

ALFRED RUSSEL WALLACE.*

THE history of a soul, when faithfully narrated for the instruction of others, can hardly fail to be interesting. Especially is this the case when the story is told by a man who has attained eminence in his particular branch of study, and whose name is familiar to practically all educated persons. For both these reasons the intelligent reader will value the autobiography which has lately been published by Dr. Alfred Russel Wallace, who made his mark deeply on the history of science when the joint memoirs in which his name was united with that of Charles Darwin were read to the Linnean Society in 1858. It is generally known that Dr. Wallace hit upon the vastly important idea of the work done by natural selection in causing the origin and differentiation of species, independently of Darwin. In the first volume of his autobiography he shows us very clearly by what steps he was led to this epoch-making discovery. The path was essentially similar to that trodden by Darwin. Dr. Wallace began life as a surveyor, and in the course of this occupation he was naturally led to develop that interest in the wonders of Nature which was innate in his disposition. "What occupied me chiefly," he says, "and became more and more the solace and delight of my lonely rambles among the moors and mountains, was my first introduction to the variety, the beauty, and the mystery of nature as manifested in the vegetable kingdom." It was the chance remark of a friend which first gave him a desire to understand something about wild flowers, and this desire was fulfilled when he came into possession of one of the shilling books published by the Society for the Diffusion of Useful Knowledge. With its help he became a good practical botanist, and his country rambles were made interesting by the possession of this knowledge. The fortunate accident that his surveying business failed to supply him with an adequate supply of work—though at the time it was hardly agreeable—encouraged him to indulge his taste for natural history. Ultimately he saw his way to devote his life entirely to this fascinating pursuit, and left England in order to become a collector of rare plants and animals, first in the valley of the Amazon, and then in the Malay Archipelago. He has already described this part of his working life in books which have long been ranked among the classics of natural history, along with the similar writings of Waterton, Bates, and Darwin.

No man who is really interested in natural history and its

underlying problems can wander long among the exotic vegetation of the Amazon without being led to ask himself the fundamental question of how all these strange and beautiful forms came into existence. Dr. Wallace in his solitary rambles pondered deeply over this question, just as Darwin had been led to muse over it by his voyage in the 'Beagle,' and had continued to seek its solution during the laborious years which piled up the materials for *The Origin of Species*. Darwin, with characteristic patience, spent many years in working out the conception which flashed upon him after reading Malthus's "Essay on Population." There is no question that the essential part of the theory which now bears his name was clearly fixed in Darwin's mind long before it occurred to anybody else. Dr. Wallace now tells us that the same idea occurred to him, then quite ignorant of the principles which were guiding Darwin's work, during an attack of intermittent fever which kept him idle at Ternate. During this enforced abstinence from work his mind ran freely on the great question of the origin of species. One day something reminded him of Malthus's "Essay," which he had read many years before, but had not at the time connected with the struggle for existence among plants and animals. Malthus deals with the checks to increase—disease, accidents, war, and famine—which keep down population among primitive races of mankind. Dr. Wallace adds:—

"It then occurred to me that these causes or their equivalents are continually acting in the case of animals also; and as animals usually breed much more rapidly than does mankind, the destruction every year from these causes must be enormous in order to keep down the numbers of each species, since they do not evidently increase regularly from year to year, as otherwise the world would long ago have been densely crowded with those that breed most quickly. Vaguely thinking over the enormous and constant destruction which is implied, it occurred to me to ask the question, 'Why do some die and some live?' and the answer was clearly that on the whole the best fitted live. From the effects of disease the most healthy escape; from enemies, the strongest, the swiftest, or the most cunning; from famine, the best hunters or those with the best digestion; and so on. Then it suddenly flashed upon me that these self-acting processes would necessarily improve the race, because in after generations the inferior would inevitably be killed off and the superior would remain,—that is, *the fittest would survive*."

In this sudden flash was contained the germ of the whole theory of natural selection. Dr. Wallace wrote it out as a paper suitable for reading before a scientific society, and sent it home to Darwin, with whom he had been in correspondence for some time. Darwin had then nearly finished his great book on *The Origin of Species*. Some men would have felt annoyance at this anticipation of their chief work by another, but Darwin, whose largeness of mind was only equalled by his modesty, at first intended to hold back the publication of his own work in order that Dr. Wallace might have priority for his discovery. He was fortunately dissuaded from this Quixotic intention by Hooker and Lyell, and a summary of his own work was read along with Dr. Wallace's paper at the Linnean Society. It is rightly felt that the great doctrine of organic evolution which has so deeply modified our views of the origin of life should be coupled with the name of Darwin; but that of Dr. Wallace has won a place of high collateral glory. There is no episode in the whole history of science which is more creditable, from the purely human standpoint to both persons concerned in it.

The first volume of Dr. Wallace's autobiography gives an adequate and interesting description of the various influences which led him up to this culminating point in his career. His second volume gives an account of the eminent friends that he made—such as Darwin, Herbert Spencer, Owen, Huxley, and Samuel Butler—and describes the various branches of study to which his latter years have been devoted. It is impossible to speak of these with so much enthusiasm as of the earlier part of his career. So far as he devoted himself to illustrating and popularising the various applications of his and Darwin's joint discovery, he did entirely good work. His books on *Island Life*, *Darwinism*, *Tropical Nature*, and the like subjects hold an honourable place in every scientific library. But one has to admit that there was a slight defect of balance in his nature, and that he wasted a great deal of energy on divagations into studies where he never showed to the same advantage. It is always regrettable that a man who has worthily earned a high place among those who have advanced natural knowledge should make sport for the Philistines by writing on subjects with which he is less competent to deal.

* *My Life*. By Alfred Russel Wallace. 2 vols. Illustrated. London: Chapman and Hall. [25s. net.]

But with the best will in the world, we can hardly speak in any other terms of Dr. Wallace's excursions into the discussion of land nationalisation, anti-vaccination, and spiritualism. His public championing of these somewhat discredited causes has done them no good, and has indirectly been rather a disadvantage to science. The "man in the street" is only too ready to argue that science may, after all, wield less authority than it claims when one of its high priests shows himself unduly ready to accept hearsay evidence, and to mistake sentiment for reasoning when he deals with matters outside his own domain. The two things are by no means incompatible; but one cannot help regretting that this should be so. Dr. Wallace learnt by bitter experience, as he tells us in one of his most interesting chapters, the folly of trying to argue with a "crank"; one cannot help wishing that his experience with the apostles of the flat-earth creed had taught him the wisdom of sticking to his last. But whatever we may think of Dr. Wallace's excursions beyond the field of natural history, there is no doubt that his name will always rank high among the shining stars of Victorian science, and his autobiography is a welcome and worthy record of an honourable and strenuous career.
