

duction occurs under conditions of prolonged ingestion of mineral acids.

Our observations show that a small amount of H_2SO_4 may limit the growth of the rat in the second generation even when little or no effect on the growth of the first generation was apparent.

A study of the effect of various acids and acid-forming substances on the reproduction of rats and swine is now being made in this laboratory.

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THE HYDROID OF CRASPEDACUSTA RYDERI IN KENTUCKY

SINCE the finding of the hydroid of *Craspedacusta ryderi*¹ (1920) in Boss Lake, Elkhart, Indiana, I have been anxious to find it elsewhere, especially so since all the medusae at Elkhart were females and all medusae found elsewhere were males. I have been interested in the sex question involved and wish to transplant hydroids from some other source to Boss Lake.

July 30 I made a trip to Benson Creek, where Garman² found the medusae in 1916, 1917 and in 1924, and was rewarded by finding the hydroids on the rocks in the shallow water just above the place where the medusae were most abundant. As the water was muddy and most of the rocks covered with slime only a few hydroids were found. Some of these I took to my laboratory, where they now are and where I hope to be able to rear them. When the water clears I shall try to find more of them.

In comparison with the hydroids in Boss Lake they are much smaller, but otherwise they look the same. The size difference may be merely a question of the food supply. The water in the creek contained very few micro-organisms.

The hydroids were not producing hydroid or medusae buds. This would also indicate unfavorable conditions.³

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SCIENTIFIC BOOKS

The First One Hundred Years of American Geology.

By GEORGE P. MERRILL, head curator of geology, United States National Museum. XXI + 773 pages, 6½ x 10 inches. Yale University Press. 1924.

In the report of the U. S. National Museum for 1904 Dr. Merrill published "Contributions to the his-

¹ Payne, *Journ. Morph.*, Vol. 38.

² Garman, *SCIENCE*, Vols. 44, 56 and 60.

³ Three weeks later hydroids were found in abundance and transplanted to Elkhart.

tory of American geology," a work of great and timely interest. The present volume is practically a republication of the former work, with the addition of three new chapters on special subjects and an appendix of personal letters. It makes a handsome large octavo volume of 773 pages, with 36 page plates and 130 text illustrations. The illustrations are slightly less in number than in the former volume. Twenty of the plates and 105 of the text figures are portraits. This is the first work published on the Philip Hamilton McMillan Memorial Publication Fund.

The history covers the ten decades from 1785 to 1885, grouped in eight eras. The first two eras are named after the two most active workers in the early days, William Maclure, the "father of American geology," and Amos Eaton, the earliest teacher of the science. The Maclurean Era includes the years 1785-1819, and the Eatonian 1820-1830. Five chapters cover five decades of State Geological Surveys (1830-1888), with chapter eight devoted to the National Surveys. The special problems discussed in the previous work were, "The fossil footprints of the Connecticut Valley," "The Eozoon question," "The Laramie question" and "The Taconic question." The three new special topics are, "The development of the glacial hypothesis"; "The development of micro-petrology," and "How old is it?"

The biographical sketches of the geologists are not the least interesting part of the history, and the author has described the workers and their work with discrimination and fairness. The appended personal correspondence is a welcome addition. It also emphasizes the large psychologic element, especially in the pioneer work. Geology is not an exact science, but relies on observation, diagnosis, comparison and interpretation. The personal element in the early years is shown by the diverse and even contradictory views on phenomena and features which to-day are lucid. A touch of humor is suggested by the placing of the portraits of Cope and Marsh side by side.

The student of geology finds the history a real romance. The young worker especially needs it for breadth of information and as suggestion of caution in his work and modesty in opinion. Dr. Merrill has done a good service not only to the geologic profession but to general science, and to the history of the evolution of real knowledge. It was a rare and fortunate combination for the author to have access to the literature and records, the time, patience and industry for collecting the vast mass of fact and the knowledge and discrimination necessary for its effective presentation.

The only suggested criticism of the work is its