THE QUARTERLY

JOURNAL OF SCIENCE.

APRIL, 1869.

I. THE MALAY ARCHIPELAGO.*



OTHING affords greater relief to the hard-worked scientific littérateur, who is compelled day by day and week by week to pore over the labours and investigations of experimentalists, or to sift the theories of speculative philosophers, until his brain becomes confused with the long lists of new genera and species which are introduced into every province of nature's realm, or with the hypotheses, more or less plausible, propounded by each new thinker, than to cast aside such dry and often uninteresting technicalities, and to follow, though it be but in imagination, one of those free lances of science,

the Naturalist Traveller. It is pleasant, indeed, to wander with him through distant regions of the globe, little known to Europeans

 1. 'The Malay Archipelago: The Land of the Orang-Utan and the Bird of Paradise. A Narrative of Travel, with Studies of Man and Nature.' By Alfred Russel Wallace, author of 'Travels on the Amazon and Bio Negro,' &c. 2 vols.
8vo, with 51 Illustrations and 9 Maps. London: Macmillan & Co. 1869.
2. 'Travels in the East Indian Archipelago.' By Albert S. Bickmore, M.A.,

2. 'Travels in the East Indian Archipelago.' By Albert S. Bickmore, M.A., Professor of Natural History in Madison University, Hamilton, N.Y. 1 vol. 8vo, with 36 Illustrations and 2 Maps. London : John Murray. 1868.

VOL. VI.

even by name, to laugh with him at the mute astonishment of his savage acquaintances as he follows his scientific pursuits, or *at* him as he practises a little of that literary archery in which all travellers are supposed to excel.

The life of such a man in many senses resembles our own, but he experiences greater extremes of physical enjoyment and privation, of mental suffering and delight; and one of his chief advantages over us is the lasting pleasure which must remain when he returns to civilized life and subsides into the useful member of a family, the occupant of a cherished home. Then the remembrance of his exciting dangers abroad must afford him as much satisfaction as that of his most enjoyable hours. As he walks through the market, and his glance falls upon a tropical fruit, his mind must wander back to the virgin forest where he plucked it fresh and luscious from the tree ; or as he inspects the treasures of some modest museum, and a rare creature, of which nothing but the skin is a reality, meets his eye, he starts for an instant, as he remembers with what surprise he first saw that form, here inanimate and perhaps disfigured by the dust of years, spring past him instinct with life as he wandered along the forest path, and disappear in the jungle before he had time even to raise his fowling-piece or rifle. Under the shade full of birds standing on the chimneypiece of some labourer's cottage, he espies in every little bright-winged creature a reminiscence of some new locality which he visited in times gone by; and whilst we should associate such objects with the auction mart, and estimate how many shillings the collection may have cost, he sees, perhaps, in one of the little feathered forms alone, the type of one which necessitated a whole day's pursuit and an unusual expenditure of his limited means. How thankful should we be to those enterprising and adventurous traders who bring into our parlours, boudoirs, and cottages the rarest and loveliest productions of tropical climes, and enable us to possess them for an outlay in some cases less than is requisite to obtain them where they are produced by nature.*

Nor must it be supposed that the roving naturalist passes through one continued series of privations all the year round, or lives in clover only when his gun supplies him with a superabundance of game; where he wanders, civilized men are often few and far between, and wherever the traveller appears, he brings to the colonist, what is more precious than gold or jewels, the sound of a cultivated voice, the recollection of home and friends far away; and no wonder that he is now and then a little petted and spoiled.

Mr. Wallace thus describes his life in Celebes : †-

Mr. Wallace tells us (vol. i., p. 473) that "numbers of the handsome but very common cones, cowries, and olives" (shells) "sold in the streets of London for a penny each" are natives of Amboyna, "where they cannot be bought so cheaply."
† Wallace, vol. i., pp. 362-3.

