. B. H.

LETTERS TO THE EDITOR.

The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

The Late Solar Eclipse.

IN his account of the work of the Eclipse Expedition at Fundium Mr. Fowler seeks to explain his inability to obtain the photographs at the moment of totality by the assumption that he received the signal of the beginning of totality at least ten seconds too late, and he bases this assumption on his own estimate of the difference in time which elapsed between my signal and that of M. Coculesco, one of the French observers at Fundium.

I did not hear M. Coculesco's signal, as my head was necessarily enveloped in the dark cloth of my photometer at the moment, but M. Deslandres, the chief of the French party, with whom I returned to Europe, tells me that he estimated the interval at about two seconds, with which estimate M. Coculesco concurs.

There would seem to be good reason to believe that the actual time of the total phase was several seconds less than we had been led to expect. The chronometer observations at Fundium (lat. 14° 7') gave 243 seconds. M. Bigourdan, who was specially charged by the Bureau des Longitudes to make accurate observations on this point at Joal, which is a few miles to the west of Fundium, and in lat. 14° 9', informs me that the total phase there was 241 seconds.

It is possible, therefore, that Mr. Fowler's estimate of 10 seconds may not only have been erroneous in consequence of the known difficulty of accurately estimating a time interval