working for the advancement of knowledge in a country whose opportunities for research are as varied as its climate and its contours.

FRITZ S. BODENHEIMER
HEBREW UNIVERSITY
JERUSALEM, PALESTINE

OCCURRENCE OF FRESH-WATER MEDUSAE IN MICHIGAN[1]

ON September 9, 1933, medusae were found for the first time in the vicinity of Ann Arbor. This is apparently the first record of their occurrence in Michigan. They were first found by a fisherman in Barton Pond, a part of the Huron River, in an area where the current had evidently thrown them into a backwater where they had assembled in considerable numbers. On September 17, the upper limit of distribution was located about one mile further upstream. In this area the water was stagnant and the medusae were swimming in enormous numbers. All stages of development from early gonad to fully matured individuals were present. As far as we have been able to determine, all individuals were females. Size ranged from one quarter to one inch in expanded phase. On September 18, a bright sunny day, large numbers were collected. On September 19 and 20, both being dark stormy days, not a single specimen could be located.

A diligent search of the vegetation, bogs and rocks has so far failed to locate the hydranth stage.

This medusa is apparently *Craspidacusta sowerbyi*, which has been reported many times in the states to the south of Michigan.

Slide traps have been sunk to the bottom in water 6 to 15 feet in depth in the hopes that by next spring the hydranths may have attached themselves and can be brought to the laboratory for study. As no field work was carried on in Barton Pond during the past summer, we have no indication of the first appearance of the medusae for this season. Many specimens have been preserved in 5 per cent. formalin, and samples are available to zoologists especially interested.

ARTHUR E. WOODHEAD
UNIVERSITY OF MICHIGAN

RATTLESNAKE POISONING BY SELF-INFLICTED BITES

IN the issue of SCIENCE for July 7, 1933, page 13, H. K. Gloyd, of the University of Michigan, writes of the effect of water moccasin venom upon a rattlesnake. In the course of the article Mr. Gloyd says: "Almost every one who has kept living venomous snakes for study has observed that on occasion they fortuitously bite themselves or others of their own or closely related species without the occurrence of noticeable reactions."

In this connection it may be of interest to report a case which occurred in our zoological laboratory two years ago. On June 16, 1931, I captured an eight-rattled rattlesnake, *Crotalus confluentus confluentus* (Say), on the prairie and kept it in captivity through the summer. On August 24, or possibly a day or so earlier, this snake gave birth to ten young.

On August 31 two observers were disturbing the snakes by shaking the cage. Soon the snakes were striking promiscuously, the old one as well as the young. During this mêlée one little snake was seen to strike itself in about the middle of its length and to have difficulty for a moment in releasing the fangs from itself. It soon began to show signs of serious effects of the poison, and I was called in to observe it. The snake was writhing and twisting in apparent agony. Within five minutes after my observation began, it had ceased its contortions and appeared nearly lifeless. It was swollen for an inch or so in the region of the bite.

The incident occurred at about 10 A. M. When I returned to the laboratory in the afternoon, the snake was entirely lifeless.

L. D. WOOSTER
FORT HAYS KANSAS STATE COLLEGE
HAYS, KANSAS

PRELIMINARY NOTE ON THE OCCURRENCE OF VITAMIN A IN THE OIL OF WEST INDIAN SHARKS

SAMPLES of the oil from the livers of two West Indian sharks, *Carcharhinus* sp., caught in the waters along the northern shore of Puerto Rico, were assayed by the bio-method of Sherman.[1]

Four levels of the oil (7.5 mg, 5.0 mg, 2.5 mg and 1 mg per day) were fed to four different groups of white rats, laboratory stock, containing respectively 6, 8, 7 and 11 rats. Two or more negative controls were run with each group.

All levels gave excellent results and even the lowest level, 1 mg, per day, gave an average growth of more than 24 grams in a period of eight weeks after depletion, and the early symptoms of xerophthalmia disappeared in a few days. All negative controls died in about four weeks after depletion.

The casein for the depletion diet was purified by the method recommended by M. T. Potter,[2] which method proved to be very reliable and economical.

C. F. ASENJO
RENSSELAER POLYTECHNIC INSTITUTE

[1] H. C. Sherman and S. L. Smith, "The Vitamines," Chemical Catalog Company, 1931.
[2] M. T. Potter, SCIENCE, August, 1932.

[1] Contribution from the Zoological Laboratory of the University of Michigan.