

that he insists on seeing all the phenomena from the point of view of a natural selectionist, and nothing more. As Mr. Wallace has, however, already discovered that Natural Selection, though applicable to man, is not sufficient, unsupplemented, to account for him, we may hope that he will yet see this with regard to the rest of the organic world.

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FOUR years ago I advanced the opinion that Natural Selection is insufficient to explain the "Origin of Species," and that, rather, the origin of the variations of which Natural Selection is said to avail itself must be looked to for this purpose. I may perhaps, therefore, be allowed to say a few words in examination of Mr. Wallace's explanation of this point in last week's NATURE.

One of the objects of Mr. Darwin has been to show that the existence of species as an absolute entity is a mere idea of our minds; that if we could at the same moment look around us in space, and also backwards in time, we should find the organic world connected together as one whole, one great mass of beings extremely closely allied to each other, and distinguishable only by an accumulation of small and perhaps scarcely appreciable differences. A second and closely-connected object has been to show that this great mass of beings has had a common origin from one primeval ancestor (or at most a few ancestors). These two points are the chief ones involved in the "Origin of Species" question, *as it is ordinarily understood*; and if they be borne in mind, it will be seen that the doctrine of "Natural Selection, or the Survival of the Fittest," deals with only a small portion of the numerous problems involved in this great question. I am sure that Mr. Wallace, after having written as he has done about man, that in his case other influences than this survival of the fittest have been at work, may reasonably allow importance to other powers than Natural Selection in the case of other organic beings.

If Mr. Darwin's book had been entitled "The Influence of Natural Selection on the Formation of Species," some misconceptions might, perhaps, have been avoided. Its present title undoubtedly tends to convey the idea that Natural Selection is *per se* the Origin of Species. I believe Mr. Darwin, however, holds no such idea.

The picture above alluded to, of a complicated mass of beings connected together by innumerable gradations, is so different from what we find existing around us, that one of the first questions suggested by it is, where are the connecting links? This first question has never yet been answered to any extent, or with anything like adequacy. The links produced are but few, and not sufficient to bear the great weight attached to them. For at no period of the geological record do we find any traces of the general and intimate connection of beings with one another that Mr. Darwin's views would lead us to look for. The creatures composing the organic world at any one given moment were, so far as the evidence of geology goes, separated from one another by lines of demarcation of similar value to those existing among animals now.

What is wanted to explain the phenomena of various limited and defined species arising from one common ancestor is, then, first, a law, or group of laws, to throw light on the origin of variation and dispersion; and, second, another law or laws to explain the limitation and separation of the varieties so produced. It is quite out of the question to suppose that the theory of Natural Selection does all this. Those, however, who have studied Mr. Spencer's work will be well aware that his theory of evolution may be applied to deal with the question in this its more extended light. And I believe that those who wish well for the survival of Natural Selection will do well to insist on its only being considered in connection with a more extensive doctrine of evolution. This is where I think Mr. Wallace errs in his advocacy.

I will not here allude to the question of mimicry more than to say, that Mr. Wallace has never answered, but rather avoided, the chief difficulties I have advanced against it; and that his theories on the subject are undoubtedly open to the objection