A number of interesting insects were obtained in the Magellanic region and at the Falkland Islands. These are also treated of in the present publication.

A few ostracods, mostly belonging to the genus *Conchœcia* or *Paradoxostoma,* were obtained from the plankton between 69° 48′ and 71° 15′ S. Lat.

The Holothurians comprise nine species, of which five are new, including the new genus *Rhipidothuria;* and which were procured chiefly between S. Lat. 69° and 71° 18′ in deep water, or in the plankton collections.

The Medusæ are also rare, only two of strictly Antarctic habitat having been taken, *Homœonema racovitzæ* and *Isonema amplum.* The second generic name, it may be noted, is preoccupied for a Mollusk since 1866 by Meek and Worthen, and might be replaced by *Arctapodema.* The other forms discussed are mostly from the subantarctic plankton, none of them identical with Arctic species, though one of them is supposed to be Mediterranean in distribution. WM. H. DALL

National Antarctic Expedition, 1901–1904, S. S. Discovery, commanded by Capt. Scott R. N. Natural History. Vol. I., Geology. London, the British Museum (Natural History). 1907. 160 pp., 4°, pl. X. Field Geology, by H. T. FERRAR, Geologist to the expedition (100 pp.). Rock Specimens, by G. T. PRIOR, Asst. Brit. Mus. (40 pp.).

We have already reviewed the second and third volumes of this excellent report, and now are able to notice volume I., which has recently appeared.

The part of South Victoria Land studied by the members of the expedition consists of a great range, or series of mountain ranges, stretching in a line almost direct from latitude 71° to latitude 82° south, a distance of some 800 miles. Some of the peaks rise to a height of 13,000 feet, and it is remarkable that there is no extensive area of land lower than 4,000 feet. Off this bold coast line is the shallow Ross Sea, with occasional islands close in and in a series roughly parallel to the coast.

In the vicinity of the winter quarters the Ross Archipelago, including the large Ross Island which bears Mts. Erebus and Terror, is composed of recent volcanic rocks. Mt. Erebus emits steam, but during the stay of the expedition no ejection of dust, lava or other solid matter was observed.

On the opposite side of the gulf, westward from Ross Island the rocks are quite different, having for a basal platform a gneissic series with which a pure white coarsely crystalline limestone in places is associated. Above this lie granites with interstratified sheets of dolerite, occasionally thin seams of micaceous schist, and narrow basaltic dykes. The granites are capped by a yellowish sandstone which reaches a thickness, of 2,000 feet or more, and at certain localities retains carbonized traces of vegetable remains. These rocks were horizontal or inclined only at comparatively small angles. The carbonaceous matter occurs in sufficient quantity to form blackish bands in the strata, which also show at times cross-bedding, pebble bands, and yellowish argillaceous mudstones or concretions up to two inches in length. Some calcareous layers were also noted.

Above the sandstones the uppermost horizon consists of intrusive dolerites, sometimes columnar.

Full notes are given on the inland and sea ice. The former covers and obliterates the inequalities of the interior land surface, leaving coastal land fringes, comparatively free from ice. The floe or sea-ice rarely exceeds eight feet in thickness, and, if depressed by a deposit of snow above, the lower surface of the floe is removed by the action of the sea to an equivalent extent, so that, according to Ferrar, it seems impossible that the thickness of the floe can be increased to any very marked extent by the addition of snow to the upper surface. The rise of the inland ice from the coast inland is very gentle and almost imperceptible, so that it seems as if, should an elevated hinterland occur at all, it must be at a considerable distance inland.

Denudation in this region seems largely due to wind action, the temperature being so low that erosion by water flow is hardly possible. Exposed surfaces of rock rapidly disintegrate into dust, but at a small distance below the

surface, where solidly frozen, practically no erosion of rock surfaces takes place.

The wind carries away the dust of disintegration; loose stones are often smoothed and pitted by the sand blast, as in desert regions; and some of the harder surfaces receive a superficial glaze. Wind carries away the smaller rock fragments, and, on rare occasions, the sudden outbursts of short-lived glacial torrents spreads mud and sand over the surface of floating glacier ice.

Sulphate and chloride of sodium occur on the floating ice, partly as concentrates or exudates from freezing sea water, sometimes in mounds several feet across and as much as two feet thick.

In a general way the ice must be regarded as at present retreating, though the amount of retreat is moderate. The rocks in their petrologic aspect are thoroughly discussed by Dr. Prior.

The text of the volume is replete with excellent half-tone cuts from photographs, and to the plates are added two well-executed charts.

Wm. H. Dall

Clean Water and How to Get It. By Allen Hazen. New York, John Wiley & Sons.

Nothing could be more timely than a book dealing with the subject of water supply, for all over the country there is a remarkable awakening of interest in improvements along this line. High death rates from typhoid fever in American cities have too long been a reproach to our civilization and the inaction which has permitted them is rapidly giving way to a wholesome spirit of reform. No one is better fitted to meet the need for popular treatment of this subject than Mr. Allen Hazen, whose own engineering skill has contributed so largely to develop the newer methods of water purification. This book is, therefore, a doubly welcome one.

The popularization of the results of scientific investigation is a difficult task. On the one hand is a mass of fresh information which needs only popular education to make it effective in practise; on the other hand is a large and intelligent public waiting for the information which it would gladly apply. The intermediary is still too often lacking because the qualities of scientific grasp and popular exposition are so rarely joined. On one side lies the pitfall of patronizing oversimplicity into which certain well-known authorities have recently so notably fallen. On the other side is the danger of being too technical, lacking in the clear analysis and telling exposition necessary to appeal to the untrained mind; this, if anything, is Mr. Hazen's error. His book is designed, as he states, especially for public officials who have been drawn from walks of life in which they have had no water-works experience and who wish to serve their cities well and can perhaps be aided in doing so by very simple statements as to certain matters. He modestly disclaims any intention of helping members of water boards and water-works superintendents, whom he believes to be familiar with the information which he gives. If the reviewer is not mistaken, however, the book will prove of very great value to the latter class of readers and will reach only exceptional individuals among the former. In a new edition, which is sure to be called for soon, the path to the solid knowledge the book contains might be made easier by a more logical arrangement of its contents and by the addition of two elementary chapters, one outlining, at the beginning of the book, the general characteristics of a good water-supply, and one, in the middle of the book, on the general plan and principles of water filtration.

In the present work the author begins with a detailed description of certain surface supplies. Then follows, in the next succeeding chapters, an admirable review of various sources of water supply, in which the grasp of trans-Atlantic conditions made possible by the writer's wide experience is tellingly evident. He discusses the use of large lakes for water supply and shows why Milwaukee and Duluth are comparatively free from water-borne typhoid, while Chicago and Cleveland have suffered so heavily. River waters are next discussed, and the ground is wisely taken that a certain amount of bacterial pollution is a necessary characteristic of surface waters and that the responsibility for the re-