"My host Mr. M. enjoyed a thoroughly country life, depending almost entirely on his gun and dogs to supply his table. Wild pigs of large size were very plentiful, and he generally got one or two a-week, besides deer occasionally, and abundance of jungle-fowl, hornbills, and great fruit pigeons. His buffaloes supplied plenty of milk, from which he made his own butter; he grew his own rice and coffee, and had ducks, fowls, and their eggs in profusion. His palm-trees supplied him all the year round with 'sagueir,' which takes the place of beer; and the sugar made from them is an excellent sweetmeat. All the fine tropical vegetables and fruits were abundant in their season, and his cigars were made from tobacco of his own raising. He kindly sent me a bamboo of buffalo-milk every morning; it was as thick as cream, and required diluting with water to keep it fluid during the day. It mixes very well with tea and coffee, although it has a slight peculiar flavour, which after a time is not disagreeable. I also got as much sweet 'sagueir' as I liked to drink, and Mr. M. always sent me a piece of each pig he killed, which with fowls, eggs, and the birds we shot ourselves, and buffalo beef about once a fortnight, kept my larder sufficiently well supplied."

So much for the creature comforts, and now as regards the intellectual enjoyment which they accompanied. Our readers will not be surprised to hear that under the circumstances the author's pursuits as a naturalist were equally pleasant.

"I have rarely enjoyed myself more than during my residence here. As I sat taking my coffee at six in the morning, rare birds would often be seen on some tree close by, when I would hastily sally out in my slippers, and perhaps secure a prize I had been seeking after for weeks. The great hornbills of Celebes (Buceros cassidix) would often come with loud-flapping wings, and perch upon a lofty tree just in front of me; and the black baboon monkeys (Cynopithecus nigrescens) often stared down in astonishment at such an intrusion into their domains; while at night, herds of wild pigs roamed about the house, devouring refuse, and obliging us to put away everything eatable or breakable from our little cooking-house. A few minutes' search on the fallen trees around my house at sunrise and sunset would often produce me more beetles than I would meet with in a day's collecting, and odd moments could be made valuable which when living in villages or at a distance from the forest are inevitably wasted. Where the sugar-palms were dripping with sap, flies congregated in immense numbers, and it was by spending half-an-hour at these when I had the time to spare that I obtained the finest and most remarkable collection of this group of insects that I have ever made.

"Then what delightful hours I passed wandering up and down the dry river-courses, full of water-holes and rocks and fallen trees, and overshadowed by magnificent vegetation! I soon got to know every hole and rock and stump, and came up to each with cautious step and bated breath to see what treasures it would produce."* But the path of the naturalist traveller is not always so smooth: sometimes he is obliged to drag his weary body through marsh and morass, harassed by all kinds of tropical pests and encompassed by hidden dangers.

"When I reached Suban again," says Mr Bickmore," "I felt a peculiar smarting and itching sensation at the ankles, and found my stockings red with blood. Turning them down I found both ankles perfectly fringed with blood-suckers, some of which had filled themselves until they seemed ready to burst. One had even crawled down to my foot and made an incision which allowed the blood to pour out through my canvas shoe. All this day we have suffered from these disgusting pests, our horses became quite striped with their own blood, and a dog that followed us looked as if he had run through a pool of clotted gore before we reached the highway again. Of all the pests I have experienced in the Tropics, or in any land, whether mosquitoes, blackflies, ants, snakes, or viler vermin, these are most annoying and disgusting."

And Mr. Wallace tells us † how, when the rains began at Celebes, "numbers of huge millipedes, as thick as one's finger and eight or ten inches long, crawled about everywhere, in the paths, on trees, about the houses;" and how he found, on rising one morning, that he had had one of them for a bedfellow!

In regard to trials and dangers, both travellers have their stories Mr. Wallace tells his in modest and unaffected language to narrate. and without any pretensions to heroism, whilst Mr. Bickmore uses such incidents for book-making purposes; and according to his own account, the Professor of Natural History at Madison University must have been as courageous as he was gallant, for whilst the terrible monsters of the animal kingdom fell beneath the blows of his axe, and his coolness was the admiration of the native men, we have the blushing confession that he was singled out by the dark beauties as the favoured object of their "osculatory salutes." But it is quite obvious to any one who has read the two works with care that the author who lays claim to the greatest coolness and courage, in reality experienced less opportunities for the exercise of either faculty: as to the osculatory business, we doubt not that the dark beauties did exhibit their good taste, and for the reason assigned by Mr. Bickmore, namely, as "they might never again have the privilege of kissing a gentleman with a white face." [‡] The contrast between the style of the two writers is best seen in the description given by each of them, of an adventure he had with a python. Mr. Wallace discovered his snake in the roof within a yard of his head.

