

Oceanic islands, as defined by Mr. Darwin, are those smaller islands or groups which are more than 300 miles from the nearest continent, from which they are separated by deep sea. Their distinguishing character is, that they possess neither terrestrial mammals nor batrachians, and rarely any reptiles, and that a large proportion of their animal and vegetable inhabitants are quite peculiar to them, although allied to those of the nearest continent. Mr. Darwin was the first to maintain that all such islands had derived their organic productions by migrations from the adjacent land, rather than by union with it; and the facts and arguments he has adduced have convinced most naturalists of the justness of this view. It is powerfully supported by the fact that a connection can in almost every case be traced between the adaptability for migration of a group of animals or plants, and the amount of distinctness of the island species of that group from their allies elsewhere. Thus the land-shells of Madeira are the most peculiar of all its productions, the beetles and the plants less so, while the birds (some of which still come over annually from the continent) are almost all of European species.

The Azores, being about a thousand miles from the nearest coast of Europe, and being separated from it by a profoundly deep ocean, are pre-eminently oceanic islands, and an especial interest therefore attaches to their natural history. The facts, however, are different from what would have been expected, since some of the most striking peculiarities of such islands are far less manifested here than in others much nearer to the mainland; yet on that very account they offer a most convincing illustration of the truth of Mr. Darwin's view, since the cause of their deviation can be detected. Although so much farther from the mainland than the Galapagos or the Madeiras, they possess a far smaller proportion of endemic forms, either of animals or plants; about eighty or ninety per cent. being European species, except in the case of the land shells, where only forty per cent. are European. The explanation of this anomaly is to be found in the fact that the islands are situated in an exceptionally stormy region, gales of wind from every point of the compass being very frequent. As a result, strange land birds of many species appear after these storms; and we cannot doubt that winged insects and the seeds of plants also arrive, although these pass unnoticed. Thus, although these islands may have been isolated quite as long as the Madeiras, their productions being continually crossed by fresh arrivals from the Continent, have not been able to become as much modified by local influences. It is a most interesting fact that the Galapagos, whose productions are so highly peculiar, are situated in an exceptionally calm region. No emigrant land birds are known to visit them, and the result is, that the few wanderers who, by some strange accident reached their shores in the distant past (when circumstances may have been more conducive to such emigration), have been isolated ever since, and have thus had time to become modified into very distinct species.

Mr. Godman's volume consists of a brief account of his journey, of carefully compiled lists, with critical remarks on all the chief groups of terrestrial animals and plants, and of a well-written summary of results. He has obtained the assistance of Mr. Crotch for the beetles,

of Mr. Tristram for the land shells, of Mr. H. C. Watson, who has given a most elaborate critical review of all that is known of the flowering plants and ferns, and of Mr. W. Mitten for the mosses and hepaticæ. There are two useful maps of the islands, and the relations of the several species to those of the Atlantic Islands, Europe, and America, are fully pointed out. In conclusion we may notice that there is a full index, that the type and arrangement are very clear, and that the book is issued with cut edges; and we may congratulate the author on having given us more useful matter in a small compass and in a convenient form, than is often to be found in works of much higher pretensions and at ten times the cost.

W.

OUR BOOK SHELF

Hardwicke's Science-Gossip. An Illustrated Medium of Interchange and Gossip for Students and Lovers of Nature. Edited by M. C. Cooke, M.A. (London: Hardwicke, 1871.)

THIS is the sixth volume of a magazine which may be said to fill in scientific literature very much the position which *Notes and Queries* takes in the literary world. The two resemble each other, indeed, in many particulars, and in none more than in the very unequal value which attaches to the articles contained in their pages. There can be no doubt that *Science-Gossip* has fulfilled its object in becoming "a medium of interchange and gossip;" the large number of writers who discuss a yet larger number of subjects in its columns give evidence of this.

As an example of the best of the papers in the present volume, we would refer to one entitled "The Towing-net," by Major Holland, which appeared in the September number, which is pleasantly written, well illustrated, and thoroughly correct in its details—although somewhat marred by an unfortunate mislettering of the engravings. It is evidently written from personal and practical experience, and is just the paper to awaken a taste for marine studies in any one who has time and opportunity to devote to them. Mr. Taylor's geological papers demand a word of praise; and a long account of a "formicary" in the November number will be read with interest. Mr. Harting and Mr. Robert Holland contribute respectively useful ornithological and botanical articles; and microscopy is well represented. In some of the papers, however, "gossip" appears to take precedence of "science," and thus we find a lady correspondent expressing her wonder "whether flowers suffer pain," and writing a paper of nearly two columns on "errors of the press;" which may be amusing, but certainly cannot by any effort of the imagination be called scientific. On the whole, however, the volume is a satisfactory one, the illustrations being especially well executed; and we have no doubt that it exercises a beneficial influence upon amateur naturalists. We should be glad to see the rule which obtains in *Notes and Queries*—that correspondents replying to queries should refer to volume and page where such questions are to be found—enforced by the editor of *Science-Gossip*; the convenience of reference to a correspondence on any particular subject would thus be much augmented.

Etudes faites dans la collection de l'Ecole des Mines sur des Fossiles nouveaux ou mal connus. Premier fascicule. Mollusques Tertiaires. Par F. Bayan, &c. 4to., pp. 81, 10 plates. (Paris: F. Savy, 1870. London: Williams and Norgate.)

M. BAYAN, who occupies the office of Engineer of Bridges and Roads in connection with the Ecole des Mines, presents us in the work before us with descriptions of 47 genera and 106 species, illustrated by 139 well-executed