

NATURAL SELECTION.*

MR. WALLACE, to whom science is nearly as much indebted for the theory of Natural Selection as it is to Mr. Darwin, has done wisely and well to reprint, in the convenient form of a volume, the more important of those scientific papers in which from time to time he advocated and supported the now generally accepted doctrine of the origin of species. It will be unnecessary for us to enter critically into Mr. Wallace's chapters, as the several articles have already been for years before the public, and have been dealt with by both scientific and general reviewers. We would, however, refer to one of them as of surpassing interest, for in it the author attempts an intensely difficult problem in trying to apply the general evolutionary doctrine to the phenomena which are popularly included under the term instinct. The remarks in this chapter have not hitherto been published. The author's definition of instinct seems to us to be especially a good one, and to be sufficiently comprehensive to include all the operations which properly come within the term. Mr. Wallace says that instinct is "the performance by an animal of complex acts absolutely without instruction or previously acquired knowledge." This is perfectly satisfactory, and though it does not seem to us that in the present state of science Mr. Wallace is in a position to explain the more curious examples of instinctive acts, he has certainly gone far towards convincing us that instinct is not to be explained by any reference to a supernatural law. His remarks on the questions, "Does man possess instinct?" and "How Indians travel through unknown and trackless forests," are admirable examples of candour in acknowledging difficulties, and of clear reasoning on the facts as we know them. Mr. Wallace's book is one which is intelligible to an ordinarily clear-headed person, and it is of course a standard book which every biologist must have on his bookshelves. The following is a list of the chapters it contains, with the dates of their first publication:—"On the Law which has regulated the Introduction of New Species" (September 1855); "On the Tendency of Varieties to depart indefinitely from the Original Type" (August 1858); "Mimicry and other Imitative Resemblances among Animals" (July 1867); "The Malayan Papilionidæ, or Swallow-Tailed Butterflies, as Illustrations of the Theory of Natural Selection" (March 1864); "On Instinct in Man and Animals" (not before published); "The Philosophy of Birds' Nests" (July 1867); "A Theory of Birds' Nests" (1868); "Creation by Law" (October 1867); "The Development of Human Races under the Law of Natural Selection" (May 1864); and, lastly, "The Limits of Natural Selection as applied to Man."

* "Contributions to the Theory of Natural Selection: a Series of Essays." By Alfred Russel Wallace. London: Macmillan, 1870.