"He was compactly coiled up in a kind of knot; and I could detect his head and his bright eyes in the very centre of the folds. The

Bickmore, pp. 492-3.
† Wallace, vol. i., p. 376.

[‡] Bickmore, p. 198.

noise of the evening before was now explained. A python had climbed up one of the posts of the house, and had made his way under the thatch within a yard of my head, taking up a comfortable position in the roof—and I had slept soundly all night directly under him.

"I called to my two boys who were skinning birds below, and said, 'Here's a big snake in the roof;' but as soon as I had shown it to them they rushed out of the house and begged me to come out Finding they were too much afraid to do anything, we directly. called some of the labourers in the plantation, and soon had half-adozen men in consultation outside. One of these, a native of Bouru, where there are a great many snakes, said he would get him out, and proceeded to work in a business-like manner. He made a strong noose of rattan, and with a long pole in the other hand poked at the snake, which then began slowly to uncoil itself. He then managed to slip the noose over its head, and getting it well on to the body dragged the animal down. There was a great scuffle as the snake coiled round the chairs and posts to resist his enemy, but at length the man caught hold of its tail, rushed out of the house (running so quick that the creature seemed quite confounded), and tried to strike its head against a tree. He missed however, and let go, and the snake got close under a dead trunk. It was again poked out, and again the Bouru man caught hold of its tail, and running away quickly dashed its head with a swing against a tree, and it was then easily killed with a hatchet. It was about twelve feet long and very thick, capable of doing much mischief and of swallowing a dog or a child."*

Mr. Bickmore's python story is reserved as the crowning sensation, the bonne-bouche, of his work. This snake did not come upon him unawares; he had it presented to him in a cage, from which it escaped, and on searching for it, he found it coiled up in the ship's boat, on the deck of the vessel in which he was sailing. According to his account, all about him were cowards, he alone a hero; and the story of the death-struggle, though intended to be thrilling, is amusing in the extreme. It is illustrated by a plate, in which the hero is figured, apparently in his night costume (but that is explained), wielding an axe, and the fierce monster, with extended jaws, is about to dart upon him, whilst nine sailors and officers are looking on as unconcernedly as though they were witnessing a game of billiards. To add to the horror of the tale, "the first mate armed himself with a revolver," and every moment the hero expected to hear a report, and find himself shot by some of the braves behind him! "I felt the blood chill in my veins as for an instant we glanced at each other's eyes, and both instinctively realized that one of us two must die on the spot."

Strange biological phenomenon! Here we have the sudden chilling of the sanguineous fluid of a warm-blooded animal, bring-

[•] Wallace, vol. i., p. 466.

[†] Bickmore, p. 541.

ing him into sympathy with a cold-blooded reptile, and enabling the two for an instant to appreciate each other's instinctive sensations.

However, we must not harrow the feelings of our readers, and therefore conclude by stating that the hero was victorious, and not only survived to tell his own tale, but went on to China, "and passed through more continued dangers and yet greater hardships than in the East Indian Archipelago." We should be harsh critics if we concluded Mr. Bickmore's work in his own words, for it might leave an impression on the reader's mind that it has nothing to recommend it except his sensational adventures. For the sake of science, as well as his own, we would advise the author, if he publishes another work, to keep such matter distinct from the more sober details of his experience. The fact is, that he spent a year very comfortably in the Dutch settlements of the Archipelago, possessing ample means for the attainment of his object, which was to make a collection of shells. He carried letters of introduction from his Government to the leading authorities, and usually travelled with an armed escort. He appears to have been no sportsman, although there are one or two passages in his work which would lead his readers to think the contrary, and almost always secured his game with a silver bullet. The headings of his pages are often sensational, as—"Among the Cannibals;"* "Riding along the Edge of a Precipice; "† "Among Tigers;" "We come upon an Elephant;" "I the Head-hunters of Ceram;" All these horrors (excepting the "precipice," which resembles one of those winding roads round a marine cliff which our readers have, no doubt, frequently met with nearer home than Java, and the "Headhunters," of whom "the Resident kindly" sent to invite a few to dance before him, as we see Kaffirs dance at Wombwell's menagerie) were only heard of by the author, ¶ and it would have been better to reserve them for a Christmas story for boys, as an eminent African traveller has recently done, and in which they would have shone to more advantage than in a scientific work, the value of which depends upon its trustworthiness.

