

References

- DALLA TORRE, C. G., Catalogus Hymenopterorum huiusque descriptorum systematicus et synonymicus. 4, Braconidae. Lipsiae, 1898.
- KLOET, G. S., & HINCKS, W. D., Check List of British Insects. Stockport, 1945.
- MARSHALL, T. A., Braconides. In: André, Spécies des Hyménoptères d'Europe et d'Algérie, 5, Beaune, 1891.
- , A Monograph of the British Braconidae. Part VIII. Trans. Ent. Soc. London, 1899, p. 11—76, 1899.
- STARY, P., A Taxonomic Revision of some Aphidiin genera with Remarks on the Subfamily Aphidiinae. Acta Faun. Ent. Mus. Nat. Praeae, 3, 53—96, 1958.
- SZÉPLIGETI, G. V., Braconidae. In: Wytzman, P.: Genera Insectorum, Fasc. 22, 1904.
- THOMPSON, C. G., LII. Bidrag till Braconidernas kännedom. Opusc. ent., 20, 2141—2339, Lund, 1895.

A Revision of the Genus *Aclitus* Förster

(Hymenoptera: Braconidae: Aphidiinae)

PETR STARY

Czechoslovak Academy of Science, Institute of Entomology, Prague

(With 7 figures)

This paper includes the redescription of the genus *Aclitus* and the species *A. obscuripennis*, which were very unsatisfactorily described in 1862 (p. 248) by FÖRSTER: „Radius stark verlängert, mehr als 2/3 des Radialfeldes schließend ... *Aclitus m* Typ.: *Acl. obscuripennis* n. sp.“ There are two more species included in this genus and *Aclitus nawaii* Ashmead being stated as the genotype by FAHRINGER in 1937 (l. c.).

In the present paper the genus *Aclitus* is considered as probably monotypic genus and FÖRSTER's original designation of *Aclitus obscuripennis* as the genotype is confirmed. The second known species — *Aclitus hedini* (Fahringer) is stated as a new synonym of *Myiocephalus boops* (Wesmael). The third known species — *Aclitus nawaii* Ashmead is considered to be a species of another genus of the Aphidiinae probably similar to *Prota-phidius* Ashmead (sensu STARY, 1958).

The nomenclature of wing venation used is the same as in the precedent paper of the author (Acta Faun. Ent. Mus. Nat. Praeae, 1958).

Genus: *Aclitus* Förster

Aclitus Förster, 1862, Verh. naturh. Ver. preuß. Rheinl., 19, 248. — SZEPLIGETI, 1904, Genera insectorum, Fasc. 22, p. 185.

Genotype: *Aclitus obscuripennis* Förster, 1862 (design. by FÖRSTER, 1862).

This genus may be distinguished from the other genera of the braconid subfamily Aphidiinae by the combination of following criteria: Eyes small; antennae short and moniliform; pterostigma short, narrow and lanceolate; pterostigmal cell in fore wing nearly complete; abdomen rounded.

According to the generic classification of *Aphidiinae* used by the present author the genus *Aclitus* is placed next to *Pauesia Quilis* in the key, but differs from the latter in having the differences quoted above.

Description of the genus:

Head transverse. Occiput slightly margined. Eyes small. Maxillary palpi 2-segmented, labial palpi 1—(?) segmented. Antennae moniliform, 15-segmented. Fore wing: Pterostigma comparatively short, narrow and lanceolate. Metacarpus long. Pterostigmal cell nearly complete. Radial vein reaching nearly wing margin. Radial and median cells confluent, completed by interrarial vein. Hind wing without complete cells. Abdomen rounded. Ovipositor sheaths narrow, straight and comparatively long.

Distribution of species: Palaearctic region (Europe — Germany).

Bionomics of species: Unknown. Probably aphid-parasites.

