One of the strongest arguments in favour of the doctrine of the origin of species by some process of evolution is certainly derived from the consideration of the geographical distribution of animals and plants upon the surface of the earth; and, indeed, it was from such considerations that Mr. Wallace was led to the preparation of his celebrated paper, the communication of which to the Linnean Society induced the publication of Mr. Darwin's work on the origin of species. It seems, therefore, to be only in the natural course of things that the most important book to which the promulgation of these views has given rise should be one devoted to the geographical distribution of animals,[4] and bear on its title-page the name of the

[4] "The Geographical Distribution of Animals, with a Study of the Relations of Living and Extinct Faunas, as Elucidating the past Changes of the Earth's Surface." By Alfred Russel Wallace. Two Vols. 8vo. London: Macmillan & Co. 1876.

naturalist who may fairly claim an equal share with Mr. Darwin in the inauguration of the new phase of biological thought. But the very circumstances which give so much importance to Mr. Wallace's work, and will render it absolutely indispensable as a book of reference to every working zoologist, make it almost impossible for us to discuss its scope and bearings properly in the space at our command, and we must be content to give the reader a general sketch of the mode in which the author has treated his subject. After an introduction to the subject, containing a discussion of the conditions governing the geographical distribution of animals in general, Mr. Wallace proceeds to the consideration of the geographical regions which it is most convenient, and in accordance with observed facts in nature, to adopt; and here he comes face to face with one of the great difficulties which beset this department of science. In the selection of such regions it is clear that there must be something in the nature of a compromise, for, as Mr. Wallace says, "it will evidently be impossible that the limits which best define the distribution of one group should be equally true for all the others." And in our author's case the difficulty is increased, because a part of the task he has set himself, in accordance with his belief in the theory of evolution, is to take into consideration not only the existing species of animals, but also the fossil forms from which, according to that theory, these have been derived. He selects the Mammalia as the class which best fulfils all the conditions necessary to furnish us with a clue to the causes of the present distribution of terrestrial organisms; and from a consideration of their arrangement on the surface of the earth, and after discussing other, and sometimes more complicated schemes, which have been proposed by various writers, he arrives at the conclusion that the six geographical regions originally laid down by Mr. Sclater in 1857, from the distribution of birds, are the best that can be adopted at present. Each of these regions, again, is divided into four natural sub-regions, and the regions and sub-regions are shown distinctly in a number of coloured maps which illustrate Mr. Wallace's book.

The groups of which the geographical distribution is specially treated of by Mr. Wallace are the five classes of the Vertebrata; the Diurnal Lepidoptera, or butterflies; the families Cicindelidæ, Carabidæ, and Lucanidæ, or tiger-beetles, ground-beetles, and stag-beetles, among Coleopterous insects; and the Pulmoniferous Gasteropod Mollusca. A general sketch of the classification of animals concludes the first or introductory section of the book. The second part is devoted to a consideration of the distribution of extinct animals, especially Mammalia, as evidenced by their remains which have come down to us; and this, although exceedingly important and interesting in itself, is really for the most part only a clearing of the ground for the treatment of the main subject, which occupies the remainder of Mr. Wallace's work. This is divided into two parts, the first describing the forms of animal life inhabiting, and

characteristic of, the different regions and sub-regions into which the author divides the surface of the earth; whilst in the second the process is reversed, and the various groups are treated as zoological entities, and their geographical distribution indicated. By means of these two sections of zoological geography and geographical zoology the facts of the geographical distribution of animals are presented in the most complete form, and it is impossible to speak too highly of the manner in which Mr. Wallace has performed his most difficult and laborious task. The mere condensed results of the technical labour which had to be undertaken by the author in getting together the materials on which to found his arguments, and which are here given in the form of full tables of genera, with indications of their distribution, are almost appalling; but at the same time, these tables of themselves, even apart from the generalisations based upon them, will prove of the utmost value to zoologists. Any attempt to give an idea of the more theoretical portions of Mr. Wallace's work, or of his often successful modes of explaining the seemingly anomalous facts of geographical distribution, would lead us too far; and those who are acquainted with his previous writings will hardly need to be told that they manifest great ingenuity and acuteness, and a careful weighing of evidence. We may, however, in conclusion, congratulate Mr. Wallace on having produced the most valuable contribution to zoological literature that has appeared for many a day.