But whilst we feel bound, in the interests of science, to censure Mr. Bickmore's sensational statements of facts, and in that of literature, to draw attention to his Yankee phraseology, as when he speaks of what he saw "back of the village," and tells us that children "help support their parents;" or that he stood "half querying;" in con-sequence of which imperfections his book is not "quite all a European palate could desire," we still tender to him our thanks

• Bickmore, p. 125. † P. 419. † P. 515. § P. 513. || P. 203. ¶ A "head-hunter," along with one of the bcautiful palms, the "Penang, or Betel-nut Palm," which illustrate Mr. Bickmore's work, have been introduced by our artist into his vignette. Mr. Wallace, we may here observe, slept in a Dyskhut in Borneo, "very comfortably with half-a-dozen smoke-dried human skulls suspended over his head."

for his valuable contribution to our hitherto imperfect knowledge of the Malay Archipelago, and to the publisher, for the admirable illustrations, many of them from photographs, with which the work is enriched.

His account of some of the natural productions of the Archipelago is interesting; indeed, so far as those are concerned whose intrinsic value in civilized life is the greatest, such as sugar, with its manufacturing processes,* nutmeg and mace,† camphor,‡ his information is full and valuable. His description of the various fruits and trees is also exceedingly interesting; and the reader is enabled to appreciate the beauty of the latter through the wellexecuted plates already referred to. A comparison of his account of the curious fruit of the Durian (Durio Zibethinus) § with that of Mr. Wallace || illustrates in an amusing manner the diversity of human tastes; and, as the fruit has scarcely ever been mentioned in England, it may be briefly noticed here. The "Durian" is a large spherical fruit, covered with sharply-pointed tubercles and a hard shell. Within, it is divided into several parts, and (according to Bickmore) it contains "a pale yellow substance of the consistency of thick cream, and having an odour of putrid animal matter, so strong that a single fruit is enough to infect the air of a whole house." The taste is described as similar to "fresh cream and filberts," but the odour was such as to repel the American traveller. Our own countryman describes the fruit in similar terms, and says "it smells like rotten onions;" but then bursting into a song in praise of its taste, which, he says, "resembles custard highly flavoured with almonds," but "intermingled with wafts of flavour that call to mind cream cheese, onion sauce, brown sherry, and other incongruities" (!) he tells us that he was a confirmed Durian eater, and, although Europeans cannot bear the fruit. and Mr. Wallace possessed his taste only in common with the savages amongst whom he lived so long, he considers it would be "worth a voyage to the East to experience the new sensation of eating it." Verily there is no accounting for tastes, and we should not be surprised if our author, or some one endowed with similar proclivities, were to tell us that he considers it worth while enduring all the hardships of a Russian winter to taste fresh caviare in Astrachan |

But Mr. Wallace has also some peculiar metaphysical theories concerning this strange fruit, for it furnishes him with evidence against the argument from design.

"The Durian is, however, sometimes dangerous. When the fruit begins to ripen it falls daily and almost hourly, and accidents not

* Bickmore, pp. 68 to 70. **†** Pp. 222-3. **†** P. 433. **§** P. 91. || Wallace, vol. i., p. 118. unfrequently happen to persons walking or working under the trees. When a Durian strikes a man in its fall it produces a dreadful wound, the strong spines tearing open the flesh, while the blow itself is very heavy; but from this very circumstance death rarely ensues, the copious effusion of blood preventing the inflammation which might otherwise take place. A Dyak chief informed me that he had been struck down by a Durian falling on his head, which he thought would certainly have caused his death, yet he recovered in a very short time.

"Poets and moralists, judging from our English trees and fruits, have thought that small fruits always grew on lofty trees, so that their fall should be harmless to man, while the large ones trailed on the ground. Two of the largest and heaviest fruits known, however, the Brazil-nut fruit (*Bertholletia*) and Durian, grow on lofty forest trees, from which they fall as soon as they are ripe, and often wound or kill the native inhabitants. From this we may learn two things: first, not to draw general conclusions from a very partial view of nature; and secondly, that trees and fruits, no less than the varied productions of the animal kingdom, do not appear to be organized with exclusive reference to the use and convenience of man." •

With the first sentence in the author's closing remarks, namely, that we should not draw general conclusions from a very partial view of nature, we heartily concur; and this is precisely the error into which he and similar argumentators fall; but we should like to know who has ever been so foolish as to state that "trees and fruits, no less than the varied productions of the animal kingdom, *are* organized with *exclusive* reference to the use and convenience of man." We certainly do not remember ever having seen such a doctrine propounded, either by poet or moralist; but if we found such a position assumed, we should certainly not adduce the author's illustration as evidence against its validity. As well might he say that because fowling-pieces sometimes kill sportsmeu who are foolish enough to get into the way when they are going off, therefore fowling-pieces were not designed for the exclusive use of Man!

