DARWINISM: AN EXPLANATION OF THE THEORY OF NATURAL SELECTION, WITH SOME OF ITS APPLICATIONS. By ALFRED RUSSEL WALLACE. London and New York: Macmillan & Co. Pp. 494. Price, $1.75.

This work treats of the origin of species on the same general lines as were adopted by Darwin, but in the light of the discussions, objections, theories, and new discoveries that have been brought forth in the nearly thirty years which have elapsed since Darwin promulgated his great principle. The objections made to Darwin's theory in its earlier days were fundamental, and were directed against the principle itself. But Darwin "did his work so well that 'descent with modifications' is now universally accepted as the order of Nature in the organic world; and the rising generation of naturalists can hardly realize the novelty of this idea, or that their fathers considered it a scientific heresy to be condemned rather than seriously discussed." The objections now made to the theory apply solely to the particular means by which the change of species has been brought about. The objectors seek to minimize the agency of natural selection, and to subordinate it to laws of variation, of use and disuse, of intelligence and heredity. Mr. Wallace maintains the overwhelming importance of natural selection over all other agencies in the production of new species. He begins with illustrating the struggle for existence, which he considers one of the most important and universal, and yet least understood, forces of Nature. Next, variability is shown to be constant, universal, incessant, and frequent. It was a weakness in Mr. Darwin's argument that he based it so largely on the evidence of domesticated animals and plants. Mr. Wallace goes to Nature, and finds variation just as much the rule with species in the wild state, illustrating the fact with numerous citations and diagrams; and the objection that the preponderance of chances is immensely against the right variation or combination of variations occurring just when required, is blown away by showing that all forms of variation are all the time occurring. The argument is continued as to the relations of crosses, color, mimicry, heredity, and the geographical distribution of organisms. The objection based upon the failure to find evidences of the existence or former existence of a great number of the connecting links, which the theory of evolution supposes must have been developed, is answered by showing that the geological record of former forms is, and always will be, very imperfect, particularly with reference to animals and plants of the upland; and good reasons are given to show why it must be so. The views of Mr. Spencer, as set forth in his "Factors of Organic Evolution," and of Prof. Cope, Dr. Karl Semper, Prof. Geddes, and Prof. Weismann, are taken up, and claimed not materially to diminish the importance of natural selection, or to show that any of the laws or forces to which they

appeal can act otherwise than in strict subordination to it. In application to man, Mr. Wallace finds natural selection ample to the development of his physical structure, but failing to account for his moral and intellectual faculties.