# ENTOMOLOGY

Chairman: B. E. MONTGOMERY, Purdue
GERTRUDE WARD, Earlham College, was elected chairman for 1964

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## ABSTRACTS

**Population Build-up of *Oulema melanopa (L.)* in Indiana and the Apparent Influence of Wind on Dispersion.** RICHARD E. SHADE and M. CURTIS WILSON, Purdue University.—A survey was made to ascertain the extent of build-up of the cereal leaf beetle, *Oulema melanopa* (L.), over a one-year period since it was first identified from Indiana. The 1963 survey duplicated the technique used by the office of the State Entomologist in 1962 and was confined to the same area. It was made both years during a period of five days in the middle of August, at which time counts were low because most of the population was aestivating. However, results of the 1963 survey show a ten-fold increase in the number of beetles collected. In contrast to 1962 when only 12.5% of the samples contained beetles, 44% of the collections showed infestation in 1963. In 1962, all beetles collected in this survey were found in an area extending 8 to 11 miles from south south east to east south east of Galien, Michigan, the center of the infestation. In 1963, they were collected 10 miles southwest of Galien, east south east for 23 miles and directly south to the limit of the survey area, which was ten miles.

Using daily prevailing wind direction, a graphic illustration (wind rose) was made for the area during the period of May 1 to June 30, 1963 when the beetles are most active. It was then plotted on a map of the infested three state area along with the known peripheral points of infestation. The close approximation of the wind rose with the infested area suggests that the prevailing winds are a major factor in the dispersion of this insect.

**Known Occurrence of Cereal Leaf Beetle, *Oulema melanopa*, in Indiana, 1963.** JAMES A. CLARK, Indiana Department of Conservation.—Survey for cereal leaf beetle during the summer of 1963 revealed parts of twenty-five counties to be infested. This is an increase of twenty-three counties over the 1962 survey. State quarantine has been altered to cover the known infested areas.

**Occurrence of *Wyeomyia smithii* (Coquillett) in Indiana.** R. E. SIVERLY, Ball State College.—Larvae and pupae of *Wyeomyia smithii* (Coquillett) were collected in Pinhook Bog in La Porte County, Indiana, in August, 1963. Immature specimens of this mosquito were taken from water contained in the leaves of the pitcher plant, *Sarracenia purpurea*. *W. smithii* usually is found wherever this pitcher plant occurs, but the immature stages are found in no other micro-habitat. The occurrence of *W. smithii* has been reported from neighboring states. To the author's

knowledge, there are no previously published accounts of the occurrence of this mosquito in Indiana. Apparently little is known concerning the biology of this mosquito. It is not known to bite man and would appear to be of minor economic importance as a pest or vector mosquito.

**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.

*Drosophila* **control on canning tomatoes.** GEORGE E. GOULD, Purdue University.—Eggs of the fruit fly, *Drosophila melanogaster* Meigen, are considered a contaminant by Federal officials when found in processed tomato products. Large populations of this fly appear in tomato fields in late August and September and lay eggs in cracks of the fruits. Field applications and hamper treatments with insecticides have been partially successful in reducing the number of eggs. In recent experiments two organophosphate insecticides, dichlorvos and Guthion, have given promising results.

**The relative attractiveness of electric lamps to nocturnal insects.** RALPH A. KILLOUGH, USDA, Beltsville, Maryland, and HOWARD O. DEAY, Purdue University.—Experiments were conducted during the summers of 1958 and 1959 at Lafayette, Indiana to determine the attractiveness of various commercially available lamps to nocturnal insects out-of-doors. Fourteen kinds of 15-watt fluorescent lamps (colors ranging from red through blacklight BLB, including several whites), ten kinds of 150-watt incandescent lamps (from red through a clear bulb), a 100-watt mercury-vapor lamp, and seven kinds of neon or argon "type" tubes (18 inches long) were compared. It was found that for insects in general the attractiveness of the lamps was as follows: BL fluorescent>BLB fluorescent and mercury-vapor>inside-frosted, white, and clear incandescent >remaining lamps (except the yellow and the red)>the yellow and the red lamps.