But, on the other hand, if we wish for a mass of evidence in favour of design, before which Paley pales, we need only read the author's account of the Bamboo and its uses, which follows immediately upon that of the Dunian. He shows that it is indispensable to the natives. Looking at their mental condition, they could not have existed without it, or some similar boon of Providence. Page after page of the work is occupied with an account of its uses. Every fraction of it is utilized. It enters into the constitution of their dwellings, serves as the raw material from which they make hem-coops, cages, fish-traps, bridges, aqueducts, water-buckets,

^{*} Wallace, vol. i., pp. 119-20.

cooking utensils, preserve jars, dagger-sheaths, pipes, cords, &c.; and yet he says:* "It is probable that my limited means of observation did not make me acquainted with one half the ways in which it is serviceable to the Dyaks of Sarawak."

But upon what principle is this wonderful adaptation of means to ends explicable? The author gives us no clue to the mystery, his philosophy being merely negative. Does pure Darwinism account for it? Is it the survival of the fittest by means of natural selection? That is to say, has nature selected the fittest plant for Man's use, and allowed it to survive? No, that is not Mr. Darwin's theory. According to his view, which is no doubt correct as far as it goes, those forms of life survive which are the best able to resist adverse conditions of existence; and therefore, although the presence of the Bamboo in Borneo may help us to understand why Man has survived there, superseding perhaps some Simian form of life, yet it throws no light upon the adaptability of the vegetable to the wants of an animal (Man) not yet formed, whilst it was struggling with the surrounding conditions of existence.

Shall we gain a clue to the mystery by calling in the aid of the Huxleyan doctrine of "Matter and Law?" Wiser brains than ours may be able to apply that misty-physical philosophy, as recently enunciated by its author in a contemporary; † but we are constrained to admit that we do not yet clearly comprehend it, and are therefore unable to apply it in the case under consideration. "Matter," no doubt, there is—that is quite clear; and "Law," no one can ignore; but our difficulty is to ascertain whether in the case under consideration it is matter that legislates, or the law that is material; and we confess we have given it up in despair, for, after all, the whole phenomenon may be but "the unknown and hypothetical cause of states of our own consciousness;" and then of course it would be best to follow Professor Huxley's "wise advice," and "not trouble ourselves about matters of which, however important they may be, we know nothing, and can know nothing."

Well, then, as Darwinism fails to explain the phenomenon, and Huxleyism declines to come to our aid, we must, at the risk of being ranked amongst the superstitious, appeal to a very old-fashioned doctrine to account for the wonderful adaptability of every part of this beautiful tropical plant to the necessities and luxuries of what would otherwise be helpless human beings; and perhaps we may be permitted to cling for a little while longer to the delusion that a beneficent Deity, to whom there is no past nor future, does exist,

Wallace, p. 126.

[†] The 'Fortnightly,' edited by John Morley, No. xxvi., Feb., 1861, in which the curious will find the latest exposition of the Materialistic doctrine, by one of its ablest professors.

and that it is He who, in ages long past, provided thus bountifully for the wants of His children still uncreated! We hope, notwithstanding the author's remark which has led to these reflections, that we have his assent to our views and inference.



