Title	Synonymical and other notes on Protaphidius wissmannii (Ratzeburg) (Hymenoptera, Braconidae : Aphidiinae)
Author(s)	Starý, Petr
Citation	Insecta matsumurana, 22(3-4), 88-91
Issue Date	1959-03
Doc URL	http://hdl.handle.net/2115/9640
Туре	bulletin (article)
File Information	22(3-4)_p88-91.pdf



SYNONYMICAL AND OTHER NOTES ON PROTAPHIDIUS WISSMANNII (RATZEBURG)

(Hymenoptera, Braconidae: Aphidiinae)

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The present author has revised in 1958 the genus Prolaphidius Ashmead. According to the revision of the type of Coelonotus rufus FÖRSTER, which is the synonym of Protaphidius wissmannii (RATZ.), it was stated that it represents the genotype of the separate genus Protaphidius Ashmead (for preocc. Coelonotus Förster; see Starý, 1958). The latter was described in 1934 from Italy as Menozzia Goidanich. Protaphidius Ashm., however, was generally accepted as the subgenus of Aphidius NEEs and a series of species from the Palaearctic and Nearctic regions are now included in it. The quoted series of species represents, of course, a well-characterized subgenus of Aphidius (i.e. Paraphidius Stary, 1958; subgenotype: Aphidius californicus Ashm.); it was included in *Protaphidius* Ashm. on the base of the very incomplete and unsatisfactory description of FÖRSTER based especially on the character "excavated propodeum". It must be added that also WATANABE (1957) had included "Aclitus nawaii" in the subgenus Protaphidius ASHM. auct.

In the same year the present author has revised the genotype of the genus Aclitus Fōrster (i.e. Aclitus obscuripennis Förster) and other species included in this genus by various authors. As the species Aclitus nawaii was described from Japan by Ashmead in 1906, the author took part of his interest in this species, too. The accurate study of Aclitus nawaii Ashm. was enabled by the kindness of Dr. C. F. W. Muesebeck who sent the female-paratype of this species with some private notes to me for the purpose to revise it. When examining this paratype I found out that it is Protaphidius wissmannii (Ratz). The Japanese specimen (i.e. "Aclitus nawaii") differs from the European specimens known to the author especially in having parapsidal furrows punctate

[[]Ins. Mats., Vols. 22, Nos. 3/4, pp. 88-91, March, 1957]

till praescutellar groove and in having first tergite of abdomen slightly slender. In my opinion these characters are not of specific value and therefore it seems to be necessary to take into consideration that *Aclitus nawaii* is a new synonym of *Protaphidius wissmannii*. *Protaphidius* Ashmead represents therefore a monotypic genus of the subfamily Aphidiinae.

The synonymy of *Protaphidius wissmannii* is as follows:

Protaphidius wissmannii (RATZEBURG)

Aphidius wissmannii Ratzeburg, 1848, Ichn. d. Forstins. 2:59 (♀ ♦ descr., Locality: Germany; host: Aphis (Lachnus) quercus).—Marshall, 1896, in André, Spec. Hym. Europe d'Algerie 5:562 (♀ descr., Locality: Germany; host: Stomaphis quercus Réaum.).—Dalla Torre, 1898, Cat. Hym. IV:13 (sine descr., Locality: Germany).—Szépligeti, 1904, in Wytsmann, Genera insectorum, Fasc. 22:187 (sine descr., Locality: Germany).—Starý, 1958, Acta Faunistica Entomologica Mus. Nat. Pragae 3:89-93 (transferred to Protaphidius Ashm.).

Coelonotus rufus Förster, 1862, Verh. Nat. Ver. Preuss. Rheinl. 19: 248 (descr., Locality: Germany).—Starý, 1958, Acta Faunistica Entomologica Mus. Nat. Pragae 3:89–93 (syn. with *Protaphidius wissmannii* (RATZ.)).

