

If a dwarf *Crepidula* be removed from a small hermit shell, and find lodgment elsewhere, it is readily seen that the inhibitory influence was merely temporary, since the dwarf then grows to the normal size. So too the confined *Paramœcium*, after being liberated, soon begins the process of fission at the normal rate.

A more detailed account of these experiments, together with some observations on the behavior of Protozoa confined in capillary tubes, will shortly appear in another publication.

G. C. CRAMPTON

MASSACHUSETTS AGRICULTURAL COLLEGE,
AMHERST, MASS.

SOCIETIES AND ACADEMIES

THE MICHIGAN ACADEMY OF SCIENCE SECTION OF ZOOLOGY

THE zoological section of the Michigan Academy of Science met at the University of Michigan, March 28. Mr. Peter Okkleberg was chosen president for the coming year. The following program of papers was presented:

"Results of the Mershon Expedition to the Charity Islands, Lake Huron, Amphibians and Reptiles," Crystal Thompson and Helen Thompson, Ann Arbor.

"Some Bird and Mammal Records for Michigan," N. A. Wood, Ann Arbor.

"Directions for Collecting and Preserving Specimens of Reptiles and Amphibians for Museum Purposes," Alexander G. Ruthven, Ann Arbor.

"The Breeding Birds of the Charity Islands, Lake Huron, with Additional Notes on the Migrants," N. A. Wood.

"On the Wisconsin Wood-frog," Helen Thompson.

"The Pickerel Frog, *Rana palustris* LeConte, in Michigan," Crystal Thompson.

"External Conditions and the Growth Period in the Eggs of *Hydatina senta*," A. F. Shull, Ann Arbor.

"The Influence of Egg and Sperm in Inheritance of Egg Characters in *Hydatina senta*," A. F. Shull.

"The Origin of Continental Forms, 3. A Preliminary Note on Faunal and Floral Relations," Howard B. Baker, Detroit.

"A Collection of Mammals from Osceola

County, Michigan," Orrin J. Wenzel, Ann Arbor.

"The Mouth Reflex of Physa: May it be Substituted for the Salivary Reflex of Pawlow in Studies of the Nervous System of Snails?" Elizabeth Thompson, Ann Arbor.

"Pseudohermaphroditism in the Brook Lamprey," Peter Okkleberg, Ann Arbor.

"Factors that Determine the Location of the Borings of the Yellow-bellied Sapsucker in the Yellow Birch," Margaret W. Taggart. (Presented by Jacob Reighard.)

"Report on the Zoological Work done at the Biological Station of the U. of M. at Douglas Lake," Jacob Reighard, Ann Arbor.

"Cestode Parasites of Fresh-water Fish," George R. La Rue, Ann Arbor.

"New Methods of making *in toto* Preparations," George R. La Rue.

"The Distribution of the Ancyridæ," Bryant Walker, Detroit.

"Preliminary Report on the Ecology of the Mollusks of the Douglas Lake Region," H. Burlington Baker, Ann Arbor.

"The Origin of the Germ Cells in the Toad Fish," Emory Sink, Ann Arbor.

"The Application of Calorimetric Methods to the Study of Embryology," O. C. Glaser, Ann Arbor.

"Notes on the Amphibia and Mammals of Gratiot County, Michigan," H. M. MacCurdy, Alma.

"Check-list of Michigan Lepidoptera. I. Rhopalocera (Butterflies)," W. W. Newcombe, Detroit.

"Some Observations on the Muskrat Houses near Ann Arbor," F. C. Gates, Ann Arbor.

"On some Amphibians and Reptiles from the State of Vera Cruz, Mexico," Alexander G. Ruthven.

GEORGE R. LA RUE

UNIVERSITY OF MICHIGAN

THE HELMINTHOLOGICAL SOCIETY OF WASHINGTON

THE tenth regular meeting of the society was held at Dr. Stiles's residence on March 14, 1912, Dr. Stiles acting as host and Mr. Crawley as chairman. The receipt of a set of author reprints from Dr. Arthur Shipley for the society's library was noted.

Dr. Stiles reported that the Index-Catalogue of Medical and Veterinary Zoology dealing with the subjects Cestoda and Cestode Diseases, by Stiles and Hassall, was now in manuscript ready for

press. He also reported that he had in preparation a list of the names of all hookworms.

