

SOME NEW HOST PLANT RECORDS AND PARASITES
OF *PHYTOBIA* (*AMAUROMYZA*) *MACULOSA* IN FLORIDA
(DIPTERA: AGROMYZIDAE)¹

CARL E. STEGMAIER, JR.²
11335 N. W. 59th Avenue, Hialeah, Florida

Malloch in 1913 described *Agromyza maculosa*. Blanchard (1938) placed this species as *Dizygomyza maculosa* (Malloch) and Frick (1952) placed this leaf miner in its present generic position as *Phytobia* (*Amauromyza*) *maculosa* (Malloch).

Frick (1959) reported the larvae to form large blotch mines on the leaves of its host plants. He cited the distribution for *P. maculosa* as widespread in the United States and also recorded from Bermuda, Jamaica, Puerto Rico, Uruguay, Argentina, and Hawaii.

Spencer (1963) cited the species as oligophagous on the family Compositae and reported them to form characteristic greenish blotch-mines on *Emelia sonchifolia* Benth. Spencer (1963) stated that he had reared *P. maculosa* from *Erechtites valerianaefolia* (Wolf) DC. and from *Emelia sonchifolia* Benth. in Brazil and Venezuela respectively. He reported capturing specimens from Jamaica and also cited the genera *Ageratum*, *Dahlia*, and *Synedrella* as hosts for *P. maculosa*. Frick (1959) recorded the following as known host plants for the species: *Aster* spp., cult. vars., *Artemisia vulgaris* L., *Arctium lappa* L., *Baccharis douglasii* DC., *Bidens pilosa* var. *radiata* Sch., *Chrysanthemum indicum* L., *Chrysanthemum* spp. cult. vars., *Erigeron canadensis* L., *Helianthus annuus* L., and *Lactuca sativa* L.

The author and other Florida entomologists have reared *P. maculosa* from numerous Compositae growing in peninsular Florida. The search for the host plant range within the composite group began in 1962. Since that year, the rearing records disclosed some plants that had not yet been designated as host plants for *P. maculosa*. The author's rearing records are as follows:

Baccharis halimifolia L.: Hialeah, 12 Feb. 1963 (C.E.S.); Hialeah, 12 Dec. 1964 (C.E.S.).

Bidens pilosa L.: Hialeah, 24 Aug. 1962 (C.E.S.). *Bidens* seems to be infested severely during the winter months in south Florida.

Chrysanthemum sp. cult. var.: Hialeah, 8 Sep. 1962. (C.E.S.).

Erechtites hieracifolia (L.) Rafin.: Hialeah, 14 Feb. 1963 (C.E.S.).

Emelia sagittata DC.³; Miami, 21 Dec. 1964 (C.E.S.).

Eupatorium odoratum L.⁴; Hialeah, 16 Feb. 1964 (C.E.S.).

¹ Contribution No. 84, Entomology Section, Division of Plant Industry, Florida Department of Agriculture, Gainesville.

² Research Associate, Florida State Collection of Arthropods, Division of Plant Industry, Florida Department of Agriculture.

³ Bailey (1947) places *Emelia sagittata* DC. as a synonym of *Emelia flammula* Cass.; however, the author elects to use the determination cited by Professor Erdman West, Botanist and Mycologist, University of Florida in personal communication.

⁴ Bailey (1941) cites *Eupatorium odoratum* as (*Osmia odorata*). Dr. Leonard J. Brass, Botanist, Archbold Biological Station, Lake Placid, Florida, stated in personal communication that, "*E. odoratum* L. is *Osmia odorata* (L.). Sch. Bip. of Small's Manual." Small (1933) cites a synonym of *O. odorata* as *Eupatorium conyzoides* Vahl.

Gnaphalium spathalium Lam.: Hialeah, 26 Feb. 1963 (C.E.S.).

Gaillardia aristata Pursh.: Hialeah, 24 Feb. 1964 (C.E.S.).

Helianthus annuus L.: Hialeah, 26 Mar. 1964 (C.E.S.).

Melanthera deltoidea Michx.: Hialeah, 16 Oct. 1964 (C.E.S.); Hialeah, 27 Oct. 1965 (C.E.S.).

Senecio glabellus Poir.: Sanford, 21 Apr. 1964 (G. W. Desin).

Sonchus asper (L.) Hill: Belle Glade, 7 Apr. 1964 (E. D. Harris, Jr.).

Tagetes erecta L.: North Miami, 11 Feb. 1962 (E. B. Lee).

Tagetes patula L.: Hialeah, 20 Dec. 1963 (leaf mines only) (C.E.S.).

The author reared four species of hymenopterous parasites belonging to the family Eulophidae. All of the parasites of *P. maculosa* were found at the bottom of the rearing container after and during the time adult agromyzids had issued from their puparium. Dr. B. D. Burks (Entomology Research Division, U. S. Department of Agriculture) identified the eulophid parasites as the following: *Chrysocharis* sp., *Diaulinopsis callichroma* Cwfd., *Derostenus variipes* Cwfd., and *Derostenus* species.



Fig. 1. Typical mines of *Phytobia* (*Amauromyza*) *maculosa* on leaves of the spanish needle, *Bidens pilosa*. The leaf on the left is a typical blotch mine produced by more than one larva. The leaflet (right), silvery, is completely mined; the light glare spoiled the mine's details. Photograph, courtesy of the Division of Plant Industry, Florida Department of Agriculture, Mildred Eaddy, Photographer.

ACKNOWLEDGEMENTS

The author is pleased to acknowledge the help and support from the following persons: Kenneth A. Spencer, of London, England, for his numerous suggestions and determinations of Florida's agromyzids; Professor Erdman West, Botanist and Mycologist, University of Florida, for determinations of host plant material. The author especially wishes to thank George C. Steyskal, Entomology Research, Division, ARS, USDA, for reviewing this paper. The author also wishes to thank the following entomologists for their host plant collections: George W. Desin, Plant Pest Control Division, USDA; Dr. E. D. Harris, Jr., formerly Entomologist at the Belle Glade Agricultural Experiment Station; and E. B. Lee, Plant Quarantine Division, ARS, USDA. Harold A. Denmark, Chief, Entomology Section, Division of Plant Industry, and Dr. Howard V. Weems, Jr., Curator, Florida State Collection of Arthropods, Florida Department of Agriculture, helped with suggestions, equipment, and photographs related to the agromyzid problem; and Dr. B. D. Burks, Entomology Research Division, ARS, USDA, determined the hymenopterous parasites of the agromyzids.

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The Florida Entomologist 50(2) 1967

