pioneers would be most valuable to science. Although Professor Chittenden attempts to reconcile his views in regard to antipeptone with modern investigations, in an addendum to 'a chemico-physiological study of certain derivatives of the proteids,' page 321, still we think he fails to make his point very clear.

JOHN A. MANDEL.

Primitive Man. By DOCTOR MORIZ HOERNES. Translated into English by JAMES H. LOEWE, London, 1900. Dent and Co. Pp. 136, Figs. 48.

This handy little 16mo volume forms the twenty-third number in the series of Temple Primers designed by the publishers to furnish, for a shilling a copy, the best and latest results of scholarship to the average reader who cannot afford the costly encyclopedias. Beginning with the subject of man's place in nature the author sums up the characteristics of culture, the earliest traces of man, the ages of stone, bronze and iron; and the primitive history of the Aryans and Semites. Small space is given to the Western Hemisphere, but that is fortunate in two ways, for some wild guessing has been done on that topic, and, secondly, American readers will be glad to have a handy little guide book to European archeology. Not one American authority is mentioned in the bibliography and no European work later than 1894.

O. T. MASON.

Anleitung zur mikroskopischen Untersuchung der vegetabilischen Nahrungs- und Genussmittel. By DR. A. F. W. SCHIMPER, ö. Professor der Botanik an der Universität Basel. Second revised edition. Jena, Verlag von Gustav Fisher. 1900.

A melancholy interest attaches to the consideration of this book owing to the recent death of Dr. Schimper in the prime of life. Here in a space of 150 pages we have a very attractive and useful introduction to the microscopic appearance of flours, starches and their adulterants; of coffee and its adulterants; cocoa, chocolate, tea, tobacco, pepper, cloves, allspice, red pepper, mustard, saffron, cinnamon, vanilla, cardamon, nutmeg, mace, ginger and turmeric. There is also a chapter on the adulterants of fruit jellies, and one on honey. The book contains a good index and 134 figures, which are well drawn and very attractive. Among the substances used for adulterating coffee Schimper mentions the following: Chickory, beets, carrots, figs, various cereals, lupin seeds, acorns, carobs, dates, vegetable ivory, potatoes. These are described in a space of twenty pages with seventeen illustrations. Under fruit jellies, we learn that agar-agar is frequently employed for their adulteration and that this substance may be detected readily by means of the microscope, owing to the fact that these seaweeds always have numerous diatoms clinging to their surface, as any one may determine readily by burning a small quantity of agar-agar in a platinum dish, adding to the ashes a few drops of water rendered acid by HCl and then examining under high powers of the microscope. When jellies are suspected of adulteration with agar-agar, the author recommends that the mass of jelly be boiled with about five per cent. dilute sulphuric acid, and then that a few crystals of permanganate of potash be carefully added. The previously suspended diatom shells now fall to the bottom and form a more or less rich sediment, which may be examined without any further preparation.

In this age of haste to be rich at any cost, the extension of the adulteration of food products has become very great, and the knowledge contained in books of this kind increases yearly in importance, not only to the special worker, but to the general public. The moderate price of four Marks in paper covers, or five Marks, bound, puts the book within the reach of every one.

ERWIN F. SMITH.

Use-Inheritance illustrated by the Direction of Hair on the Bodies of Animals. By WALTER KIDD, M.D., F.Z.S. London, Adam and Charles Black. 1901.

This is an interesting contribution to the dynamic or Lamarckian principles of evolution. Dr. Kidd has first treated of the formation of whorls in the hairy coats of mammals; and second, the slope of hair in certain selected regions of the bodies of animals and