

Transcription (from *Trove*), July 2014:

*The Argus* (Melbourne, Australia) No. 10807 (5 Feb. 1881): 4a-4b (anon.).

[p. 4a]

‘Current Literature.’

Under the modest and most inadequate title of *Island Life* (Macmillan and Co.), Mr. A. R. Wallace, perhaps the first of living naturalists, has made a very important and interesting contribution to a branch of natural science in which he is *facile princeps*, if not alone, namely, what may be called the geography of zoology. Written with all that breadth of knowledge and keen spirit of research which are the distinguishing qualities of his books this is perhaps more than any of them interesting to the general reader. Mr. Wallace possesses in a larger measure than any of his contemporaries, not even excepting Mr. Darwin, whose foremost disciple, and indeed co-founder of the modern theory of evolution, he may claim to be, the gift of exposition. His present work, which he announces as a popular supplement to and completion of his more exact treatise on the *Geographical Distribution of Animals*, is more fascinating than any romance and more readable than any history. Its object is, in view of the more general acceptance of the truth of the doctrines which are usually associated with the name of Darwin, to prove how those doctrines are illustrated and verified in the present distribution of animal life over the globe, to assert the laws which regulate the extension of groups of living creatures over the earth's surface, the permanence of the great features of the distribution of land and water, and the nature and frequency of climatal changes through geological time. In his introductory chapter he explains why it is that he has selected islands as offering the best subjects for the study of the problem of animal distribution. The question is presented to the non-scientific reader in a manner which must irresistibly tempt him, if he has any of the spirit of curiosity, to follow his guide into a domain which, while the keys of it have hitherto been held by a few men of science, ought no longer to be a *terra incognita*. The traveller from Great Britain to Japan, after passing through many various climates, each with its characteristic products, cannot but remark, Mr. Wallace observes, the close resemblance of the natural objects round him to those with which he is familiar at home. The woods and fields are tenanted by birds in most cases absolutely identical with those of England. Even the insects are similar to those of the British islands. Some of each class of animals may be new and peculiar, but the visitor cannot but be impressed with the fact of the wonderful resemblance between the productions of two countries so far removed from one another as Great Britain and Japan. On the other hand, the traveller from Australia to New Zealand, though he passes over a distance of not much more than a thousand miles, cannot but be struck with the total dissimilarity between the productions of the two countries. There is scarcely a single form of animal or vegetable life which is common to Australia and New Zealand. Nor has climate much to do with these phenomena. Hot countries undoubtedly differ from cold ones in their organic forms, but the difference is not a constant one, nor does it bear any proportion to difference of temperature. There is less difference, as Mr. Wallace points out, between frigid Canada and sub-tropical Florida in their animal productions than between Florida and Cuba, which are so much more alike in climate. So the differences between temperate Tasmania and tropical Australia are slight and unimportant as compared with the differences between the latter and Java. “The equatorial parts of Brazil and of the West Coast of Africa are almost identical in luxuriance of vegetation, but their animal life is totally diverse.” If we examine the larger islands of the globe we shall be struck with the anomalies in their animal productions. While some exactly resemble the nearest