E T not our readers, however, for an instant suppose that because we have grouped the two works before us under one heading, we therefore consider them to possess equal merit or scientific value. It happens that they have appeared about the same time, and treat of the same region of which little is known in civilized Europe; but Mr. Bickmore, who is an American Professor of Natural History, spent only twelve months in the Malay Archipelago, confining his

visits and observations to the Dutch possessions there, and occupied himself chiefly in purchasing valuable shells from the natives; whilst our own countrymen, to whose work we now propose to direct special attention, resided in the Archipelago about eight years, during which period he visited and studied the physical geography and natural history of all the most important islands, including Borneo, Sumatra, Java, Bali, Lombok, Celebes, the Moluccas, New Guines, with the surrounding islands, and the Malay Peninsula. Indeed, Mr. Wallace's book, which has long been expected by naturalists, is likely to be the standard work on those regions. The author, as most people are aware, is, so to speak, the originator of that view which Mr. Darwin (to whom his book is dedicated) has developed into a well-defined theory-the theory of Natural Selection; and although, in his published works, Mr. Darwin has traversed a wider range of Physical Science, and deals with more extended areas of the earth's surface than the author, yet we believe that the present work will be found to exercise a more potent influence, in the promulgation of the advanced theory, than the well-known treatises which have been published from time to time by the able writer whose name it bears.

For Mr. Wallace himself observed the phenomena which suggested to his mind the theory of natural selection; and although he seldom refers to that theory, and then only as though he were a modest disciple of Mr. Darwin, he brings those phenomena vividly before his readers; and the previous works of the last-named author having borne down prejudices and removed obstructions, the readers of the present treatise will be better prepared to accept the

conclusions to which its numerous and well-recorded facts unquestionably point. The author's theory (one that has been floating in the public mind for some time) is that the continent of Asia at one period extended much farther eastward, and that of Australia farther west, than at present, until they almost joined, and that the two continents were probably separated by the Lombok Strait, which divides an island of that name supposed to have formed part of Australia from Bali, another existing island which is believed to have constituted, along with Java and Sumatra, a portion of the old Asiatic continent. This hypothesis is kept before the reader throughout the work, and is supported by all the data which can be furnished by physical geography, zoology, botany, and the heterogeneous nature of the inhabitants of the Archipelago. A shallow sea surrounds the Indo-Malayan region, as the author calls it, embracing the Malay peninsula, Sumatra, Borneo, Java, and Bali : another shallow sea encloses the Papuan region, whilst a deep one embraces the islands of Celebes, Lombok, Sumbawa, Flores, Timor, and the Moluccasall of which together constitute the Austro-Malayan region. These conditions are well shown in the map which accompanies the work.

The fauna of Australia seems to have crept as far as Lombok; that of Asia to Bali; and in the passage from one island to the other, or rather by the contrast between the natural productions of the two islands, the author seems to have been led to adopt the theory which is so ably expounded in his work. When he first visited Lombok, the most westerly of the Austro-Malayan Islands, he says:—

"Birds were plentiful and very interesting, and I now saw for the first time many Australian forms that are quite absent from the islands westward. Small white cockatoos were abundant, and their loud screams, conspicuous white colour, and pretty yellow crests, rendered them a very important feature in the landscape. This is the most westerly point on the globe where any of the family are to be found. Some small honeysuckers of the genus *Ptilotis*, and the strange moundmaker (*Megapodius gouldii*), are also here first met with on the traveller's journey eastward."

Subsequently he shows in detail how the Flora and Fauna of the Timor group—namely, Lombok, Flores, and Timor—represent the transition from the Asiatic to the Australian types. Thus there are—

		In Lombok.		In Flores.	In Timor.*
Javan birds	 		33	23	11
Australian birds	 		4	. 5	10

these islands being all separated from each other by a deep sea; and as the same rule applies in a greater or lesser degree to mammals, insects, and plants, the natural inference is, that the

^{*} Wallace, vol. i., p. 320.

islands must at some time have been connected together; and, although he does not believe that Timor was actually connected with Australia in recent geological epochs, he considers that they were in much closer proximity than at present.

The human inhabitants of the Polynesian Archipelago, the author thinks, did not penetrate so far east as Lombok, and he draws the line between the Malayan and Polynesian races through the Sapy strait between the islands of Sumbawa and Flores, and northward through the Moluccas. This line of demarcation is shown upon another of the numerous maps which accompany the work.