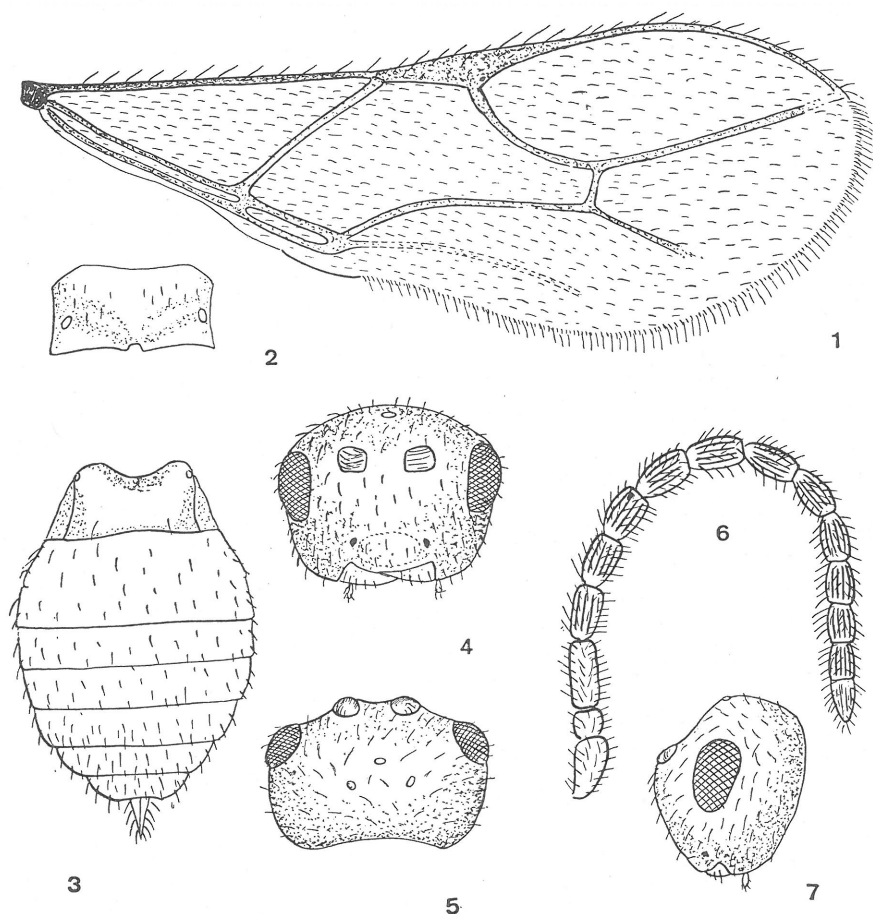
Aclitus obscuripennis Förster

Aclitus obscuripennis Förster, 1862, Verh. naturh. Ver. preuß. Rheinl., 19, 248.

Female.—Head (figs. 4, 5, 7) transverse, rounded, not wider than thorax at tegulae, with sparse long hairs, smooth, shining. Occiput very slightly and undistinctly margined. Frons comparatively flat. Ocelli small, their mutual distance being 3 times as long as length of ocellus, slightly prominent. Eyes small, oval, a little narrowed downwards, with long sparse hairs, slightly prominent laterally. Temples about twice as wide as transverse eye-diameter. Genae wide, only a little shorter than longitudinal eye-diameter. Face convex towards antennal bases. Clypeus oval, separated by shallow groove from face, with comparatively shallow tentorial pit on either side, slightly margined frontally, flat, sparsely haired. Mandibles acutely bidentate, with long hairs on outer surface. Maxillary palpi 2-segmented, the second segment with long hairs. Labial palpi 4—(?) segmented. Antennae (fig. 6) 15-segmented, moniliform, comparatively strong and short, as long as about head and thorax combined, densely haired, situated at about the middle of the eyes. Scape stout, pedicellus globular; first flagellar segment somewhat longer than the second, nearly parallel-sided; following segments widest centrally, beginning with the second segment longitudinally striated, apical and penultimate segment not distinctly separated from each other; apical segment bluntly pointed at apex.

Thorax: smooth, shining, sparsely haired. Mesonotum falling almost vertically to pronotum, without covering it when seen from above, smooth, shining. Parapsidal furrows only frontally distinct as slight rugosities. Praescutellar groove wide, deep, smooth. Scutellum widely triangular, only slightly narrowed backwards. Mesopleurae smooth, shining, Metanotum not prominent centrally, smooth, with shallow lateral impressions. Propodeum (Fig. 2) transverse, smooth, shining, sparsely haired. Fore wing:

(fig. 1): large, hyalin. Pterostigma narrowly lanceolate, comparatively short; pterostigmal cell nearly complete. Radial vein reaching nearly wing margin. Radial and median cells confluent and completed by interradiar vein. Hind wing: without complete cells, only costal and subcostal veins slightly



Aclitus obscuripennis Förster, female, holotype: Fig. 1. Fore wing. — Fig. 2. Propodeum. — Fig. 3. Abdomen. — Fig. 4. Head, frontal view. — Fig. 5. Head from above. — Fig. 6. Antenna. — Fig. 7. Head, lateral view

developed. Legs: comparatively strong, densely haired. Last tarsal segment comparatively large. Claws simple.

