THE MALAY ARCHIPELAGO.*

No persons can write more charming books of travel than naturalists who unite to knowledge of their special subject great general powers of observation, and a fair share of literary skill. Mr. Darwin's voyage in the Beagle is a model of what such a book should be; and Mr. Wallace, whose share in supporting Mr. Darwin's theory is well known, has written an account of his journeys in the Malay Archipelago which may be fairly put beside it. One circumstance about it is sufficiently significant. Mr. Wallace's journeys were spread over eight years, and more than six years have elapsed since his return, owing to ill-health and to the difficulties of arranging his large collections, amounting to over 125,000 specimens. Now it is obvious that had Mr. Wallace followed the example of book-making travellers, and tumbled out upon us voluminous masses of undigested diary and scientific disquisition, he might have composed a work from which the boldest reader would have shrunk in undisguised dismay. On the scale which some recent travellers have adopted, he would have filled a good-sized bookshelf. As it is, he has contented himself with two volumes of moderate size, of which he modestly says that they are "far too small for the extent of the subjects" treated. Certainly, if it had been his purpose to give us a handbook to the Archipelago, or an exhaustive disquisition upon its natural products, or even a full account of all his own adventures, the space would have been ridiculously small. But all general readers may congratulate themselves on his having aimed at a different mark, and sifted away the chaff before giving us the fine grain of his observations. The result is a vivid picture of tropical life, which may be read with unflagging interest, and a sufficient account of his scientific conclusions to stimulate our appetite without wearying us by detail. In short, we may safely say that we have seldom read a more agreeable book of its kind than Mr. Wallace's account of the Malay Archipelago.

The country is one which in many ways excites and rewards the curiosity of the naturalist. Strange birds and beasts haunt its forests, and innumerable insects creep and fly and buzz and bite the enthusiastic traveller. There, for example, are butterflies the very sight of which caused Mr. Wallace tortures of delight. When he first saw the Ornithoptera Cyanea, his heart began to beat violently, the blood rushed to his head, "and he felt much more like fainting than he has done when in apprehension of immediate death." The excitement produced a headache for the rest of the day. Still more affecting is his

account of his first interview with another species, the great bird-winged butterfly, Ornithoptera Poseidon. He speaks with
rapture of its golden body, crimson breast, and the violet black veins which lace its wings in inches, across. It is one that the eye
sees, to say there is a beauty like a Snow-white creature, "to feel it struggling between one's fingers, and to gaze upon its fresh and living beauty, a bright gem shining out amid the silent
beholder's eyes, for few are they who can resist the sight of it, and length. There is, on the other hand, a kangaroo whose tail is
dege rate in size, the animal, like some would-be athlete, having entered in climbing trees—a calling for which one would
perhaps more
spIrsals at the tops of their heads. Then we have the two great strength of them, has taken to what it cons iders to be flying.
fallen off in point of tail without gaining proportionately in
an animal which from its portrait seems to resemble a very large
different species known he only succeeded in collecting five; but
these wonderful hirds. The captiue of the first, he says, repaid
nicely-balanced relations upon which the preservation of the
woods, with no intelligent eye to gaze upon their loveliness; to
cousins, the Orang-ulans. There is a most pathetic account of the
victim to his scientific zeal. The poor little Mias was still unable
to nurse it, however, with never-failing patience. He let it play
milk, the diet was scarcely nourishing enough for its needs. He
whose wonderful structure and beauty he alone is fitted to enjoy."

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(Second Notice.)

The chief interest of Mr. Wallace’s book is in the light which it throws upon the theory of natural selection; and we will shortly explain the nature of his argument. Whether it is well or ill founded, it has at least the merit that it brings together certain classes of facts which would otherwise be simply inadmissible. The phenomena of the distribution of species to which he calls attention may of course be due to the fact that the animals were created where we find them; this is as much so as to say that we neither know nor ever can know anything more about the matter. The attempt to explain them by means of natural selection may perhaps fail entirely; but meanwhile it gives an interest to the inquiry into what must otherwise remain a detached series of facts.

It supplies a thread which, provisionally at least, binds them together for our further consideration.

The principle upon which Mr. Wallace’s explanation goes is simply this. If we find that in two neighbouring islands—a, for example, in England and the Isle of Man—the existing species are identical, we may assume that they have been connected within a recent period, say, within a few million years. If, on the other hand, they are completely distinct, no such connexion can have existed. Finally, if they resemble each other without being identical, we must suppose that the islands have been separated for so long a period as to allow of a certain modification of the species. Thus, if we knew the rate at which species diverged from a common origin, we might obtain a measure of the time which has elapsed since the geographical changes to which their separation was due. Borneo, for example, must have been parted from the mainland long enough for some of its frogs to learn the art of flying; and New Guinea must have been parted from Australia long enough to teach its kangaroos to climb trees very awkwardly. How long a kangaroo requires to fit itself for so new a station in life is of course an insoluble problem.

