publication of Alder & Hancock's "British Tunicata." He has since completed it through the year 1910. He has added many titles to Herdmann's bibliographic list in his *Challenger* reports, which has been the standard bibliography for the Tunicata.

The bibliography is in the form of an author's index with full titles, with page references, and often with brief note as to contents. There are included not only works which deal exclusively or mainly with the Tunicata, as indicated in their titles, but very many works in which the reference to the Tunicata is not the main theme, general text-books being included in the list. Of course, no such list can possibly be entirely complete, but in this instance it is a remarkably full one and will be of great value to students of the group.

In several weeks' use of the bibliography the reviewer has noticed no inaccuracies and no omissions of any moment. It is a little unfortunate that about a tenth of the titles are placed in a supplementary list.

Maynard M. Metcalf

Oberlin, Ohio,
October 1, 1913

The Earth: Its Genesis and Evolution Considered in the Light of the Most Recent Scientific Research. By A. T. Swaine. London.

Worthless is a very strong adjective to apply to a book which is almost a model in paper, typography and illustration. Yet just what is the value of a book whose author believes that vital force produces matter (p. 72), that thus the earth is slowly growing larger (p. 263), that the great cycles of sedimentation correspond to a filling up of the great ocean depths, a straw-colored siliceous ooze below 3,000 fathoms and red clays corresponding to the basal quartzites and red beds (p. 20), that up to the close of the Paleozoic the light and heat energy of the sun had not been experienced on earth (pp. 144–151), but that an increase in temperature of the earth's crust in cycles was due to igneous activity and outflow of heat from the interior, which evaporated a large amount of the ocean (pp. 89, 95, 109, 174, 183, 193)? Compared with these heresies, the theory that sedimentary rocks are fused sediments (p. 54), that erosion and conglomerates are largely due to the wash of the evaporated ocean condensing again (p. 95) with the tidal waves caused by earth movement paroxysms (pp. 186, 213), the explanation of transgressive formations (p. 95), of laterite (p. 199) and of drumlins (p. 245) are but minor. The book shows, however, a wide acquaintance with recent and the best geological literature, though it is curious in a book that dwells so much on geologic cycles of sedimentation that no mention seems to be made of Newberry or Schuchert. It contains a mass of geological fact mixed with the author's unique views put in an interesting way.

Conceivably, it might be of use to give to a rather advanced student, inclined to swallow what he reads too easily, as an emetic, asking him to show why the facts advanced by the author do not support his theories.

Alfred C. Lane

SCIENTIFIC JOURNALS AND ARTICLES

The first number of the new *Journal of Agricultural Research* published by the U. S. Department of Agriculture was issued October 10. It consists of eighty-seven pages of letterpress and line drawings and five plates, including one color plate. The articles in the first number are:

"*Citrus ichangensis*, a Promising, Hardy, New Species from Southwestern China and Assam."

"*Cysticercus ovis*, the Cause of Tapeworm Cysts in Mutton."

"The Serpentine Leaf-Miner."

In the introduction, written by Dr. B. T. Galloway, assistant secretary, the purposes of the journal are explained as follows: "The recent advances in the theory and practise of agriculture have come almost entirely from scientific research applied to agricultural problems. Accumulated results of centuries of painstaking studies have been drawn upon, and it has become evident that further improvement in agriculture calls for continued investigation of the most accurate and thorough nature. The first recognition of the economic value of progress in these investigations as well as the initial application of theories to practical prob-