Cape Crozier for the purpose of obtaining eggs of the emperor penguin.

Naturally the most extensive data pertain to geological subjects relative to west Victoria Land, which was twice visited and explored by Taylor, under conditions of extreme hardship which tested the strength and endurance of the party to the utmost. Taylor's line of research specially pertained to the "effect of ice in carving out the features of the earth's surface." Near two great glaciers he noted:

> The grandest geological section I have ever seen. It was capped by yellowish rock, which represents the most eastern exposure of the Beacon sandstone in the valley. Beneath this were two *sills* of dolorite . . . which represented flows of lava wedged in between the granites and sandstones. . . . Above and below the lower of these black sills were layers of gray granite.

Considerable attention is given to descriptions of cwm, or arm-chair, valleys. At one point was discovered a huge deposit of mirabilite (sodium sulphate) about 10 by 50 feet in surface area.

The seaward movement of the antarctic glaciers engaged Taylor's attention, and careful measurements were made of several. During the ten coldest months one moved about twenty feet. The Tongue on the east coast of Victoria Land was moving seaward about a yard a day in January—midsummer.

The vitally important fossils of the expedition are those obtained by Scott at the head of Beardmore glacier—in my opinion elsewhere expressed, obtained and preserved at the cost of the lives of that heroic explorer and his sledge comrades—which are considered as epoch-making in antarctic geological history. Among these, it may be recalled, was a fern-like *Glossopteris,* a plant of the Permo-Carboniferous age. Other fossils of the Cambrian age had been brought back by Shackleton from the Beardmore glacier, in 84° S., among which were specimens of one fossil which united the character of the sponges and corals.

Taylor's party—Debenham, Gran and Taylor—contributed specimens of fossils of the armor-plate of a primitive fish. They are thought to pertain to the Devonian age, and so are intermediate between the antarctic fossils of the Cambrian limestones and the Permian coal-measures.

One must read the book itself to obtain any adequate idea of the hardships and privations endured by Taylor, Debenham and Gran in their geological researches on Victoria Land. They were accepted as part of the *game,* and with such a spirit of comradeship and solidarity as alleviated the inevitable miseries of field life in the polar regions. This fine spirit is indirectly exhibited by Taylor at the end of his story, where he says:

> Only in polar lands is to be found the joy of a *real return to the primitive,* in association with the best types of strenuous youth. There, if anywhere, is life worth while.

A. W. GREELY

Rhynchophora or Weevils of Northeastern America. By W. S. BLATCHLEY and C. W. LENG. The Nature Publishing Co., Indianapolis. Pp. 682. Price $4.00.

When, in 1910, the senior author, Mr. Blatchley, published his notable work on the Coleoptera of Indiana, the Rhynchophora were not included. We had, however, the assurance of the author that a further paper covering this group would be forthcoming. In the appearance of the present volume, the promise of six years ago is more than fulfilled, for we have here not merely a complement to the Coleoptera of Indiana, but a review of much wider usefulness, covering as it does the entire country east of the Mississippi River.

Although the Rhynchophora or Weevils—the latter term used in the entomological rather than in the popular sense—constitutes only about twelve or fifteen per cent. of the Coleopterous fauna of the country, still the number of species is very large—no less than 1,084 being recognized by the authors from the territory named, these being distributed among nearly 300 genera. The only previous work on North American Rhynchophora with which the present one can be compared is that published by Le Conte and Horn in 1876. This Coleopterological classic, although still of the greatest value as the basis of our modern classification, is altogether inadequate as a student's handbook, the number of species

given from the whole United States being less than two thirds of that now known from east of the Mississippi.

As expressed by the authors, the primary object of the present manual is—as in the "Beetles of Indiana"—"to furnish to students and tyros in entomology a simple means of enabling them in the most direct way possible to arrange, classify and determine the scientific names of the weevils in their collections." To do this, all the higher subdivisions have been carefully defined, keys for the separation of all families, tribes, genera and species have been prepared or adapted, original descriptions have been condensed so as to show more readily the principal diagnostic characters, and geographical range, time of appearance and habits recorded so far as known. The whole is preceded by a chapter on structural characters, and followed by a tolerably complete bibliography and indexes of both the beetles and the plants on which they occur. Add to this the fact that the press work leaves little to be desired and the illustrations are numerous, nearly all good, and many of them beautiful, and we have a very attractive as well as useful contribution to Coleopterology.

In a work of this sort, based upon a multiplicity of sources of information, it is inevitable that there should be some errors of fact; furthermore inasmuch as all schemes of classification and taxonomy involve so large an element of individual opinion, it is altogether unlikely that any specialist could be found who would agree entirely with the authors in their sequence of tribes, genera, etc., or in their delimitation of species. The authors, on the whole, appear to have followed a sanely conservative course, and, while the work embodies the results of the best of recent studies both in this country and in Europe, they have rarely accepted the views of the extremists, and, where differing from the authorities, have frankly stated the reasons for their conclusions.

Let no one be deceived by the words of the authors, quoted above, into believing that the book will prove a sinecure for the entomological "tyro." A difficult subject has perhaps been simplified as far as possible, but it still remains a difficult subject, and the tyro will still have to depend largely on the specialist for the determination of his specimens. On the other hand, the student with a considerable fund of experience will find this work of very great assistance. Would that we had more like it.

H. C. Fall

Pasadena, Calif.

SCIENTIFIC JOURNALS AND ARTICLES

Bollettino di Bibliografia e Storia delle Scienze Matematiche. Publicato per cura di Gino Loria. Torino, 1915, 1916.

Such are the conditions in Europe at the present time that both the publication and the transmission of scientific journals are attended with great difficulty. Some of these journals have been discontinued altogether, others appear in reduced form, and many are greatly delayed if, indeed, they are allowed to pass the barriers at all. Of those which reach us Professor Loria's "Bollettino" is among the most regular and among those which best preserve their usual placidity.

Since this publication consists chiefly of notes on recent mathematical works, there are but few articles that admit of interesting summary in a review of this nature. It is pleasant to observe, however, how little the war disturbs the academic atmosphere, for these mathematical notes, relating to current books of various European belligerents, give no evidence whatever of the conflict which now disturbs the world. Such, for example, are the "notizie" on "La matematica in Germania in questo ultimo quarto di secolo," "Sofia Germain" (by Schwarz), the "Materialien für eine wissenschaftliche Biographie von Gauss" (Klein and Brendel), and the "Entwickelung der Mengenlehre und ihrer Anwendungen" (Schoenfliess).

Of the original articles of a mathematico-historical nature, mention should be made of a few which may have some interest to American readers. M. Lucien Godeaux of Liège has an article on "Un mathématicien Belge du XVIième Siècle: Jean Taisnier." Al-