

ENTOMOLOGY

Chairman: R. E. SIVERLY, Ball State College
B. ELWOOD MONTGOMERY, Purdue University, was elected chairman
for 1962

ABSTRACTS

Studies on the Control of the Periodical Cicada in Apple Orchards. G. EDWARD MARSHALL, Purdue University.—Severe decline in certain apple orchards is attributed to the presence of high populations of periodical cicada nymphs in the soil. Research is reported on the types of chemicals tried for the control of these insects with special comment on the success of demeton.

The Life History of the Mimosa Webworm in Indiana. MICHAEL L. MCMANUS, Purdue University.—Since its original discovery in 1940 at Washington, D. C., the mimosa webworm, *Homadaula albizziae* Clarke, has spread rapidly throughout the Eastern and Central United States. At present, the webworm has officially been reported in 61 of Indiana's 92 counties. Although at least two generations each year occur in Indiana, a partial third generation is possible. The completion of one generation was found to require an average of 39.7 days. Studies on five varieties of thornless honeylocust during the summers of 1960 and 1961 show that a varying degree of susceptibility exists.

Humoral Regulation of Carbohydrate Metabolism in the Cockroach *Blaberus craniifer* Burmeister. W. S. BOWERS, Purdue University.—The effects of ablation of insect endocrine glands on the metabolism of blood sugar and fat body glycogen have been studied. Preliminary results indicate that glycogen disappearance during starvation is decreased by ablation of the corpus allatum. Measurement of fat body glycogen in starved allatetectomized and starved unoperated roaches reveals higher levels of glycogen persist in the operated animals.

Attractiveness of Various Cucurbit Varieties to Cucumber Beetles. GEORGE E. GOULD, Purdue University.—The attractiveness of various squash varieties, cucumbers, muskmelons and watermelons to the heavy spring populations of the striped cucumber beetle (*Acalymma vittata* (F.)) and the August populations of the spotted cucumber beetle (*Dia-brotica undecimpunctata howardi* Barber) showed considerable variation. Squash belonging to the species *Cucurbita moschata* (D.) had fewer beetles attacking the seedling plants than did plants belonging to *C. pepo* (D.) and *maxima* (L.). Butternut squash (*moschata*) attracted fewer beetles and suffered less loss than did the Hubbard (*maxima*). Two varieties first tested in 1961, Sweet Meat and Marblehead, were so seriously attacked as seedlings that few plants remained for observations later in the season. Cucumbers, muskmelons and watermelons were less attractive than squash growing adjacent to them, but grown to themselves had to be protected with insecticides. In seasons of high beetle populations, such as 1961, insecticide treatments were necessary to produce a crop on

cucumbers, muskmelons, watermelons and most of the 10 squash varieties under trial.

Further Studies of the Composition of Some Indiana Nectars. B. ELWOOD MONTGOMERY, Purdue University.—This paper is a continuation of the preliminary studies reported in 1958. It includes the results of the analysis of the sugar content of samples of nectar obtained from flower-visiting bees during the past three seasons. Correlations and relationships of the sugar content of nectar with relative humidity, temperature and season of flowering are shown.

Occurrence of *Culex territans* Walker in Indiana. R. E. SIVERLY, Ball State Teachers College.—Larvae of *Culex territans* Walker were collected in a bog area in Delaware County, Indiana, in June, 1958. Larvae of this mosquito were again collected in the same habitat in September, 1961. So far as it is known, these are the first collection records for this mosquito in Indiana. In the southern states, *C. territans* often occurs in earth cavities, or tree holes at ground level, and is found in breeding association with *Culiseta melanura*. The same breeding association occurs in Indiana. *C. territans* tends to occupy lighted areas of the earth cavity, while *Culiseta melanura* larvae tend to seek out the darker recesses of the microhabitat. *Culex territans* is believed to be of minor economic importance, since it feeds on cold-blooded animals. Perhaps its greatest significance is indication—by its presence—of the possible occurrence of *Culiseta melanura* in a given area. *Culiseta melanura* is now established as an endemic vector of eastern encephalitis. Larvae of the two species of mosquitoes are distinguished by the color of the antennae, the length and shape of the air siphon, and the character of the scales on the eighth abdominal segment.