# APANTELES ORNIGIS WEED, 1887 (INSECTA, HYMENOPTERA): PROPOSED CONSERVATION BY THE SUPPRESSION OF MICROGASTER ROBINIAE FITCH, 1859 Z.N.(S.)2506

By James B. Whitfield (Department of Entomological Sciences, 201 Wellman Hall, University of California, Berkeley, CA 94720, U.S.A.)

The braconid wasp widely known as *Pholetesor ornigis* (Weed) is a common parasitoid of blotchmining Lepidoptera and is perhaps the most frequently encountered member of its genus in eastern North America. Described as *Apanteles ornigis* Weed, 1887, p. 6, this species has accumulated a substantial literature due to its parasitism of *Phyllonorycter* spp. on cultivated apple (for an introduction see Johnson *et al.*, 1979; Pottinger & Roux, 1971; Maier, 1984). It now serves as the type species for *Pholetesor* Mason, 1981, p. 37.

- 2. In 1859, twenty-eight years prior to Weed's description of *ornigis*, Asa Fitch described *Microgaster robiniae*, p. 836, as a solitary parasitoid of *Recurvaria* (now *Sinoe*) *robiniella* Fitch on black locust, *Robinia pseudo-acacia*. His description was inadequate even for his own time and the species was considered recognisable only on the basis of its light coloration. The name *robiniae* has since been used only in catalogs, species lists and keys (e.g. Viereck *et al.*, 1916; Muesebeck, 1920; Muesebeck, Krombein, Townes *et al.*, 1951; Krombein *et al.*, 1979; Mason, 1981) and then only with reference to what is known of the type series.
- 3. It now appears that the two names, ornigis Weed and robiniae Fitch, are subjective synonyms because; (a) ornigis Weed, as the name has been traditionally applied, refers to a parasitoid with a broad host range of blotchmining Lepidoptera on a diversity of deciduous trees, shrubs and woody vines (Krombein et al., 1979; Whitfield, in prep, PhD dissertation), including leafminers on black locust; (b) the holotype of Microgaster robiniae Fitch is indistinguishable morphologically from many small individuals of Pholetesor ornigis (Weed), differing only in its light reddish color; (c) specimens of many species of Pholetesor which have been extensively exposed to sunlight are apt to bleach to a color similar to that of the robiniae holotype; (d) other specimens in Fitch's collection are unusually light or bleached in color (R. A. Wharton, pers. comm.) and (e) no fresh specimens resembling in color the Microgaster robiniae holotype have been recovered since, despite repeated rearings of the essentially morphologically identical Pholetesor ornigis (Weed) from the type host of robiniae. It appears that the holotype of Microgaster robiniae Fitch is a bleached specimen of the species generally referred to as Apanteles (or now Pholetesor) ornigis Weed.
- 4. The name *ornigis*, by contrast to *robiniae* Fitch, has been used in a large number of non-taxonomic papers during the last fifty years. For

example: Dutcher & Howitt, 1978; Gambino & Sullivan, 1982; Gibbons & Butcher, 1961; Herbert & McRae, 1983; Hough, 1957; Johnson et al., 1978; Martin, 1956; Putman, 1935, 1942; Weaver & Dorsey, 1965.

5. To preserve usage of the name ornigis as it has been applied for 97 years to a well-known species, the International Commission on

Zoological Nomenclature is requested:

(1) to use its plenary powers to suppress the name *robiniae*, Fitch, 1859, as published in the binomen *Microgaster robiniae*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place the specific name ornigis Weed, 1887, as published in the binomen Apanteles ornigis, on the Official List of Specific

Names in Zoology;

(3) to place the specific name *robiniae* Fitch, 1859, as published in the binomen *Microgaster robiniae*, and as suppressed under the plenary powers in (1) above, on the Official Index of Rejected and Invalid Specific Names in Zoology.

### REFERENCES

DUTCHER, J. D. & HOWITT, A. J. 1978. Bionomics and Control of *Lithocolletis blancardella* in Michigan. *J. econ. Entomol.*, vol. 71, pp. 736–738.

FITCH, A. 1859. Fifth report on the noxious and other insects of the State of New

York. N.Y. State agric. Soc. Trans., vol. 18, pp. 781-854.

GAMBINO, P. & SULLIVAN, D. J. 1982. Phenology of emergence of the spotted tentiform leafminer, *Phyllonorycter crataegella* (Lepidoptera: Gracillariidae) and its parasitoids in New York. J. N. Y. entomol. Soc., vol. 90, pp. 229–236.

GIBBONS, C. F. & BUTCHER, J. W. 1961. The oak skeletonizer, *Bucculatrix ainsliella*, in a Michigan woodlot. *J. econ. Entomol.*, vol. 54, pp. 681–684.

