

The Great Lakes Entomologist

Volume 21
Number 4 - Winter 1988 *Number 4 - Winter*
1988

Article 4

December 1988

The Bindweed Plume Moth, *Emmelina Monodactyla* (Lepidoptera: Pterophoridae): First Host Record for *Phaeogenes Vincibilis* (Hymenoptera: Ichneumonidae)

Foster Forbes Purrington
Ohio State University

Deborah H. Stinner
Ohio State University

Follow this and additional works at: <https://scholar.valpo.edu/tgle>



Part of the [Entomology Commons](#)

Recommended Citation

Purrington, Foster Forbes and Stinner, Deborah H. 1988. "The Bindweed Plume Moth, *Emmelina Monodactyla* (Lepidoptera: Pterophoridae): First Host Record for *Phaeogenes Vincibilis* (Hymenoptera: Ichneumonidae)," *The Great Lakes Entomologist*, vol 21 (4)
Available at: <https://scholar.valpo.edu/tgle/vol21/iss4/4>

This Peer-Review Article is brought to you for free and open access by the Department of Biology at ValpoScholar. It has been accepted for inclusion in The Great Lakes Entomologist by an authorized administrator of ValpoScholar. For more information, please contact a ValpoScholar staff member at scholar@valpo.edu.

**THE BINDWEED PLUME MOTH, *EMMELINA MONODACTYLA*
(LEPIDOPTERA: PTEROPHORIDAE): FIRST HOST RECORD FOR
PHAEOGENES VINCIBILIS (HYMENOPTERA: ICHNEUMONIDAE)¹**

Foster Forbes Purrington and Deborah H. Stinner²

ABSTRACT

The first host record for *Phaeogenes* (= *Oronotus*) *vincibilis*, a solitary ichneumonine pupal parasite, is the bindweed plume moth, *Emmelina monodactyla*.

Worldwide importance of *Ipomoea batatas* (sweet potato) as a food staple and the contrasting status of some other herbaceous Convolvulaceae species as pernicious agricultural weeds has focused much interest on their faunal associates here and in Mediterranean Europe (Rosenthal and Buckingham 1982) in efforts to discover suitably specific bio-control agents. *Emmelina monodactyla* (L.), the bindweed plume moth, is a cosmopolitan (Forbes 1923) leaf feeder on several convolvulaceans including *Convolvulus arvensis* (field bindweed), *Calystegia sepium* (hedge bindweed), as well as sweet potato (Barnes and Lindsey 1921, Mohyuddin 1969). We observed a vigorous population of this moth on lush adventitious field bindweed in a greenhouse at Wooster, OH during the 1986 and 1987 growing seasons.

In both years, plume moth pupae were parasitized (ca. 25%) by *Phaeogenes* (= *Oronotus*) *vincibilis* (Cresson), a solitary endoparasite. This constitutes the first host record for this wasp. In addition to parasitism by *P. vincibilis*, *Emmelina monodactyla* was attacked (ca. 2%) by *Cotesia* sp. (Hymenoptera: Braconidae), a solitary larval endoparasite.

Whereas several of the field bindweed insects we observed in the greenhouse were also found associated with bindweed outdoors, *Phaeogenes vincibilis* was not. Therefore, the association of *P. vincibilis* with *E. monodactyla* should be viewed as a possible outcome of the eclectic character of greenhouse faunal assemblages until it can be repeated from field rearings.

Known hosts of other *Phaeogenes* species represent a range of Microlepidoptera, including other pterophorids for *P. cynarae* Bragg, and sesiids for *P. ater* Cresson (Carlson 1979, Purrington and Nielsen 1987).

ACKNOWLEDGMENTS

We thank D. C. Ferguson (USDA-Beltsville) for identifying *Emmelina monodactyla*; D. Wahl (American Entomological Institute, Gainesville, FL) established the identity of *Phaeogenes vincibilis* and kindly reviewed an early draft of the ms.

¹Salaries and research support provided by State and Federal Funds appropriated to the Ohio Agricultural Research and Development Center, The Ohio State University. Manuscript number 53-88.

²Department of Entomology, Ohio Agricultural Research & Development Center, The Ohio State University, Wooster, OH 44691.

LITERATURE CITED

- Barnes, W. and A. W. Lindsey. 1921. The Pterophoridae of America, north of Mexico. Contrib. Nat. Hist. Lepidop. N. Amer. 4:281-478.
- Carlson, R. W. 1979. Ichneumonidae, pp. 315-740 In: K. V. Krombein, P. D. Hurd, D. R. Smith, and B. D. Burks (eds.). Catalog of Hymenoptera in America north of Mexico: Vol. 1 Symphyta and Apocrita (Parasitica). Smithsonian Inst. Press, Washington, D. C.
- Forbes, W. T. M. 1923. Lepidoptera of New York and neighboring states. Cornell Univ. Agric. Expt. Sta. Mem. 68:647-651.
- Mohyuddin, A. I. 1969. The biology and host spectrum of some stenophagous insects found on *Convolvulus* and *Calystegia* spp. at Belleville, Ontario. Tech. Bull. Commonw. Inst. Biol. Control 12:131-146.
- Purrington, F. F. and D. G. Nielsen. 1987. New host records of parasitic Hymenoptera in clearwing moths (Lepidoptera: Sesiidae). Great Lakes Entomol. 20:141-142.
- Rosenthal, S. S. and G. R. Buckingham. 1982. Natural enemies of *Convolvulus arvensis* in Western Mediterranean Europe. Hilgardia 50:1-19.