continents, as Borneo resembles Asia, others are widely different, as Madagascar from Africa. These examples illustrate the kind of questions with which it is the object of Mr. Wallace's book to deal, though the problem he sets himself to solve is one of infinitely greater difficulty and variety than they would at first sight suggest. "If we take the organic productions of a small island, or of any very limited tract of country, such as a moderate sized country parish, we have in their relations and affinities, in the fact that they are there, and others are not there, a problem which involves all the migrations of these species and their ancestral forms, all the vicissitudes of climate, and all the changes of sea and land which have affected those migrations, the whole series of actions and reactions which have determined the preservation of some forms and the extinction of others; in fact, the whole history of the earth, inorganic and organic, through a large portion of geological time." Before entering upon the immediate subject of his work, namely, the study insular forms of life as bearing upon the solution of the problem thus indicated, Mr. Wallace has thought it necessary to devote one-half of this volume to an explanation of the modes of animal distribution, variation, and modification of the geological changes which have affected the globe, of changes re-of climate, their nature, causes and effects, and of the deviation of geological time and the rate of organic development. This, though a very valuable portion of the book, is necessarily one of greater interest to men of science than to the general reader. It is the second part of Mr. Wallace's book, which deals immediately with insular faunas and floras, which will be found of the greatest interest to the non-scientific public, and which exhibits the rare qualifications of our author as a popular expounder of scientific truths in their greatest perfection. Those who are already acquainted with Mr. Wallace's larger work on the *Geographical Distribution of Animals* will not require to be told of the nature and direction of the investigations which he has here in greater detail and in a more popular form pursued. Islands are specially advantageous for the study of the phenomena and distribution because of their restricted area and definite boundaries, and because they present the facts in their simplest aspect. Following Mr. Darwin in the division of islands into two great classes, those that are continental, and those that are oceanic, Mr. Wallace proceeds to deal, by the light of the most recent researches, with the facts they present which bear upon the general problem of animal distribution. Continental islands are such as are more or less directly connected with continents by submerged banks. They are divided into ancient and recent—the ancient being such as are separated from the continent by a depth of sea of a thousand fathoms and upwards, whose fauna and flora exhibit peculiar and anomalous forms, not necessarily allied to those of the main land; the modern being those that have no more than a hundred fathoms between them and the nearest continent. An example of the former is New Zealand—of the latter, Great Britain. Oceanic islands, once supposed to be the tops of submerged continents, but which the researches of Mr. Darwin have proved to be independent growths of volcanic or coral formation, have never formed any portion of a continent, and are always separated from one by a very deep sea. The distinctions between these two kinds of islands in respect of their animal productions are very striking, and of great value in determining the great problem of the growth and development of animal life on the globe. The fauna and flora of the continental islands resemble almost exactly the fauna and flora of the neighbouring continents, proving the fact that at no very remote period in geological time they were connected. The birds, beasts, and insects of Great Britain are common to Europe, to a great part of Asia, and North Africa. The genera and species are fewer in number because of the conditions less favourable to the multiplicity of forms in the island. On the other hand the fauna and flora of an oceanic island, such as one of the Azores or St. Helena, are limited and peculiar, having no resemblance whatever to those of the nearest continents, and showing unmistakably that they have had their origin not in special creations, as the old school of naturalists used to teach, but in accidental migrations, the results of which have been

more or less modified by local conditions. The fact that there are no mammals indigenous to any oceanic island is in itself a sufficient proof of Mr. Wallace's position. Birds can fly from the mainland to a neighbouring island, insects and plants can be carried from one to the other in various ways, but quadrupeds cannot swim the intervening space. Arguing conversely, the fact of the presence of continental birds and insects in an oceanic island is a proof of the distance which these are able to traverse, and illustrates the manner in which the globe is peopled. The instance of New Zealand is one of the most curious and instructive of all, and Mr. Wallace's chapter on it is a perfect model of close reasoning, and of that faculty of minute observation, combined with the power of synthesis, which is necessary to the highest order of natural science. The islands of New Zealand present many anomalies to the student of zoology, and at first sight would appear to be a standing contradiction to the theory of animal distribution which Mr. Wallace has adopted. Yet when closely examined, the results they yield will be found to be a striking testimony in favour of the truth of that which is no longer only the theory of evolution. In most respects New Zealand is continental—in its geological formation especially, with its ancient sedimentary rocks, with super-imposed strata of later ages. Yet New Zealand is separated from temperate Australia by an ocean varying from 2,000 to 3,000 fathoms deep, and what connection it has at a depth of 1,000 fathoms is with New Caledonia and tropical Australia. Its animal and vegetable productions are wonderfully isolated, and resemble nothing in Australia or in Oceania. Thus, the inferences to be drawn from its animal life seem to contradict those drawn from its physical structure. The process by which Mr. Wallace accounts for this anomaly and reduces it to one more proof of his theory, we cannot pretend to summarise. It forms one of the most interesting chapters of a very remarkable book, which will do more to confirm and spread the truth of the new science than anything which has yet appeared in any language.

[\[Return\]](#)

*The Alfred Russel Wallace Page*, Charles H. Smith, 2014.