

SECTION ON ZOOLOGY

Chairman: HENRY G. NESTER, Butler University

The attendance at the section on zoology maintained an average of between 50 and 60 throughout the session. The following named demonstrations were given: the use of the Argus camera in the biological laboratory, Caudata of Vigo County, juvenile forms of Acanthocephala, and the spotted turtle, *Clemmys guttata*. Other papers were also supplemented by demonstration material.

C. P. Hickman, of De Pauw University, was elected chairman of the section for 1939.

ABSTRACTS

The centennial of the cell theory of Schleiden and Schwann, 1838-1938. HENRY G. NESTER, Butler University.—Biographical sketches of the two authors of the cell theory are given. Some of Schwann's scientific work is mentioned. Schwann's "Microscopical Researches into the Accordance in the Structure and Growth of Animals and Plants" and Schleiden's "Contributions to Phytogenesis" are reviewed. Bibliographies of the two men are included.

Insects of Indiana for 1938. J. J. DAVIS, Purdue University.—Each year finds us confronted with a changed insect population. During the past year many insect problems have confronted the citizens of Indiana. Army worms destroyed field crops early in the season; grasshoppers were abundant, but, because of the heavy rainfall and resulting luxuriant vegetation, they did not cause severe losses; the Hessian fly built up to threatening numbers, especially in the northern half of the state; and for the first time since its introduction into Indiana, the European corn borer caused commercial losses in the eastern part of the state. Garden pests, especially the Mexican bean beetle and leafhoppers, caused severe losses in many parts of Indiana. Annoying pests, including mosquitoes and fleas were unusually abundant. Scale insects, including the European elm scale, the cottony maple scale, and the San Jose scale, were on the increase. Fruits were likewise subject to heavy toll by the Oriental fruit worm and codling moth. These and many others are discussed.

Further observations on conditions under which fresh-water medusa, *Craspedacusta*, occurs. MURVEL R. GARNER, Earlham College.—The medusa has now been found to occur in seven of the last eight years in this same body of water, indicating that conditions appear to be satisfactory for its permanent residence there. Furthermore, the medusae have been found in two other artificial bodies of water within a few miles of Richmond, one of which has contained them at least three or four summers. As a means of determining the conditions under which these animals live, physical and chemical data concerning the water and a description of the bodies of water are given. It is hoped that other investigators will contribute similar data as a means of determining the conditions of occurrence of this form.

Radiation of *Drosophila* with low-intensity ultra-violet light for one complete generation. III. Effect on crossing-over in the second chromo-

some of the male. S. A. RIFENBURGH and MARTHA WALKER, Purdue University.—Abstract withheld until study is complete.

The Golgi material in the parathyroid gland cells of vitamin-D-deficient albino rats. HENRY G. NESTER, Butler University.—Ten albino rats, the mothers of which had been on a diet deficient in vitamin D during lactation, were placed on Steenback ricket-producing diet 2965 when 29 days old and kept on it for 31 days. They were then killed and the parathyroids preserved in a modification of the Nassanov Kolatchev method, and the tibias were tested by the McCollum line test. The same procedure was followed with animals kept on a normal diet. Preliminary observations show that the Golgi apparatus of the parathyroid gland cells of animals receiving a normal diet is larger and more complex than that in the animals deficient in vitamin D.

A preliminary report on the life history of a species of *Amphimerus* (Trematoda: Opisthorchiidae) from the snapping turtle (*Chelydra serpentina*). RAYMOND M. CABLE, Purdue University.—Among a large number of parasites found in a snapping turtle from Madison County, Kentucky, were 42 specimens of *Amphimerus*, which were taken from the gall bladder and bile ducts. Twenty-two of these were teased apart and placed in aerated water until the eggs contained active miracida, but none of the eggs were observed to hatch. Each of 10 small specimens of *Goniobasis semicarinata* was isolated with a small portion of worm material containing embryonated eggs, and at intervals the snails were cracked and examined for parasites. One died, four became infected, and five gave negative results. The last infected snail, examined 90 days after infection, contained 24 cercariae that were capable of swimming. The other infected specimens did not contain mature cercariae but yielded large numbers of rediae of the type characterizing the *Pleurolophocera* group. Both mother and daughter rediae were observed, apparently for the first time in this group. Larval stages of none of the other seven trematodes known to parasitize this snail were found in the experimental material. Since the natural incidence of infection with all species is low in this mollusk, and the specimens used were very small, it seems quite probable that the infection resulted from the ingestion of the eggs of the parasite. The second intermediate host has not been discovered.

Star-recessive and Trim, spontaneous mutations on the second chromosome of *Drosophila melanogaster*. EDWARD B. LEWIS, JR., Minneapolis, Minn.—Star-recessive (symbol S^r), a recessive allelomorph of the dominant gene for Star-eye (S , 2-1.3), produces a rough eye in the homozygous state. Its phenotypic expression, however, is more variable than that of $S/+$, while the combination S/S^r results in a new phenotype. A series of experiments show S^r to be located on the second chromosome and prove its allelomorphism with Star. Trim (symbol trm) is a recessive mutation resulting in scalloped wing margins. An interesting feature is the complete infertility of the homozygous trm female—a condition uncommon although not unique among autosomal recessives. The final localization of trm is made by a special type of crossing-over experiment known as a balanced viability test.