HERBERT, H. J. & MCRAE, K. B. 1983. Effect of temperature on the emergence of overwintering *Phyllonorcyter blancardella* (Lepidoptera: Gracillariidae) and its parasite *Apanteles ornigis* (Hymenoptera: Braconidae) in Nova Scotia. *Can. Entomol.*, vol. 115, pp. 1203–1208.

HOUGH, W. S. 1957. Effect of mouse-control spray of Endrin on insect life in

orchard ground cover. J. econ. Entomol., vol. 50, pp. 692-693.

JOHNSON, E. F., LAING, J. E. & TROTTIER, R. 1978. The seasonal occurrence of *Lithocolletis blancardella* (Gracillariidae) and its major natural enemies in Ontario apple orchards. *Proc. entomol. Soc. Ontario*, vol. 107, pp. 31–45.

——, TROTTIER, R. & LAING, J. E. 1979. Degree-day relationships to the development of *Lithocolletis blancardella* (Lepidoptera: Gracillariidae) and its parasite *Apanteles ornigis* (Hymenoptera: Braconidae). *Can. Entomol.*, vol. 111, pp. 1177–1184.

KROMBEIN, K. V., HURD, P. D., SMITH, D. R. & BURKS, B. D. (Eds) 1979. Catalog of Hymenoptera in America North of Mexico. Smithsonian Institu-

tion Press, Washington, D.C. 2735 pp.

MAIER, C. T. 1984. Abundance and phenology of parasitoids of the spotted tentiform leafminer, *Phyllonorycter blancardella* (Lepidoptera: Gracillariidae), in Connecticut. *Can. Entomol.*, vol. 116, pp. 443–449.

- MARTIN, J. L. 1956. The bionomics of the aspen blotch miner, *Lithocolletis* salicifoliella Cham. (Lepidoptera: Gracillariidae). Can. Entomol., vol. 88, pp. 155–168.
- MASON, W. R. M. 1981. The polyphyletic nature of *Apanteles* Foerster: a phylogeny and reclassification of Microgastrinae. *Mem. entomol. Soc. Canada*, no. 115, 147 pp.

MUESEBECK, C. F. W. 1920. A revision of the North American species of ichneumon-flies belonging to the genus Apanteles. Proc. U.S. nat. Mus., vol.

58, pp. 483-576.

of America North of Mexico. Synoptic catalog. U.S. Department of Agriculture Monograph 2, 1420 pp.

POTTINGER, R. P. & LEROUX, E. J. 1971. The biology and dynamics of *Litho-colletis blancardella* (Lepidoptera: Gracillariidae) on apple in Quebec. *Mem. entomol. Soc. Canada*, no. 77, 437 pp.

PUTMAN, W. L. 1935. Notes on the hosts and parasites of some lepidopterous larvae. Can. Entomol., vol. 67, pp. 105–109.

- 1942. Host plants and parasites of some lepidopterous larvae. Can.

Entomol., vol. 74, pp. 219-224.

VIERECK, H. L., MACGILLIVRAY, A. D., BRUES, C. T., WHEELER, W. M. & ROHWER, S. A. 1916. Guide to the insects of Connecticut. Part III. The Hymenoptera, or wasp-like insects, of Connecticut. *Bull. Conn. State geol. nat. Hist. Surv.*, vol. 5, no. 22, 824 pp + 10 pl.

WEAVER, J. E. & DORSEY, C. K. 1965. Parasites and predators associated with five species of leafmining insects in black locust. *Ann. entomol. Soc. Am.*, vol.

58, 933-934.

WEED, C. M. 1887. Notes on some Illinois microgasters: with descriptions of new species. *Bull. Ill. State Lab. nat. Hist.*, vol. 3, pp. 1–8.



Whitfield, James B. 1986. "Apanteles ornigis Weed, 1887 (Insecta, Hymenoptera): proposed conservation by the suppression of Microgaster robiniae Fitch, 1859." *The Bulletin of zoological nomenclature* 43, 96–98. https://doi.org/10.5962/bhl.part.384.

View This Item Online: <a href="https://www.biodiversitylibrary.org/item/45868">https://www.biodiversitylibrary.org/item/45868</a>

**DOI:** https://doi.org/10.5962/bhl.part.384

Permalink: <a href="https://www.biodiversitylibrary.org/partpdf/384">https://www.biodiversitylibrary.org/partpdf/384</a>

# **Holding Institution**

Natural History Museum Library, London

### Sponsored by

Natural History Museum Library, London

# **Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: International Commission on Zoological Nomenclature

License: http://creativecommons.org/licenses/by-nc-sa/3.0/

Rights: https://biodiversitylibrary.org/permissions

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at https://www.biodiversitylibrary.org.