Abdomen: (fig. 3): widely rounded. First tergite smooth, shining, with some hairs; transverse, about twice as wide as long; following tergites smooth, shining, sparsely haired. Ovipositor sheaths narrow, comparatively straight, gradually narrowing towards apex, with long hairs.

Coloration: brown. Mouth-parts, antennae, propodeum, and legs light brown. First, second, and third abdominal tergites whitish.

Measures: Head: width, 0.52; interocular line, 0.38; transfacial l., 0.35; facial l., 0.35; clypeoantennal l., 0.12; Antennae: first flagellar segment, 0.14; second flagellar segment, 0.10. Thorax: width at tegulae, 0.52. Wing: Pterostigma, width, 0.07; length, 0.52; first abscissa of radial vein, 0.31; second abscissa of radial vein, 0.28; interrarial vein, 0.07. Abdomen: first tergite, width at spiracles, 0.35; length, 0.17. Length of body: 1.7 mm.

Holotype, *female*: labelled: 24/187, Aachen, August; Frst; *Aclitus obscuripennis*.

Deposited in coll. FÖRSTER, Zoolog. Museum d. Humboldt-Universität, Berlin. (Condition: good; left antenna, left hind leg, right hind tarsus and left fore wing, missing.)

Male: Unknown.

Distribution: Palaearctic region (Europe — Germany).

Host: Unknown. Probably aphid-parasite.

Species incorrectly placed in the genus *Aclitus*.

Aclitus hedini (Fahringer)

Aphidius hedini Fahringer, 1929, Ark. Zool., 21 (A), p. 2 (♂ descr., Locality: Kamtschatka).

Aclitus hedini (Fahringer), FAHRINGER, 1937, Festschr. 60. Geb. E. Strand, Riga, 3, 241 (♂ descr., Locality: Kamtschatka, Siberia). — FULMEK, 1957, Ann. naturh. Mus. Wien, 61, 173 (sine descr., Locality: Siberia; host: ? *Cinara* sp.).

This species was described in 1929 as *Aphidius hedini* by FAHRINGER, placed in the group of *Aphidius abietis* Marshall and supposed to be probably parasite of *Lachnus* spp. In 1937 FAHRINGER stated *Aphidius hedini* as an *Aclitus*.

The present writer has seen the type (male) and the type series (3 males), deposited in „Naturhistoriska Riksmuseum“ at Stockholm, which are labelled as follows:

1. Kamtschatka, Malaise, 146, Type, *Aphidius Hedini* m., 121/58; (condition: very good, half of left antenna missing).
2. Kamtschatka, Malaise, 148, *Aphidius Hedini* m., 122/58. (condition: very good, half of right antenna missing).
3. Kamtschatka, Malaise, 497, *Aphidius Hedini* ?, 123/58. (condition: nearly destroyed).
4. Kamtschatka, Malaise, 481, *Aphidius Hedini* ?, 124/58. (condition: bad).

According to the revision of the type and the type-series this species is doubtless conspecific with *Myiocephalus boops* (Wesmael) (Criteria: broad and triangular, viewed from in front, head; large posterior coxae, which are

as long as propodeum; position of propodeal spiracles; venation of wings; etc), which belongs to the braconid subfamily *Euphorinae*. Therefore it is necessary to place *Aphidius hedini* Fahringer [= *Aclitus hedini* (Fahringer)] as a new synonym of *Myiocephalus boops* (Wesmael).

Aclitus nawai Ashmead

Aclitus nawai 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* sp.).

Aphidius nawai (Ashmead); WATANABE, 1957, Ins. Mats., **21**, 2 (n. comb.; host: „*Lachnus* sp.“ = ? *Stomaphis yanonis* Takahashi).

According to the original description and figure this species does not belong to the genus *Aclitus* Förster, but is related probably to *Protaphidius* Ashmead (sensu STARÝ, 1958) in the present author's opinion. WATANABE (1957) based upon the revision of the type (deposited in U. S. Nat. Museum) placed this species in *Aphidius* (subg. *Paraphidius* Starý, 1958; = *Protaphidius* Ashmead, 1900, sensu WATANABE, 1957), but I suppose this placement to be probably incorrect too. I did not, however, see the typical material and therefore leave the question unsolved for the present.

