

59. MR. ALFRED WALLACE is a zealous and fearless advocate of his convictions, and adds to the merits of patient thought and accurate observation the attraction of a singularly lucid and pleasing style. His small volume of *Contributions to the Theory of Natural Selection*, though mostly a reprint of essays which have

already appeared in various scientific and other periodicals, contains a quantity of new and interesting matter, together with an exposition of the author's more recent views, which depart somewhat widely from those of Mr. Darwin and the majority of his followers. The essays are arranged in ten chapters. A large part of the book is taken up by subjects which are peculiarly Mr. Wallace's, such as protective mimicry, and the relation borne by birds' nests to the colours of the female birds. One of the most interesting parts of the volume is the last chapter, which treats of the limits of natural selection as applied to man.

It is here that Mr. Wallace deviates from the strict Darwinian view. He maintains that the origin of man has been brought about by the agency of a higher intelligence guiding the action of natural laws, as man guides them in the formation of the domestic races. He also attributes the origin of life and of consciousness to some deeper law than that of natural selection. He grounds his position concerning man on several facts. Thus he considers that savages possess, in the large brain with which they are provided, an organ beyond their needs, and one therefore which cannot have been developed by the action of natural selection alone. He also contends that the general absence and peculiar disposition of hair on the human body must have been obtained in some other way, the nakedness of the back being a positive detriment to the nude figure. Finally he thinks that on strict Darwinian principles alone neither the origin of such conceptions as those of space, time, infinity, etc., nor even the range and perfection of the human voice, can be accounted for.

These dissents from the views of Mr. Darwin are advanced with great modesty, but at the same time with confidence; and their expression on the part of the co-originator of the theory of "Natural Selection" is a noteworthy phenomenon. Mr. Wallace seems perfectly right in his objections; but, if a deeper law is thus seen to underlie necessarily the production of man, it is probable, a priori, that a similar deeper law also underlies the evolution of all organic forms. It is difficult to see design in the hand of man, and not see it in the singularly beautiful and perfect form of the horse, an animal to all appearance as specially organized for the service of man in one way as is the dog in another. Indeed it may fairly be urged upon Mr. Wallace that the action of intelligence is not manifested in the production of man only, or of the animals which minister to him, or of all organized life, but no less in the development of crystalline and other mineral structures, in the laws of heat and motion, in the geological evolution, and in that of the solar system, or of the whole sidereal universe. Such indeed is the result to which the book directly tends, in spite of the distinction Mr. Wallace attempts to draw between the physical origin of man and of other animals. This tendency is most strongly displayed in a few pages on metaphysical considerations, towards the end of the book. Here matter is reduced to force, and force is taken to be the expression of will. "If, therefore," says the author, "we have traced one force,

however minute, to an origin in our will, while we have no knowledge of any other primary cause of force, it does not seem an improbable conclusion that all force may be will-force; and thus that the whole universe is not merely dependent on, but actually is, the will of higher intelligences, or of one Supreme Intelligence."