

tests that may be applied to determine in the easiest and quickest way what a mineral actually is, and others which, though they may be of equal scientific interest, are unimportant or inapplicable. In its detail the work is monographic and if this is what the author had in mind there is naturally nothing more to be said. Criticisms along these lines are often unfair, being based upon what a reviewer thinks he has a right to expect rather than what the author intends. Whatever may be one's views on these subjects there is always the comforting reflection that the information given is as accurate as the stage of the science will permit.

The make-up of the book is the same as that of the first edition. The paper and binding are good, the type clear, and the illustrations excellent. Petrographers are to be congratulated that so able an authority has found time to put the knowledge gained by many years of study and experience into a form available for students the world over.

GEO. P. MERRILL

*The British Nudibranchiate Mollusca.* By ALDER and HANCOCK; Supplement by SIR CHARLES ELIOT. London, Ray Society (Dulau & Co.) 1910. 4to. Pp. 198. 8 plates.

Of works on this attractive group of mollusca, that of Alder and Hancock is *par excellence*, the classic, not only on account of its exquisitely beautiful and accurate plates, but from its monographic character and correct anatomical details. Among the posthumous papers left by the two authors were notes and drawings preliminary to a supplement to the original work.

To forty-two of these drawings Sir Charles Eliot has added twenty-three new ones and supplied a text, the whole being sent out by the Ray Society with suggestions for the completion of imperfect copies of the old work possessed by individuals interested in the subject. The form is that of the original monograph and the quality of the plates fully equal to that of the first issue.

But the author has not been satisfied with

the preparation of a merely descriptive and corrective supplement. He has prefixed to the purely systematic portion chapters on variation and distribution, bionomics, embryology and larval stages, general classification of the group and an exhaustive discussion of the affinities and relationships of the animals concerned. These chapters not merely illuminate the subject but are from a merely literary standpoint presented in a form so clear and interesting as to be readable with pleasure by one having only a general knowledge of the mollusca. Such contributions to zoology are likely to invite study of the animals treated, and it is to be wished that works of this quality were more common.

WM. H. DALL

*Duc d'Orleans, Campagne arctique de 1907.*

Par CHARLES BULENS. Bruxelles. 1910-11. *Etude lithologique*, par J. THOULET; *Echinodermes*, par JAMES A. GRIEG; *Mollusques et Brachiopodes*, par PHILIPPE DAUTZENBERG et HENRI FISCHER; *Microplankton des Mers de Barents et de Kara*, par le DR. ALPH. MEUNIER; *Faune des Mousses: Tardigrades*, par FERD. RICHTER; *Journal de Bord, et Physique du Globe*, par A. DE GERLACHE, etc.; *Appendice, Sondages de 1909*, par A. DE GERLACHE; planches et cartes.

The steamer *Belgica*, well known for her explorations in the Antarctic seas, has been engaged in Arctic exploration of late years, under the auspices of the Duke of Orleans and commanded by Commandant A. de Gerlache de Goméry. In 1907 the expedition left the northern coast of Norway at Hammerfest and Vardö, crossed the Murman Sea, circumnavigated the southern island of Novaia Zemlia, skirted the west coast of the northern island, penetrated to about latitude 78° in the Polar Sea, taking numerous soundings, before returning to Norway. In 1909 hydrographic explorations and soundings were made in the Greenland seas. By the munificence of the patron of the expedition the scientific results of the work are appearing in a series of finely illustrated and beautifully printed quartos. A summary of the titles of those which have

reached us appears in the heading of this article, the parts enumerated comprising 578 pages, 7 charts and 50 plates. Of this the larger part is comprised in a monograph of the Microplankton which takes up 355 pages and an Atlas of 37 plates. Lists of the birds and mammals observed are given in the "Journal." The mosses were extensively collected and contained an extensive fauna of minute invertebrates, of which the Tardigrades are described by Dr. Richter, about 30 species were obtained, of which five proved to be new. A minute copepod crustacean, *Moraria muscicola* Richters, which has adapted itself to a terrestrial habitat, was among the other animals found in the moss. The dredgings produced thirty-eight species of mollusks and two brachiopods, all well-known arctic forms. The Echinoderms included twenty-five species, a Crinoid, nine Ophiurans, eleven starfish, an echinus and three Holothurians, none of which proved new, which is not astonishing, since so many exploring expeditions have visited this region. The specimens of bottom obtained conformed in general to the character of soundings previously made in the Polar seas. The specimens studied are rich in garnet, pyroxenes and basaltic magmas, but showed no meteoric particles and were poor in magnetite. More than seventy soundings were made, of which nineteen were carefully analyzed. In the matter of terrestrial physics meteorology is discussed by Commandant de Gerlache, magnetism by A. Nippoldt and atmospheric electricity by G. Ludeling. The charts are from the latest researches published by the Russian Admiralty.

Altogether the present contribution adds a worthy member to the long list of publications on the ever interesting problems of the Arctic region.

WM. H. DALL

*Modern Geography.* By MARION I. NEWBIGIN. New York, Henry Holt and Company. 1911. Pp. 256.

Newbigin's "Modern Geography" is Volume 7 of the new Home University Library of Modern Knowledge, established by Williams and Norgate of London. It is a popular

volume, aiming to summarize in two hundred and fifty pages the content of geography as now understood. Four chapters are devoted to the history of geography since the doctrine of evolution has revolutionized modern thought, to the development of surface forms and to climate and weather. Four chapters are devoted to the geography of plants and animals and the Races of Europe. The final chapter considers the Distribution of Minerals and the Localization of Industries and Towns.

The chapters are necessarily brief and in no case is it possible for the author to consider any topic in a really satisfactory manner; and yet the new ideas are outlined in simple, untechnical language, and with sufficient fullness to give the gist of modern thought, in every case. The reader will not, as is so frequently the case in volumes of similar scope, gain the impression that all has been said that might be said on any subject. He will, on the contrary, be naturally and easily led far enough into the subject to become interested in it and desire to learn more about it. A carefully selected list of references given in the appendix presents the reader with the logical next step in his advancement. Throughout the volume the author writes with a real geographic instinct and constantly inserts examples of the influences of physical conditions on life distribution and relations. In this way geography is shown to be a subject not merely of broad generalizations, but of real significance in understanding some of the common things of every-day life. Except in the chapter devoted to Plant Geography, where the author considers the plant formations of Eurasia and North America, but little attention is given to American conditions, and few illustrations of geographic relations are taken from the rich offering of our own continent.

Though the volume is thus European in tone, it is not by any means without value for readers in this country. It is a suggestive volume, interestingly written, that should appeal to the general reader, and offers many suggestions to the geographer, though he may