The Malay Archipelago furnishes all kinds of examples of this supposed process. It consists of a series of islands long enough to stretch from the West of Europe to Central Asia, three of which are as large as Great Britain, three more equal in size to Ireland, eighteen equal to Java, and more than a hundred equal to the Isle of Wight, besides innumerable islets of smaller dimensions. They are divided from each other by straits and arms of the sea of widely varying breadth and depth; and we find that the natural productions are contrasted to the most remarkable degree.

The most remarkable breach of continuity is between the two islands of Baj and Lombok, which are divided by a strait of only fifteen miles across; yet in Baji the species are distinctly Asiatic, whilst in Lombok we get at once amongst species which are almost as distinctly Australian. A few cockatoos have managed, it seems, to cross the strait to Baji; but they are the only representatives of Australia upon that side. Baji, in short, may be regarded as the furthest outpost to the East of the great continent of Asia, whilst Lombok holds the same position with regard to Australia. Now it is remarkable that this striking division corresponds to no change either in the climate or in the physical characteristics of the country. The great volcanic chain of which the elevation of the islands is apparently due runs through both divisions. Baj on one side of the dividing line closely resembles New Guinea on the other, in its climate, its geology, and its freedom from volcanoes. In like manner, the Moluccas resemble the Philippines in fertility, in luxuriance of forests, and in volcanic structure; and Bali is as dry and parched as Timor. Yet the groups which resemble each other in every other respect are most strikingly contrasted in their animal productions: whilst the stony desert of Australia, with its dry winds and open plains, produces animals closely related to those inhabiting the hot, damp, luxuriant forests which everywhere clothe the plains and mountains of New Guinea. These facts, according to Mr. Wallace, are to be explained by supposing that within a recent geological period the Western islands formed part of the Asiatic continent, whilst the Eastern were more or less connected with Australia. They have gradually approached each other towards the islands of Bali and Lombok, whilst they have become separated from the mainland at each end. The varying state of geographical connexion explains the singular resemblances and contrasts between the products of the several islands. These resemblances and contrasts appear to be closely connected with another measure of time. On the principles so ably explained by Sir Charles Lyell, we may naturally infer that the depth of an ocean is a probable indication of the length of time during which depression has been taking place; and, accordingly, it is a general rule that the difference in the fauna of two islands corresponds to the depth of the intervening sea. Thus the islands which resemble Asia in their productions are divided from it by a very shallow sea, whilst a comparatively deep sea separates them from the Australian group. Following out the same indication in detail, we find that the distinction between the products of islands within the Archipelago follows the same law, and thus, for example, the range of the birds of paradise is accurately marked out by the hundred-fathom line round New Guinea. Another illustration of the same principle appears when we examine more closely the degree of resemblance. Thus, for example, in the Timor group of islands, which are on the Australian side of the

boundary, we find a mixture of species, though the proportion of Australian species increases and that of Javan species diminishes greater than has ever existed before; we maintain a multitude as we approach more nearly to Australia. It seems, however, that whose lot is the humber's because it is contrasted with the existence in Java, one-fourth of the Australian species are identical with them, and who are so far worse off than the savage in the midst of his tribe. We cannot enter upon the very wide discussion to which this would lead us; but more practical conclusions may be drawn from his report as to the benefits resulting from Dutch rule. He admits that the Dutch system is despotic and protective, but says that it has, on the whole, been of incalculable benefit to the native population. The ordinary result of civilized intrusion, as exemplified by English and American experience, is to spread drunkenness and moralization, leading to ultimate exploitation. In the Dutch colonies the people have become industrious, peaceable, and civilized. They are better clothed, housed, fed, and educated than the surrounding tribes, and have made a distinct progress towards a higher social state. Many of them have been converted to Christianity, though it seems that some people consider this a doubtful benefit, and declare that the converts are thievish, lying, drunkard, and lazy, as compared with the Mahometans; but Mr. Wallace says that his experience is different. It is indeed easy to suppose that the worst class of natives may become nominal Christians from selfish and hypocritical motives. However this may be, Mr. Wallace says enough to convince us that much may be learnt from Dutch experience, and that there is still room for any one possessed of the necessary experience to write a very interesting book on the Archipelago, even if he knows nothing of beetles or birds of paradise. Meanwhile we are obliged to Mr. Wallace for what he has told us, and can only hope that his very interesting book may be as popular as it deserves to be.