To treat the subject with anything like particularity in this place would, however, be impossible, and for a full exposition of the author's views and theories we must refer our readers to the work itself, where they will find page after page of evidence to support them.*

And now what shall we say of the book, as the production of a naturalist and traveller? We think few will disagree with us when we pronounce it to be one of the most attractive and, at the same time, the most learned work on foreign travel, "with studies of man and nature," that has appeared in our language. It surpasses in scientific interest Mr. Darwin's Naturalist's Voyage in the 'Beagle' (and that is saying a great deal), because its author has been a more industrious observer and collector, and has been able to render it more attractive by the employment of modern methods of illustration; for these latter carry us into the heart of the remote and little-known regions which he visited, and enable us to form a good idea of their varied inhabitants of all kinds.[†] His collection "comprised nearly 3000 birds' skins of about 1000 species, and at least 20,000 beetles and butterflies of about 7000 species, besides some quadrupeds and land shells."[‡]

• The following is an extract from the 'Proceedings of the Royal Society,' No. cvi., Nov., 1868 :-- "A Royal Medal has been awarded to Mr. Alfred Russell Wallace, in recognition of the value of his many contributions to theoretical and practical zoology, among which his discussion of the conditions which have determined the distribution of animals in the Malay Archipelago (in a paper on the zoological geography of that region, published in the 'Proceedings of the Linnean Society' for 1859) occupies a prominent place. "'The case may be briefly stated thus:--The strait separating the islands of

"The case may be briefly stated thus:-The strait separating the islands of Baly and Lombok is only 15 miles wide; nevertheless the animal inhabitants of the islands are widely different, the fauna of the western island being substantially Indian, that of the eastern as distinctly Australian.

"Mr. Wallace has described, in a far more definite and complete manner than any previous observer, the physical and biological characters of the two regions which come into contact in the Malay Archipelago; he has given an exceedingly ingenious and probable solution of the difficulties of the problem, while his method of discussing it may serve as a model to future workers in the same field."

† In the second vignette, our artist has copied a portion of one of Mr. Wallace's plates, exhibiting the mode in which the natives shoot the Great Bird of Paradise.

† Wallace : Preface.

Nothing seems to have escaped his observation. The peculiar ways of the Chinese trader of Singapore amused him exceedingly.

"The shopkeeper is very good-natured; he will show you everything he has, and does not seem to mind if you buy nothing. He bates a little, but not so much as the Klings, who almost always ask twice what they are willing to take. If you buy a few things of him, he will speak to you afterwards every time you pass his shop, asking you to walk in and sit down, or take a cup of tea, and you wonder how he can get a living where so many sell the same triffing articles." *

We have met with something like this spirit in small continental towns. Then come the habits of the animal next below man in anatomical structure which he captured-the Orang-Utan. For that creature, by the way, he showed less sympathy than might have been expected in a Darwinian, for he appears to us to have shot it somewhat wantonly. The Dyak music made a great impression upon him, but we cannot say that we admire his taste in that respect. The association of art with savage life struck him as being sometimes very remarkable. At Dorey, in New Guinea, he found the worst savages whom he anywhere met with, and after describing their habits, he says : "If these people are not savages, where shall we find any? Yet they have all a decided love for the fine arts, and spend their leisure time in executing works whose good taste and elegance would be admired in our Schools of Design !" † This is the first step towards human culture, and it carries our minds back involuntarily to those periods in human history when rude outlines of animals, now extinct, were carved on knife and axe handles; but there are in those wonderful eastern islands traces of a civilization far different from this. In Java there exist vast piles of ruined temples, covering miles of ground; and in one spot "traces of nearly 400 temples have been found," t whilst " the ruins of forts, palaces, baths, aqueducts, and temples can be everywhere traced."

The numerous and beautiful tropical plants, with their luscious fruits and varied uses, and all the denizens of the animal kingdom, come under the author's notice, as we have already seen; especially interesting is the account of the exquisite birds of Paradise, to obtain which he sacrificed health, strength, and almost life itself. Nor are the grander phenomena of nature, such as earthquakes and volcances, overlooked in the naturalist's zeal. Of those he speaks without exaggeration, whilst he seeks at the same time to convey to the reader's mind the stupendous changes which the occult forces of nature have brought about upon the earth's surface; and to them he largely attributes the physical configuration of the land, and the

• Wallace, vol. i., p. 33.

† Vol. ii., p. 325.

‡ Vol. i., p. 166.

past and present geographical relations of the various islands which he visited. Political and social economy, good and evil government are discussed; and although the author is not likely to find many disciples in his advocacy of monopoly abroad and protection at home, yet the facts noted by him even on these subjects are well worthy of the consideration of practical minds. The great charm of the work is its obvious truthfulness and simplicity, and if the author sometimes misses opportunities (of which travellers usually avail themselves with such eagerness) of appealing to the sense of wonder in his readers, he inspires, on the other hand, the most implicit confidence in all he says, and often affords us some consolation for having to read about, rather than participate in his adventures.