The secretary read the following communication from Dr. Fritz Zschokke:

Gordius aquaticus L. as a Parasite of Man.

A two and one half year old boy at Dorentingen, a village near Solluthorn (Switzerland), passed per anum a male *Gordius aquaticus* L. about 17 centimeters long, together with several specimens of *Oxyuris*. After passage, the worm lived three days free in water. According to the attending physician, the patient was subject to nervous troubles, which disappeared immediately upon the removal of the parasite. Symptoms involving the intestinal canal were present only to a slight extent.

Up to 1906, 9 authentic cases of the occurrence of *Gordius* in man were known. These occurred in Italy (3), France (3), North America (1), Bavaria (1) and Austria (1). To these must now be added the case reported from Switzerland. Most of the carriers of the parasites are boys and young people from two and a half to twenty-two years old. Systematically, the *gordius* forms found in human beings belong to the species: *Gordius aquaticus* L., *G. villosi* Rosa, *Paragordius varius* Leidy, *P. tricuspatus* L., *Parachordodes tolosanus* Duj., *P. pustulosus* Baird and *P. violaceus* Baird.

The duration of the pseudoparasitic infection of the human intestinal canal by *Gordius* may extend over months; it is accompanied by the symptoms of a more or less clearly indicated helminthiasis which disappear with the discharge of the parasite by mouth or anus of the host individual.

Probably the infection takes place through the ingestion in drinking water of the free-living worms which have already passed through their parasitic developmental stage in insect larvæ and predaceous insects. Also, the patient at Dorentingen had the habit of drinking from a watering trough.

Gordius in the adult state is well fitted for a parasitic mode of living. Its strong chitinous covering protects the worm against the digestive fluids of the host. It is in a high degree insensitive to considerable variation of temperature, and also, as G. V. Bunge has shown, to the absence of oxygen.

Dr. Ransom presented the following note:

Cysticerci in American Sheep, Reindeer and Cattle.

Federal meat inspectors are frequently finding

sheep infested with cysticerci in the heart and voluntary muscles. These cysticerci closely resemble *Cysticercus cellulosæ*, which is said to occur occasionally in sheep, and they have been provisionally identified as such. The question as to their identity is now under further investigation, since it seems unlikely that so many cases of infestation would occur in sheep, especially in view of the fact that *Cysticercus cellulosæ* is comparatively rare in this country in hogs, the usual host.

Specimens of muscle cysticerci from Alaskan reindeer have recently been received by the Bureau of Animal Industry from Dr. D. S. Neuman, of Nome, Alaska, who reports that they are very common. These cysticerci have been provisionally identified as the cysticerci of *Tenia krabbei*, a tapeworm of the dog, although in some respects they do not correspond to the available descriptions of the cysticercus of that tapeworm.

There have also been some unusually high percentages of infestation of cattle with *Cysticercus bovis*. Three lots of cattle of 251, 70 and 201 head, originating in the same locality, had 25, 41 and 39 head, respectively, infested with this parasite.

Dr. Garrison reported that in an examination of a slide of some old human feces he had found an egg of *Fasciola*, apparently *F. hepatica*, together with a number of other parasite eggs, including a lateral-spined *Schistosomum* egg. He noted that Ashford has reported finding this egg in human feces in Porto Rico.

In comment, Dr. Stiles reported that he had an adult specimen of *Fasciola* from man in Porto Rico. The *Fasciola* from sheep in Porto Rico appears to be a quite distinct species on comparison with the European specimens, but a comparison with American specimens seems to furnish a complete series of gradations between the typical Porto Rican and the European forms. Dr. Stiles noted that cases had been reported from Porto Rico of death from asphyxiation as a result of *Fasciola* attaching in the throat following the eating of raw liver. The prompt production of vomiting will carry out the flukes and save the patient. There is a total of 26 to 28 cases of infection of man with *Fasciola*, most of the cases being discovered on postmortem.

Dr. Garrison presented a report on the terminology of parasitic diseases, and the remainder of the evening was spent in a discussion of his paper.

MAURICE C. HALL,

Secretary