

Contributions to the Theory of Natural Selection. By ALFRED
RUSSEL WALLACE. Macmillan & Co.

All who have read or heard any of the papers which have been written by the sagacious naturalist of the Malay Archipelago will rejoice that they have been gathered from the various publications in which they first appeared, and placed side by side in a very readable form.

The first paper is already famous, as having precipitated the publication of 'The Origin of Species.' It is true there is very little evidence of *precipitation* in Mr. Darwin's book, however premature the theory itself may appear to some; but we have Mr. Darwin's assurance and acknowledgment that in this paper his own idea was at least foreshadowed. We think no one can read 'The law which has regulated the Introduction of New Species' without justifying Mr. Darwin's estimate of that paper. Mr. Wallace's conclusion is, that 'Every species has 'come into existence coincident both in time and space with pre-existing closely allied species.' While this law directly points to a derivative origin for species, and some of the arguments suggest the idea of a natural selection, Mr. Wallace has been content not to assume this derivative origin as proved, and some will be inclined to think that by so doing he showed a laudable scientific caution. Mr. Wallace has, however, fully adopted the Darwinian hypothesis, very gracefully acknowledging the superlative fitness of its author for its enunciation and discussion.

In his essays on 'The Tendency of Varieties to depart indefinitely from the Original Type,' and 'Mimicry,' the author lends a powerful support to Darwin's theory. The latter essay attracted so much attention when it first appeared in the 'Westminster Review' of July, 1867, that its merit is well known. In it the peculiar powers of Mr. Wallace are shown to the greatest advantage. The clearness of his

style, the minuteness of his knowledge of detail, and the skill with which he applies this to the elucidation of his main idea is unparalleled, except by Mr. Darwin himself. Mr. Wallace, though an enthusiastic, is by no means a servile disciple of Darwin. He declines to place as much stress on *sexual selection* in the attainment of the striking beauty which characterize different species of birds and butterflies, and especially of the males of those species, as the author of 'The Origin' does. That natural selection may operate in making the male bird more conspicuous, and will certainly tend to render the female, who sits on an open nest, inconspicuous, is insisted on most cogently. The theory of sexual selection is, of course, no part of the theory of natural selection. It involves considerations quite different from it, and rests, we think, upon very imperfect and scanty information. It is, no doubt, a convenient supplement to the theory of natural selection, because it accounts for the existence of beauty, which is quite unaccountable on the Darwinian hypothesis, in so far as it can be severed from use and advantage of some kind.

Mr. Wallace is not so fascinated by one idea as to fail to recognise in the development of the organic world other laws than those of variation and natural selection. His last two essays, on 'The Action and Limits of Natural Selection, as applied to Man,' are full of original thought, and point directly to the controlling intelligence of the Creator consciously aiming at results, as distinguished from the blind *quaquaversal* variation, which seems to be the tacit assumption which underlies the theory of 'The Origin of Species.'

The speculations of Mr. Wallace are always original and interesting. Those which treat of *instinct* and *imitation* are novel. Some of them do not, however, convince the judgment to the same extent as others do. Thus, his remarks on the capability of savages to travel through unknown and trackless forests, in which the power is removed from the province of instinct and placed under the category of intelligence, are undoubtedly correct; but when he endeavours to show that birds build their nests, not by instinct, but by the education of their imitative faculty, we can scarcely follow him to that conclusion. No doubt, there is more analogy between the building propensity of man and of birds than a *primá-facie* view of the subject would indicate, but we must still consider it an analogy, and not an identity. We are conscious of both instinctive and intelligent actions. The building of our houses is not instinctive, while the nidification of the bird certainly does seem to be the performance of a complete act, absolutely without instruction or previously acquired knowledge; otherwise, the cuckoo would build a hedge-sparrow's nest. We commend Mr. Wallace's book to all readers, because it is the product of a diligent searcher after truth in the vast and varied field of nature, and presents the results of great labour in so charming a manner as to abstract all labour from the reception of them.