

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

II. EPHEMERIDA, LEPIDOPTERA, NEUROPTERA, ODONATA,
ORTHOPTERA, THYSANOPTERA, AND TRICHOPTERA

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EPHEMERIDA

This order is represented by only one species, unquestionably a visitor brought into the field by winds from the direction of the lake.

Ephemeridae

Hexagenia bilineata Say. Three specimens taken July 16 to August 8.

This is the species common along Lake Erie and known to the residents of this region as "June-bugs" or "Canadian Soldiers." One old gentleman of this locality advanced the naive suggestion that this insect "hatched from infertile fish eggs." During the summer months, when the wind is blowing off the lake, these insects are present in such numbers as to make driving extremely hazardous. Street lamps and lighted windows may be completely covered with a layer of these insects, and lighted advertisements will be entirely hidden.

Determination of these specimens was made by Mr. A. N. Caudell.

LEPIDOPTERA

This order is quite well represented. However, as many of the adults were difficult to capture, with time and proper collecting equipment, the number of species in this order could have been greatly extended. Determinations were made by Mr. F. H. Benjamin, Mr. August Busck, Mr. C. Heinrich, and Mr. John Thomas.

Arctiidae

Diacrisia virginica Fab. Two larvae taken on the corn plants July 10 and 12.

Estigmene acraea Dru. One adult taken August 12, and a larva taken on the corn plants July 29.

Geometridae

Geometridae sp. Four larvae taken on the corn plants in late August.

Pleuroprucha insularia Gn. Two adults taken August 1 and 12.

Gelechiidae

Aristotelia (Chrysopora) hermanella Fabr. Two adults taken July 13 and 17.

Hesperidae

- Pholisera catullus* (Fabr.). One adult taken July 20.
Talides themistocles (Lat.). One adult taken August 5.

Lymnadiidae

- Anosia plexippus* L. Observed resting upon a corn plant on July 16.
 The presence of this species in the corn field was undoubtedly due to the milkweed present in the field. Larvae of this species were often observed feeding upon the leaves of milkweed.

Noctuidae

- Acronycta oblongata* (S. & A.). A larvae taken upon the corn plant in late August.
Caenurgia erecta Gr. Adult taken on July 15.
Ceramica picta Harris. "A pale larvae" taken on corn plant on July 17.
Heliothis obsoleta Fab. Adults taken on August 3, larvae on leaves of corn in late August.
 The adults of this species were first observed flying in large numbers on August 5 among the corn plants when disturbed. The larvae were numerous in the ears of late sweet corn.
Lithacodia carneola Gn. One adult taken on July 31.
Noctuidae sp. Two larvae taken July 9 and August 2, and one pupae taken in late August.
Noctuidae (*Cirphus* group). One larvae taken upon the corn plant August 15.
Plusia sp. One larva and a cocoon and pupa taken on the corn plant in late August.
 A larva of this genus was taken as the prey of *Sphex urnarius* (Dahl.), (Hymenoptera-Sphexidae).
Prodenia sp. Early stage larva taken upon the corn plant July 10.
Prodenia ornithogalli Gn. One larva taken upon the corn plant in late August.

Nymphalidae

- Basilarchia astyanax* Fab. Observed resting upon the corn plants on July 5 and August 5.
Basilarchia disippus Godart. Observed flying in the field on July 8.
Polygonia interrogationis Fabr. Adult taken on August 6.
 Other specimens of the genus were observed flying among the corn plants throughout the season, but it is impossible to state whether or not they were the same species.
Vanessa altanta L. One adult taken on August 9. Observed feeding upon the exudations from a corn borer opening on August 9. The species was a frequent visitor among the corn.
Vanessa cardui L. Adult taken on August 8. Pupa collected on corn plant in late August.
Vanessa virginiensis Dru. One adult taken on August 14.

Pieridae

Pieris rapae L. One adult taken July 20.

This species was common throughout the season, undoubtedly due to the fact that most of the cabbage fields in the near vicinity were unharvested due to prevailing low prices. The butterflies were so numerous about the cabbage fields that the air above had the appearance of a snow storm.

Pyralidae

Pyralidae sp. (*Pyraustinae*). One larva taken upon the corn in late August.

Argyria nivalis Dru. One adult taken July 13.

Nomophila noctuella D. & S. One adult taken July 20.