After describing some of the beautiful scenery of Mount Ophir, in the Malay Peninsula, he concludes his account of it by saying :---"The top is a small rocky platform covered with Rhododendrons and other shrubs. The afternoon was clear and the view fine in its way--ranges of hill and valley everywhere covered with interminable forest, with glistening rivers winding among them. In a distant view a forest country is very monotonous, and no mountain I have ever ascended in the tropics presents a panorama equal to that from Snowdon, while the views in Switzerland are immeasurably superior." Some satisfaction, this, to the tourist at home, whose means or opportunities will not allow him to visit the tropics.

Again, let us recommend the romantic enthusiast who longs to visit the court of an Eastern Rajah, and catch a glimpse of the beauties who inhabit the Harem, to pause and ascertain the author's experience in that way. He had an interview with a "Rajah," the Queen and her daughters, and concerning the latter he says :---

"And here I might (if I followed the example of most travellers) launch out into a glowing description of the charms of these damsels, the elegant costumes they wore, and the gold and silver ornaments with which they were adorned. The jacket, or body of purple gauze, would figure well in such a description, allowing the heaving bosom to be seen beneath it, while 'sparkling eyes,' and 'jetty tresses,' and 'tiny feet,' might be thrown in profusely. But, alas! regard for truth will not permit me to expatiate too admiringly on such topics, determined as I am to give as far as I can a true picture of the people and places I visit. The princesses were, it is true, sufficiently goodlooking, yet neither their persons nor their garments had that appearance of freshness and cleanliness without which no other charms can be contemplated with pleasure. Everything had a dingy and faded appearance, very disagreeable and unroyal to a European eye." †

And, finally, it will be pleasing to our countrymen to hear that if the gigantic vegetation of the tropics has so long formed the theme of the traveller's admiration, we have in our English scenery

^{*} Wallace, vol., i. p. 50.

[†] Pp. 313-4.

a feature largely wanting in the tropical world, which more than compensates for the absence of Palms, Tree Ferns, and gigantic Fig-trees, namely, the masses of flowers which adorn our landscapes. After describing such scenery as can only be met with where nature has been most lavish of her tropical gifts, Mr. Wallace says: •—

"The reader who is familiar with tropical nature only through the medium of books and botanical gardens, will picture to himself in such a spot many other natural beauties. He will think that I have unaccountably forgotten to mention the brilliant flowers, which, in gorgeous masses of crimson, gold, or azure, must spangle these verdant precipices, hang over the cascade, and adorn the margin of the mountain stream. But what is the reality? In vain did I gaze over these vast walls of verdure, among the pendant creepers and bushy shrubs, all around the cascade, on the river's bank, or in the deep caverns and gloomy fissures,—not one single spot of bright colour could be seen, not one single tree or bush or creeper bore a flower sufficiently conspicuous to form an object in the landscape."

This peculiarity he explains by stating that it is the custom of travellers to have their attention drawn to the few rare and magnificent flowers which are here and there met with in hot climates, and are gathered together and fostered with so much care in our conservatories at home; but he adds, "During twelve years spent amid the grandest tropical vegetation, I have seen nothing comparable to the effect produced in our landscapes by gorse, broom, heather, wild hyacinths, hawthorn, purple orchises, and buttercups." †

And now, in conclusion, let us express the hope that in thus seeking to treat Mr. Wallace's work with impartiality, and to show how unprejudiced he usually is in his judgments, we may not have detracted from his merits as a literary man, nor yet from his work as an interesting record of a traveller's experiences. We might have selected far more "telling" passages for extracts than we have done, and perhaps thus have enabled the publishers to sell a few more copies of the work at the outset. But that is quite unnecessary. It will bear its own recommendation in its pages, and we have felt it our duty to place upon it, as far as we are able, the stamp of scientific authority, where there are so many scientific novels running their ephemeral course, so that every intelligent man who thinks fit to give it a permanent place upon his shelves may feel assured that he is depositing there for the benefit of posterity a highly valuable contribution to the scientific literature of our age.

• Pp. 371-2,

† Wallace, vol. i., pp. 373.