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SPIDERS AND INSECTS FOUND ASSOCIATED WITH SWEET CORN, WITH NOTES ON THE FOOD AND HABITS OF SOME SPECIES

IV. DIPTERA AND HEMIPTERA

RAY THOMAS EVERLY,

Holmesville, Ohio

DIPTERA

This order is well represented in the field, but due to inability to use better collecting and preservation methods, most of the determinations could only be made to the genus. However, the identifications listed will give a fairly accurate representation of the families and genera present among the corn plants. Determinations were made by Mr. S. W. Bromley, Mr. C. T. Greene, Mr. D. G. Hall, Mr. J. N. Knull, Mr. R. C. Osburn, and Mr. Allan Stone.

Agromyzidae

Agromyza sp. Four specimens taken July 13 to August 8.

Asilidae

Asilus notatus Wied. One specimen collected July 21.

Erax aestuans L. Three specimens taken July 16, August 5, and August 11.

Proctacanthus milbertii Macq. Seven specimens collected July 8 to late August.

Three of the above specimens, collected July 29, August 14, and late August, were preying upon the melon bee, *Melissodes bimaculata LeP.*, (Hymenoptera-Andrenidae). One, collected on August 14, was preying upon a bumble-bee, *Bombus impatiens Cress.*, (Hymenoptera-Bombidae). Another specimen, collected on August 13, was feeding upon an adult stink bug, *Euchistus variolarius P. de B.*, (Hemiptera-Pentatomidae).

Borboridae

Leptocera sp. One specimen taken July 5.

Ceratopogonidae

Forcipomyia sp. One specimen taken July 14.

Chamaemyidae

Leucopsis sp. One specimen collected July 18.

Chironomidae

Chironomus sp. One specimen collected July 18.

Chironomus tentans F. Two specimens taken July 17.

Clinotanypus scalpularis (Lw.). Four specimens collected July 10 and 28.

Anthomyidae

Anthomyidae sp. "Poor condition," taken July 12 and 28, two specimens.

Chloropidae

Botanobia sp. Five specimens taken July 10 to 18. Chloropsica sp. Three specimens collected July 18 to August 7. Crassiseta sp. Four specimens taken July 11 to August 9.

Culicidae

Aedes vexans (Mg.). One specimen taken late August.

Dolichopidae

Chrysotus sp. Two specimens collected July 11.

Ephydridae

Psilopus sipho Say. Three specimens taken July 24 to August 7.

Lauxanidae

Pachycerina sp. Two specimens collected July 13 and 19.

Metopiidae

Pollenia rudis Fabr. Five specimens taken July 24 to late August. Sarcophaga falculata Pand. Two specimens taken July 15. Sarcophaga lherminieri RD. One specimen collected late August.

Muscidae

Phaoniinae near Pseudophonia. One specimen taken July 29.

Musca domestica L. One specimen taken August 7.

Myiopina RD. sp. Eight specimens taken July 11 to August 8.

Myiopina sp. Four specimens taken July 11 to August 7.

Otitidae

Chaetopsis fulvifrons Macq. Three specimens taken July 9 to 28. Tetanops luridipennis Lw. Three specimens taken July 12 to August 5.

Phyllomyzidae

Milichiella sp. Two specimens taken July 14 and 16.

Sciaridae

Sciara sp. Three specimens taken July 10 to 11. Sciara jacunda Joh. One specimen taken August 3.

Stratiomyidae

Johannsenomyia albaria (Coq.). One specimen taken July 29. Odontomyia varipes Loew. One specimen taken July 9. Odontomyia vertebrata Say. One specimen taken July 12. Stratiomys badius Walk. One specimen taken August 5.

Syrphidae

The larvae of this family were very abundant upon the leaves of the corn plants. None were observed to feed. Zamicrotoridea syrphicola (Ashm.), (Hymenoptera-Ichneumonidae), was reared from an undetermined larva of this family, possibly a species of Bacchus sp., as a larva of this genus was taken upon the same leaf with the parasitized specimen. Bacchus sp. One larva taken upon the corn leaf July 29.

Eristalis arbustorum L. One specimen collected July 14.

Platychirus quadratus Say. Four specimens taken July 9 to 28.

Mesogramma marginata Say. Three specimens taken July 14 to 16.

Mesogramma polita Say. One specimen reared from a puparium found on a corn leaf July 19.

Metasyrphus wiedemani Johnson. One specimen collected July 25. Toxomerus geminatus Say. One specimen taken July 13.

