Entomology

Chairman: GEORGE H. BICK, St. Mary's College

LELAND CHANDLER, Purdue University, was elected chairman for 1968

ABSTRACTS

The Biological Control of the European Corn Borer Through the Use of Bacteria. D. NESBITT and H. L. ZIMMACK, Ball State University.—The research work has been an attempt to find one or more bacteria that would have a pathogenic effect on the European corn borer and not be pathogenic to humans or animals.

The screening with mass rearing was conducted to learn whether any of the bacteria had a definite pathogenicity for the corn borer. The results of this experiment were negative. There was no indication of outstanding pathogenic effects on the larvae. The bacteria tested on the individually reared larvae did not cause any outstanding mortality. There was very little difference between the control group and the three experimental groups of larvae that were used. The egg production of the females in the control group was 1.66 times that of the *Serratia marcescens* Bizio group, 1.95 times the *Escherichia coli* (Migula) production, and 2.70 times the *E. coli-S. marcescens* group. The eggs per female per day was 1.60 times as many for the control group as for the *Serratia* group; 3.14 times as many as for the *E. coli* group; and 1.83 times as many as for the *E. coli-S. marcescens* females. The greatest difference among the four groups of larvae tested was in the egg production.

Reproductive Behavior and Social Organization in the Coleoptera. FRANK N. YOUNG, Indiana University.—Reproductive behavior of Coleoptera includes not only simple male-female relationships in mating but also paired conflicts between males, parental care of the young, and cooperative colony formation. The behavior patterns are sometimes complex and overlap those found among the primitive bees and wasps. None of the beetles, however, form perennial colonies in which there is distinct division of labor and caste formation, but the Sylvanidae, Ipidae, Platypodidae, some Tenebrionidae, and the Passalidae form associations which are close to truly social organizations. As in the Hymenoptera the binding force in these associations seems to be pheromones or ectohormones which are exchanged in feeding or grooming or are released into the air. The beetle subsocieties are thus more closely comparable to the mammalian family held together by male-female, parent-child eroticisms rather than the vertebrate society organized by heirarchy, territory, and leadership.

Other papers read

Colloquium on Insect Reproduction: Odonata. GEORGE H. BICK, St. Mary's College (by invitation).

Colloquium on Insect Reproduction: Culicidae. GEORGE B. CRAIG, JR., University of Notre Dame (by invitation).