in the parts devoted to manuring and cultivating.

R. J. H. DeLoach

Bermuda in Periodical Literature, with occasional References to other Works. A Bibliography by George Watson Cole. Pp. ix + 275. Printed for the Author. 1907.

This volume contains 248 pages of references and 24 pages of index; the references are arranged alphabetically by publications, the index by subject and author, thus providing easy access to the contents. Each title is followed by a brief note which gives the characteristic features of the article, and these notes constitute a feature quite as valuable as the references themselves.

On the last page is a list of references to libraries in which a copy of the work cited was found. By the choice of fonts and skillful use of insets the various items of a citation are clearly differentiated to the eye, and the page is made attractive. The range of periodicals cited is very wide, and they cover not only newspapers and magazines, but proceedings of learned societies. The range of subjects is unrestricted, and taken together, they comprise nearly all that has appeared concerning history, description and natural history for the last fifty years. The last division has been especially well done, for it became apparent to Mr. Cole, soon after beginning his compilation, that Bermuda has been a favorite field for the geologist, the botanist and the zoologist. In the preface he says:

> Bearing this in mind, a special effort has been made to render the record of their labors as complete as possible. In order to do this, references are made to some works which are not periodicals, mostly, however, by authors who have also made contributions to periodical literature concerning the flora and fauna of those islands.

The result of this special effort has been to provide in one volume a reference to nearly every addition made to the flora and fauna since (and including) the *Challenger* expedition. The value of such a gathering to the botanist and the zoologist can not be overestimated, and this compilation, moreover, has proved to be exact and accurate at every point tested by the reviewer. Some idea of the manner of treatment may be gathered from the fact that nearly fourteen pages are required for the direct excerpts from the *Challenger* report, to say nothing of the entries of articles appearing elsewhere on the *Challenger* material. The references on birds go back to 1849 and come down to 1904; those on flora extend from 1700 to 1906; those on geology from 1833 to 1906. Moreover, the index takes account of the changes in nomenclature (*e. g.,* "Leptocardians, Goode (1877), 19. *See also* Asymmetron"), so that the difficulties due to this unfortunate obstacle are minimized.

While natural history is amply represented, the other subjects are not neglected. Twenty-four pages are given to citations from the New York City daily papers and seven pages to those from the London *Times*. The total number of citations is 1,382.

Taken as a whole, the work is a masterpiece of bibliography. To take up the chronicles of a somewhat remote island and set them down in order in these days of wide-spread publication seems a task almost impossible to perform in a creditable manner, and a thankless task when done. Mr. Cole's work is excellently well done, and he will earn the hearty thanks of every botanist and zoologist who has occasion to use the volume. In view of the forthcoming tercentennial celebration to be held in Bermuda next year, the colony may well thank Mr. Cole for so handy a volume of reference.

C. L. Bristol

SCIENTIFIC JOURNALS AND ARTICLES

Terrestrial Magnetism and Electricity for December contains the following articles: "Solar Magnetism," by W. J. Humphreys; "Note on the Magnetic Effect of Winds," by W. J. Humphreys; "Solar Magnetic Fields and the Cause of Terrestrial Magnetism," by W. Sutherland; "Note on Sutherland's Article," by G. E. Hale; "On the Probable Existence of a Magnetic Field in Sun-spots," by G. E. Hale; "On the Distribution of Magnetism over the Earth's Surface, II.," by P. T. Passalskij, translated by Paul Wernicky;

"Results of Recent Magnetic Observations in Mexico (1906–8)," by Felipe Valle; "The Magnetic Storms of September, 1908," by O. H. Tittmann; "Letters to Editor," "Notes," etc.

THE NEWEST ANCIENT MAN

Yesterday (December 14) before the Academy of Sciences Professor Edmond Perrier, director of the Museum d'Histoire Naturelle exhibited a skull to which he ascribes a great importance. The skull, together with other parts of the skeleton (bones of the upper and lower limbs), was found about six months ago by two abbés (Bouyssonie and Bardon) in some excavations being made near Chapelle-aux-Saints in the Corrèze.

The rock strata in which these bones were found are, according to M. Perrier, of middle Pleistocene age.

The skull is that of a man of extremely low type, an ape-man, or perhaps of a man-ape of greater cranial capacity than any at present known. This great cerebral development leads M. Perrier to consider it, on the whole, a human skull. But the very thick, low cranial dome, the flattened forehead and pronounced orbital ridges, the broad nose separated from the forehead by a deep furrow, and the much elongated snout-like maxillaries combine to give the skull a marked gorilla-like seeming. The brain cavity, however, is as already said, very much larger than that of the gorilla or any other present-day anthropoid.

The limb bones are curved and present a conformation which indicates that this Pleistocene man walked more often on all-fours than in an erect position. The bones seem to be fairly intermediate between those of a man and those of the present-day anthropoids.

Altogether Professor Perrier (whose scientific standing gives his opinions in the matter high authority) believes that he has in his hands—the specimens have been purchased by the museum—remains much more ancient than those of Neanderthal or Spy, and actually representing a type intermediate between Pithecanthropus and present man.

Those interested should watch for the more detailed and authoritative report of Professor Perrier's account which will appear in the *Comptes Rendus*.

VERNON L. KELLOGG

PARIS,
December 15

THE INDIANA UNIVERSITY EXPEDITION TO BRITISH GUIANA

PROFESSOR CARL EIGENMANN, dean of the Graduate School of Indiana University, has just returned from a four months' trip to British Guiana, where he was engaged in the study and collection of South American fishes. He was accompanied by S. E. Shideler as a volunteer assistant. Professor Eigenmann is now engaged in a monograph of the fresh-water fishes of tropical America. The trip to British Guiana had three objects. It was intended to collect as many species of fresh-water fishes as possible from one of the South American rivers flowing north; to photograph living fishes, and to collect on the plateau of Guiana.

Fishes were collected near the mouths of rivers from the Berbice River on the east to Morawhana near the Orinoco on the west. In the Demarara River collections were made at Georgetown, at Nismar, near the head of tide water, about sixty miles from the coast, and at Malali, almost thirty miles further up stream at the first rapids.

In the Essequibo River collections were made at Bartica, Rockstone, Crab Falls and the Warraputa Cataract.

For an attack on the Guiana Plateau the Potaro River was selected. It is a tributary of the Essequibo about ninety miles from the coast. There are a series of short cataracts with long stretches of navigable water in between. The first of the rapids are at Tumatumari where extensive collections were made. From the next rapids, near Potaro Landing a path of seven miles brings one above the Ichaura, Aurituk, Cŏbanatuk and Pakatuk Cataracts to Cangaruma. From here on the trip was continued with the boats and crew of sixteen Indians, generously put at the service of the expedition by Messrs. G. Linnel and