Aphidius rufus (FÖRSTER): DALLA TORRE, 1898, Cat. Hym. IV:12 (sine descr., Locality: Germany).

Aclitus nawaii Ashmead, 1906, Proc. U.S. Nat. Mus. 30:188 (♀ ↑ descr., fig., Locality: Japan; host: Lachnus sp.).—Fahringer, 1937, Festschr. 60. Geb. E. Strand, Riga 3:240 (♀ ↑ descr., Locality: Japan; host: "Lachnus (Cinara) sp.").—Fulmek, 1957, Ann. Naturhist. Mus. Wien 61:173 (sine descr., Locality: Japan; host: "Cinara sp."). N. syn.

Ccelonotus wissmannii (Ratzeburg): Fahringer, 1937, Festschr. 60. Geb. E. Strand, Riga 3:241 (\$\phi\$ descr., Locality: Germany; host: Stomaphis quercus).—Fulmek, 1957, Ann. Naturhist. Mus. Wien 61:175, 222 (sine descr., Locality: Germany; host: Clavigerus salicis L., Stomaphis quercus L.).

Menozzia formicaria Goidanich, 1934, Boll. Lab. ent. Bologna 6: 217–227 (♀δ descr., Locality: Italy; bionomics).—Starý, 1956, Acta Mseui Silesiae, Opava 5: 47–48 (part. descr., Locality: Czechoslovakia).—Fulmek, 1957, Ann. Naturhist. Mus. Wien 61: 122, 148 (sine descr., Locality: Italy; host:?).—-Starý, 1958, Acta Faunistica Entomologica Mus. Nat. Pragae 3: 89–93 (syn. with *Prolaphidius wissmannii* (Ratz.)).

Aphidius (Protaphidius) nawaii (ASHMEAD): WATANABE, 1957, Ins. Mats. 21:2 (n. comb., host: orig. data revised, "Cinara sp." supposed to be Stomaphis yanonis TAK.).

Protaphidius wissmannii (RATZEBURG): STARÝ, 1958, Acta Faunistica Entomologica Mus. Nat. Pragae 3: 89-93 (n. comb.; synonyms; Localities: Germany, Czechoslovakia, Italy; host).

Bionomics: Goldanich (1934) gives comparatively precise description of bionomics of Protaphidius wissmannii. Larvae of this species were found in a nest of Lasius fuliginosus in a Salix and pupated inside globular cocoons which are described and figured in the cited paper. The short description of a cocoon from which the female-specimen was reared was given by STARÝ (1956) from Czechoslovakia, too; this cocoon is of globular shape but slightly depressed laterally—the depression was evidently caused by the pupation of the larva in the restricted space under the rind of a stump where the cocoon had been found. RATZEBURG (1848), however, reports Protaphidius (i. e. Aphidius of RATZEBURG) wissmannii to be reared from the aphid Stomaphis quercus. ASHMEAD also remarks the following on his Aclitus nawaii: "One male and two female specimens were sent, bred from a large Aphis, which, judging from the dry pupa skins, I identified as a species of Lachnus, or certainly a genus in the subfamily Lachninae". The host aphid species was later identified as Stomaphis yanonis by WATANABE (1957).

According to the data given above bionomics of *Protaphidius wis-smannii* seems to be not known satisfactorily for the present. The data can be divided into two groups:—

- 1. Protaphidius wissmannii pupates inside the parasitized aphid (Stomaphis). (RATZEBURG, 1848; ASHMEAD, 1906).
- Protaphidius wissmannii pupates at a distance from the parasitized aphid in a separate cocoon (Goidanich, 1934; Stary, 1956, 1958).

A more detailed resarch on bionomics of this species is necessary.

Acknowledgements

The author has a pleasure to acknowledge his thanks to Dr. C. F. W. Muesebeck (U. S. National Museum, Washington) and to Dr. G. Steinbach (Zoolog. Museum, Humboldt Univ., Berlin) who kindly sent him the type-material for the study.

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