

ENTOMOLOGICAL NEWS.

PHILADELPHIA, PA., JANUARY, 1914.

Alfred Russel Wallace.

The opening sentence of the NEWS for July, 1913: "In the death of Lord Avebury, on May 28, there passed away the youngest, but not the last, of that group of famous English naturalists intimately associated with Darwin and the promulgation of his theories," is no longer true. Alfred Russel Wallace, "the last," died on November 7, 1913, aged 90 years and ten months less one day. The length of his life is remarkable, considering the attacks of disease from which he suffered both in England and on his expeditions to the Amazon and the Malay Archipelago.

His autobiography, published in two volumes in 1905, under the title, *My Life A Record of Events and Opinions, with facsimile letters, illustrations and portraits*, renders unnecessary any account of his life in this place. It is not superfluous, however, to recall his entomological labors and the influence which he considered that the study of insects had upon his own career and that of his co-discoverer of the theory of natural selection.

At the meeting held by the Linnean Society of London on July 1st, 1908, to celebrate the Fiftieth Anniversary of the joint communication made by Charles Darwin and Alfred Russel

Wallace to the Society, "On the Tendency of Species to form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection," the first Darwin-Wallace medal was presented to Wallace, who said in reply, among other things:

this brings me to the very interesting question: Why did so many of the greatest intellects fail, while Darwin and myself hit upon the solution of this problem—a solution which this Celebration proves to have been (and still to be) a satisfying one to a large number of those best able to form a judgment on its merits? As I have found what seems to me a good and precise answer to this question, and one which is of some psychological interest, I will, with your permission, briefly state what it is.

On a careful consideration, we find a curious series of correspondences, both in mind and in environment, which led Darwin and myself, alone among our contemporaries, to reach identically the same theory.

First (and most important, as I believe), in early life both Darwin and myself became ardent beetle hunters. Now there is certainly no group of organisms that so impresses the collector by the almost infinite number of its specific forms, the endless modifications of structure, shape, color and surface-markings that distinguish them from each other, and their innumerable adaptations to diverse environments. * * *

Again, both Darwin and myself had what he terms "the mere passion of collecting"—not that of studying the minutiae of structure, either internal or external. I should describe it rather as an intense interest in the mere *variety* of living things—the variety that catches the eye of the observer even among those which are very much alike, but which are soon found to differ in several distinct characters. * * *

It is the constant search for and detection of these often unexpected differences between very similar creatures that gives such an intellectual charm and fascination to the mere collection of these insects; and when, as in the case of Darwin and myself, the collectors were of a speculative turn of mind, they were constantly led to think upon the "why" and the "how" of all this wonderful variety in nature—this overwhelming, and, at first sight, purposeless wealth of specific forms among the very humblest forms of life.

Then, a little later (and with both of us almost accidentally) we became travelers, collectors and observers, in some of the richest and most interesting portions of the earth; and we thus had forced upon our attention all the strange phenomena of local and geographical distribution, with the numerous problems to which they give rise. Thenceforward our interest in the great mystery of *how* species came into ex-

istence was intensified, and—again to use Darwin's expression—"haunted" us.

Finally, both Darwin and myself, at the critical period when our minds were freshly stored with a considerable body of personal observation and reflection bearing upon the problem to be solved, had our attention directed to the system of *positive checks* as expounded by Malthus in his "Principles of Population." The effect of this was analogous to that of friction upon the specially-prepared match, producing that flash of insight which led us immediately to the simple but universal law of the "survival of the fittest," as the long sought *effective* cause of the continuous modification and adaptation of living things.

Wallace's interest in beetles, as he tells in *My Life* (i, pp. 236-237), was due to his meeting Henry Walter Bates, in 1844 or 1845, as a result of which he not only began to collect these insects but also to enter into a correspondence with Bates that eventually led to their joint visit to the Amazon. Their choice of this region of the world was the result of reading W. H. Edwards' *A Voyage up the Amazon*, published in 1847. Edwards, being in London soon after, gave the young Englishmen letters of introduction to friends at Para. Forty years later, in April, 1887, Wallace renewed his personal acquaintance with the great American lepidopterist by a visit to the latter's home at Coalburgh, West Virginia.

The richest parts of Wallace's South American collections, 1848-1852, were lost by the burning of the vessel on which he was returning to England. He mentions, in his *Narrative of Travels on the Amazon and Rio Negro*, having gathered 900 species of diurnal Lepidoptera.

He was more successful in his journey to the East, 1854-1862, and, in the preface to *The Malay Archipelago*, tells us that when he returned to England in the spring of 1862 he found that the collections which he had retained for his private use included "at least twenty thousand beetles and butterflies, of about seven thousand species," while the total numbers of specimens which he secured were 13100 specimens of Lepidoptera, 83200 Coleoptera and 13400 other insects. His papers, *The Malayan Papilionidae, as illustrating the Theory of Natural Selection* (Trans. Linn. Soc. Lond. xxv),

on the Pieridae of the Indian and Australian regions and on the Cetoniidae of the Malay Archipelago (these two in *Trans. Ent. Soc. Lond.* 1867) were based in large part on his own collections, are summarized in *My Life* (i, pp. 400-403) and constitute his systematic entomological work.

Many of his essays on general subjects such as Mimicry, and many chapters in his larger works, *The Geographical Distribution of Animals*, *Darwinism*, *Tropical Nature*, etc., are founded on his own observations on insects. As President of the Entomological Society of London, his address in January, 1871, dealt with the peculiarities of insular insects, while that of 1872 "endeavoured to expound Herbert Spencer's theory of the origin of insects, on the view that they are fundamentally *compound animals*, each segment representing one of the original independent organisms."