Pyrausta nubilalis Hbn.

The adults of this species were observed in the field in numbers from July 7 to 18, and again in much smaller numbers on August 10. A pupa was found during the dissections, on August 2 and two more were found on August 5. Two larvae were taken, one as the prey of *Glischrochilus quadrisignatus* Say (Coleoptera-Nitidulidae), on July 25. This larva was still partly in a tunnel. The other larva was being dragged away by an individual of the species *Prenolepis imparis* (Say), (Hymenoptera-Formicidae).

Loxostege similalis Gn. One adult taken August 12.

Tortricidae

Grapholitha interstinctiana Clem. One adult taken August 12.

Yponomeutidae

Glyphipteryx impigritella Clem. One adult taken July 28.

NEUROPTERA**Chrysopidae**

These insects were very numerous in the corn field. Their stalked eggs were observed upon the corn plants throughout the season. Mr. Ralph Mathes reported observing an undetermined larva feeding upon a corn borer egg mass upon a corn leaf. Determinations of the following species were made by Mr. A. N. Caudell.

Chrysopa chi Fitch. Five specimens taken July 9 to August 8.

Chrysopa chlorophana Burm. One specimen taken August 8.

Chrysopa ploribunda Fitch. Three specimens taken July 29 to August 7.

Myrmeleontidae

Adults of this family were observed frequently during the season. Even though not strong flyers, they were difficult of approach and only one specimen was taken. This was determined by Mr. A. N. Caudell.

Clathroneuria sp. One specimen taken July 18.

ODONATA

Ischuridae

Several species of this group were observed in the field at different times during the season, but only one specimen was captured. Mr. D. A. Borer made the determination.

Ischnura verticalis Say. One female taken upon the corn plant on August 8.

Libellulidae

No specimens of this family were collected, as they are exceptionally alert and fast on the wing. They were observed throughout the season flying and feeding above the corn, and were seen occasionally to rest upon the tassels and upper leaves of the corn plants.

ORTHOPTERA

This order was represented in the corn field chiefly by the grasshoppers and crickets. None were observed feeding upon the corn plants, although many were frequently seen resting upon the corn leaves. All determinations were made by Mr. E. S. Thomas.

Acrididae

Dissotera carolina (L.). One male taken on July 25 and two females taken July 29 and August 3. A III instar nymph was taken July 9.

The above species was very abundant on the ground of the roadways between the plots of corn and were observed occasionally among the corn plants. The first adults were seen on July 18 and were very common by July 26. On July 29 two specimens, the sex unknown, were observed to alight beside each other facing in opposite directions. After a few moments they simultaneously raised their posterior pairs of legs into the air four times, very slowly, the angle formed by the femur and tibia while at rest, was retained when the legs were raised. They then flew in opposite directions.

Melanoplus femur-rubrum (DeG.). IV instar male taken August 7.

Melanoplus mexicanus mexicanus (Saus.). Two females taken July 11 and 18, a V instar male taken July 9, and a V instar female taken July 31.

Blattidae

Parcoblatta uhleriana (Saus.). One adult female taken on the corn plant July 22.

Gryllidae

Gryllus assimilis Fab. Four adult females taken July 17 to late August. One V instar female collected in late August.

Nemobius fasciatus subsp.? (DeG.). One pair taken August 5 and 14, a V instar male on August 1, a III instar nymph on August 14, and a III instar female taken July 31.

The specimens of the two above species were very common on the ground beneath corn and weed debris.

Oecanthus nigricornis nigricornis F. Walker. One adult female taken August 14 and a III instar male taken July 17.

Tettigonidae

Conocephalus fasciatus subsp.? (DeG.). One male, "undoubtedly a migrant," taken on August 7.

Orchelimum vulgare Harris. V instar male taken July 28, IV instar male July 16, and IV instar female on July 19.

THYSANOPTERA

Two families of this order were collected in the cornfield. Determinations were made by Mr. Dudley Moulton.

Aeleo-thripidae

AeliOTHrips sp. One specimen taken July 11 on the corn plant.

Thripidae

Anaphothrips striatus Osb. The "oat-bug" was very abundant about the time the oats in adjoining fields were cut, and were very annoying and irritating when crawling upon a person's skin.

TRICHOPTERA

This order was represented by one small specimen which Mr. A. N. Caudell stated "a small caddis-fly. I am unable to name this."