Acknowledgments

The present author is very obliged to Dr. STEINBACH (Zool. Museum d. Humboldt-Universität, Berlin) for sending Förster's type of *Aclitus obscuripennis*; and is very indebted to Prof. Dr. L. BRUNDIN (Naturhistoriska Riksmuseum, Stockholm) for valuable information on material of *Aphidius hedini* Fahr. and for sending it.

Summary

In this paper the revision of the genus *Aclitus* Förster is given. This genus was redescribed from the female-holotype of *Aclitus obscuripennis* Förster (designated as genotype by FÖRSTER in 1862). It was stated that other known species included in the genus *Aclitus* up to now do not belong in the quoted genus: *A. hedini* (Fahringer) was synonymized with *Myiocephalus boops* (Wesmael) (n. syn.); *A. nawai* Ashmead is considered to be the species of another genus, probably closely related to *Protaphidius* Ashmead (sensu STARÝ, 1958).

Zusammenfassung

Die Arbeit bringt eine Revision der Gattung *Aclitus* Förster mit einer erneuten Beschreibung des Genotypus *A. obscuripennis* Förster. *A. hedini* Fahringer wird als Synonym zu *Myiocephalus boops* Wesmael gestellt; *A. nawai* Ashmead gehört vermutlich zur Gattung *Protaphis* dius Ashmead.

Резюме

В настоящей работе приведена ревизия рода *Aclitus* Förster. Дается редескрипция рода *Aclitus* по голотипу (♀) *A. obscuripennis* Förster. (генотип установлен Ферстером в 1862). Было установлено, что другие известные виды, включавшиеся до сих пор в данный род, относятся к другим родам: *A. hedini* (Fahringer) является синонимом вида *Myiocephalus boops* (Wesmael) (н. син.); *A. nawai* Ashmead является, вероятно, представителем рода близкого к *Protaphidius* Ashmead (sensu STARÝ, 1958).

References

- ASHMEAD, W. H., Descriptions of new Hymenoptera from Japan. Proc. U. S. Nat. Mus., **30**, 169—201, 1906.
- FAHRINGER, J., Entomologische Ergebnisse der Schwedischen Kamtschatka-Expedition, 1920—1922, 24. Braconidae. Ark. Zool., **21** (A), p. 1—12, 1929.
- , Die Parasiten der Baumläuse (*Lachnini*) aus der Gruppe der *Aphidiinae* Först. Festschr. 60. Geb. E. Strand, Riga, **3**, 240—245, 1937.
- FÖRSTER, A., Synopsis der Familien und Gattungen der Braconen. Verh. naturh. Ver. preuß. Rheinl. Westph., **19**, 225—288, 1862.
- FULMEK, L., Insekten als Blattlausfeinde. Ann. naturhist. Mus. Wien, **61**, 110—227, 1957.
- MUESEBECK, C. F. W., The Genera of Parasitic Wasps of the Braconid Subfamily *Euphorinae*, with a review of the nearctic species. U. S. Dept. Agric. Misc. Publ., No. 241, p. 1—36, 1936.
- STARY, P., A Taxonomic Revision of some Aphidiin genera with Remarks on the Subfamily *Aphidiinae*. Acta Faun. Mus. Nat. Pragae, **3**, 53—96, 1958.
- SZÉPLIGETI, V. G., Braconidae. In: WYTSMAN, P., Genera insectorum, Fasc. 22, Bruxelles, 1904.

The Life-History in the Field and the Anatomy of fully-grown Larva of *Doliphoceras pseudococci* Alam, an Endoparasite of *Pseudococcus newsteadi* Green

(*Hymenoptera: Encyrtidae* & *Hemiptera: Coccidae*)

S. MASHHOOD ALAM

Entomology Section, Zoology Department,
Muslim University, Aligarh¹⁾

(With 8 figures)

Contents	Page
Introduction	189
The habits of the adult	190
The life-cycle	190
The distinguishing features of the parasitized coccid	191
The external anatomy of the larva	191
The internal anatomy of the larva	192
The importance of the parasite	194
Summary	195
References	195

Introduction

None of the species of the genus *Doliphoceras* is so far reported from Great Britain and the genus is for the first time represented in this country by *Doliphoceras pseudo-*

¹⁾ I am greatly indebted to Prof. O. W. RICHARDS, Dept. of Zoology and Applied Entomology, Imperial College of Science and Technology, London, for permission to work at Silwood Park (Field Station of the College) and for his useful suggestions on the problem.