Tachinidae

Achaetoneura sp. One specimen taken August 2.

Archytas near analis. One specimen taken July 17.

Exorista sp. Two specimens taken July 8 to August 5.

Linnaemyia RD. sp. One specimen taken feeding upon exudations from European corn borer tunnel in sweet corn plant.

Micropthalma sp. One specimen taken July 12.

Paradmontia sp. One specimen taken July 11.

Tachinidae sp. One specimen in "poor condition," taken July 28.

Tetanoceridae

Sepedon fuscipennis Lw. One specimen taken August 1.

Therevidae

Psilocephala sp. Four specimens taken July 10 to August 5.

Tipulidae

Nephrotoma ferruginea (F.). One specimen taken July 11. Tipula sp. One specimen taken July 8.

Trupaneidae

Euaresta bella Lw. Two specimens taken July 14 and August 9.

HEMIPTERA

This order was very abundant in the corn field, especially in the individuals of the species. Some were observed preying upon other insects and some attacking the corn plant itself. The following determinations were made by Mr. J. S. Hambleton.

Anthocoridae

Triphelps insidiosus Say

This species occurred very commonly throughout the cornfield upon the corn plants, both as nymphs and adults. It was commonly observed in the tassels and ear silks, and was very abundant between the leaf sheaths and the stalk. It readily bites humans and was quite annoying while working among the corn plants during July and August. This species has been noted as an important predator of the corn ear worm larvae, and this fact, coupled with abundance of the insect during July and August among the tassels and at the base of the corn leaves, suggests that it may also be an important predator of the eggs and newly-hatched European corn borer larvae, Pyrausta nubilalis Hbn.

Corimelaenidae

Corimelaena pulicaria (Germar). Five specimens taken July 25 to August 5.

Galupha nituloides (Wolff). One specimen taken July 28.

Coryzidae

Corizus lateralis (Say). One specimen taken late in August.

Lygaeidae

Blissus leucopterus Say. Common upon corn stalks under leaf sheaths at base of plants. Taken from July 8 to late August.

Geocerus bullatus (Say). One specimen taken July 28.

Myodocha serripes Olivier. Two specimens taken August 14.

Miridae

Adelphocoris rapidus (Say). Six specimens taken July 8 to August 7. Chlamydatus sp. Abundant upon the corn plants. Taken July 12 to 18. Lygus praetensis (L.). Common in the field throughout the season.

This species was taken as the prey of $Nabis\ ferus\ (L.)$, (Hemiptera-Nabidae).

Lygus praetensis strigulatus Walker. One specimen taken July 11. Plagionathus annulatus cuneus Knight. One specimen taken July 9. Semium hirtum Reuter. One specimen taken late in August. Trigonotilus ruficornis (Geoffroy).

This species was very abundant during the latter part of July and early August. It was taken as the prey of *Ceratomegilla fuscilabris Muls.*, (Coleoptera-Coccinellidae).

Nabidae

Nabis ferus (L.). Common on the corn plants and under debris upon the ground. July 8 to August 14.

This species was taken preying upon Lygus praetensis (L.), (Hemiptera-Miridae).

Nabis roseipennis Reuter. One specimen taken August 3. Pagasa pallipes Stal. One specimen taken August 1.

Pentatomidae

Euchistus variolarius (P. de B.)

This species was commonly observed in the field from July 9 to August 9. It was noted upon several occasions with the beak inserted into the stalks and leaves of the corn plants. It was taken as the prey of *Proctacanthus milbertii Macq.*, (Diptera-Asilidae). Eggs, of an undetermined pentatomid, possibly this species, were found parasitized by *Telenomus podisi Ashm.*, (Hymenoptera-Scelionidae). *Perillus bioculatus (Fab.)*

This species was taken upon black nightshade, Solanum niger Nutt., growing in the roadway of the plot on August 22, feeding upon a larva of Lema trilineata Oliv., (Coleoptera-Chrysomelidae). This larva was determined by Dr. A. G. Boeving.

Thyanta custator (Fab.). Three specimens taken July 17 to 19.

Piesmidae

Piesma cinerea (Say). Quite common on the leaves of the corn plants, taken July 9 to 28.

Reduviidae

Sinea diadema (Fab.). One specimen taken July 17.

Tingitidae

Corythca marmorata (Uhler). Taken July 9 to 19. Very abundant early in July but not seen after July 19.