THE PLANTHOPPERS, OR FULGOROIDEA, OF ILLINOIS WITH INFORMATION ON THE BIOLOGY OF SELECTED SPECIES

Stephen W. Wilson, Ph.D.
Southern Illinois University
at Carbondale, 1980

Reprinted from
DISSERTATION ABSTRACTS INTERNATIONAL

Volume 41, Number 8, 1981

THE PLANTHOPPERS, OR FULGOROIDEA, OF ILLINOIS WITH INFORMATION ON THE BIOLOGY OF SELECTED SPECIES

Order No. 8102441

WILSON, STEPHEN W., PH.D. *Southern Illinois University at Carbondale*, 1980. 465pp.

A list of, and keys to, the 9 families, 51 genera and 150 species of Illinois planthoppers, with accompanying illustrations, are presented. Included are a synopsis of the systematic literature of each family and genus and the distribution of each species in Illinois.

Information on seasonal life cycle, oviposition sites, food plants, parasites, predators and laboratory rearing is given, where available, for each of the following species: *Acanalonia bivittata* (Say), *A. conica* (Say) (Acanaloniidae); *Anormenis septentrionalis* (Spinola), *Metcalfa pruinosa* (Say) and *Ormenoides venusta* (Melichar) (Flatidae); *Megamelus davisi* Van Duzee (Delphacidae); *Bruchomorpha oculata* Newman (Issidae); and *Nersia florens* Stål (Dictyopharidae). Descriptions of the eggs and nymphal instars of these species are included.

A. bivittata and *A. conica* are univoltine, overwinter as eggs inserted in woody vegetation, and feed on a wide variety of wood and herbaceous plants. Nymphs of both species are parasitized by 1 or more species of dryinid wasp. *A conica* nymphs are parasitized by larval mites of 1 species, and adults and nymphs by a species of epipyropid moth. Keys for separating the nymphs of *A. bivittata* from those of *A. conica*, and for distinguishing each nymphal instar of both species, are provided.

A. septentrionalis, M. pruinosa, and *O. venusta* are univoltine and feed on a wide variety of woody and herbaceous plants. *A. septentrionalis, M. pruinosa* and, probably, *O. venustra* overwinter as eggs inserted into woody tissue. Nymphs of these 3 species are parasitized by 1 or more species of dryinid wasp. *M. pruinosa* and *O. venusta* nymphs are parasitized by larval mites of 1 species and *M. pruinosa* nymphs by a species of epipyropid moth. Keys for separating the nymphs of these 3 species, and for distinguishing each nymphal instar of the 3 species, are provided.

M. davisi feeds and reproduces on water lily, *Nuphar advena* (Aiton), and is trivoltine. It overwinters as 5th instar nymphs in leaf litter along the shorelines of ponds. Nymphs are preyed upon by a species of mesoveliid bug. Eggs are parasitized by 1 or more species of mymarid wasp and adults by a species of pipunculid fly. A key for distinguishing each nymphal instar is provided.

B. oculata laid its eggs, in the laboratory, at the base of grass blades. An adult parasitized by a species of dryinid wasp was collected. A key for distinguishing each nymphal instar is provided.

N. florens is probably univoltine and was found on curlydock and white snakeroot.

Nymphs of 4 species, *A. conica, A. septentrionalis, M. pruinosa* and *O. venusta*, were often found in mixed species feeding assemblages. Although most aspects of the life histories of these species are similar, differences in oviposition habits may serve to reduce or prevent competition.