

NOTES ON THE GENUS *ZAOMMA* ASHMEAD, WITH A
KEY TO SPECIES (HYMENOPTERA: ENCYRTIDAE)

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In conjunction with our collaborative studies of Nearctic Encyrtidae we had the opportunity to study the type-species of *Zaomma* Ashmead. Ashmead based this genus on *Encyrtus argentipes* Howard (type-locality St. Vincent, West Indies). Since the original description, the genus has remained monotypic and an enigma to many students of the Encyrtidae. Our study of *Zaomma argentipes* (Howard) has revealed the following new synonymy.

Zaomma Ashmead

Zaomma Ashmead, 1900. Proc. U.S. Natl. Mus. 22(1202): 340, 401. Type-species: *Encyrtus argentipes* Howard. Original Designation.

Apterencyrtus Ashmead, 1905. Canad. Entomol. 37(1): 5. NEW SYNONYMY. Type-species: *Apterencyrtus pulchricornis* Ashmead. Monotypic. (The type-species is considered a subjective junior synonym of *Chiloneurus microphagus* Mayr, 1876.)

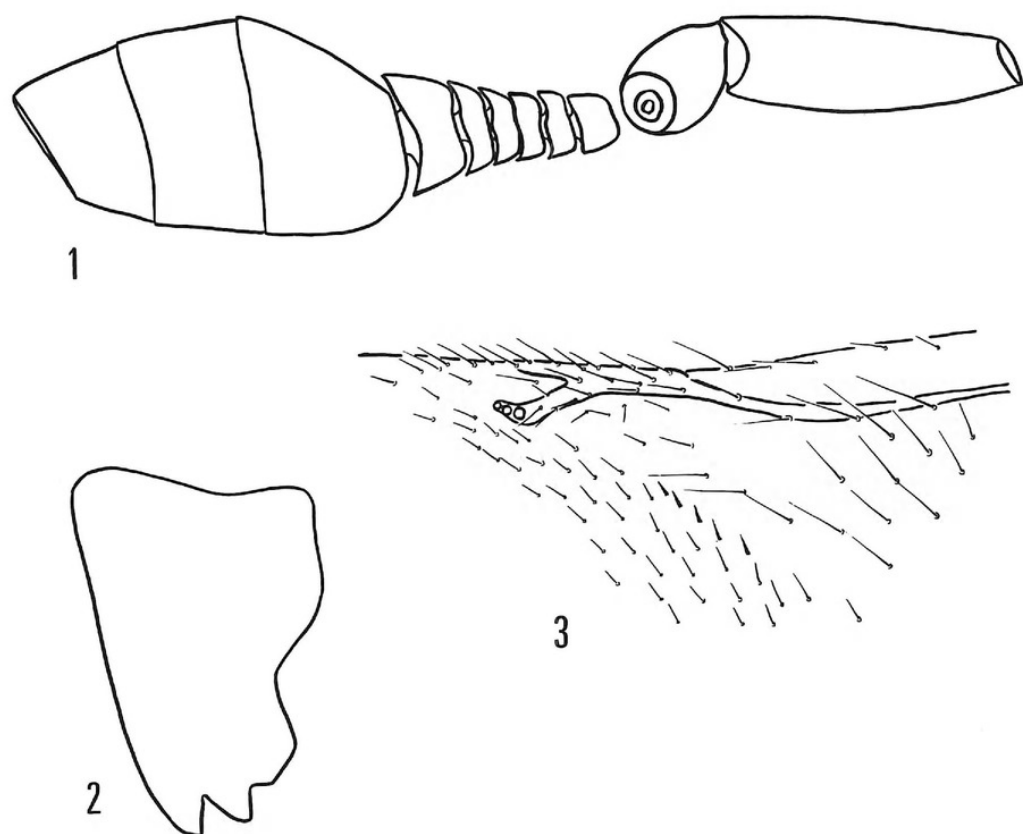
Metallonoidea Girault, 1915. Journ. N.Y. Entomol. Soc. 23(3): 169-170. NEW SYNONYMY. Type-species: *Metallonoidea brittanica* Girault. Monotypic.

Chiloneurinus Mercet, 1921. Fauna Iberica Himen. Fam. Encirtidos, p. 646. Type-species: *Chiloneurus microphagus* Mayr, 1876. Original Designation.

Metapterencyrtus Tachikawa, 1963. Mem. Ehime Univ., Sect. VI (Agric.) 9(1): 213-214. NEW SYNONYMY. Type-species: *Metapterencyrtus eriococci* Tachikawa. (The type-species is considered a subjective junior synonym of *Zaomma eriococci* (Ferrière). NEW SYNONYMY. Original Designation.

A Key to the Species of *Zaomma* (Females)

1. Middle tibia white or yellow, without dark ring. Tuft of setae on apex of scutellum not developed 2
Middle tibia with dark ring near base or more or less dark with base and apex pale; tuft of setae on apex of scutellum frequently developed 4
2. Exserted portion of gonostylus at least 0.33 times as long as gaster. Legs including coxae brownish yellow. Scutellum flat. Antennal funicular segments 5-6 not transverse. Forewing not less than three times longer than its maximum width. U.S.S.R. (Kunashir Island, Kuriles) from *Antonina crawi* Cockerell (Pseudococcidae) on bamboo (*Sasa*)
..... *Z. danzigae* (Pilipjuk and Trjapitzin) NEW COMBINATION¹
Exserted portion of gonostylus not longer than 0.25 of gaster. Coxae, femora, fore and hind tibiae more or less darkened. Scutellum convex. Antennal funicular segments 5-6 transverse, forewing length: width ratio variable 3
3. Apical 2-3 funicular segments white or yellow. Minimum width of vertex about 0.20 times maximum width of head (extreme 3:14). D.D.R.; Czechoslovakia; Hungary; U.S.S.R. (Zakarpatye Region, Moldavia, Kabardino-Balkaria, Transcaucasus, East-Kazakhstan Region, Yakutia, Primorye Territory, Sakhalin), Japan as secondary parasite of Eriococcidae
..... *Z. eriococci* (Ferrière) NEW COMBINATION²
All funicular segments dark. Minimum width of vertex about 0.25 maximum width of head. U.S.S.R. (Kunashir Island, Kuriles) from *Acanthococcus sasae* Danzig (Eriococcidae) on *Sasa* (dwarf bamboo)
..... *Z. acanthococci* (Pilipjuk and Trjapitzin) NEW COMBINATION³
4. Funicular segments 5-6 somewhat wider than long, rarely quadrate or a little longer than wide; club more than 2 times longer than wide. Scutellum with a well-developed tuft of long, dark setae on apex 5
Funicular segments 5-6 twice as wide as long; club less than two times longer than wide (Fig. 1). Scutellum without a tuft of long, dark setae on apex 6
5. Funicular segments 5-6 white, quadrate, or slightly transverse. Posterior half of mesoscutum with dense, silvery pubescence. Gaster usually as long as thorax; apical angle of syntergum obtuse. Cosmopolitan as secondary parasite of Diaspididae.
..... *Z. lambinus* (Walker) NEW COMBINATION⁴
Funicular segments 5-6 brownish-black, a little longer than wide.



Figs. 1-3. Fig. 1. Female antenna of *Zaomma argentipes* (Howard) (reconstructed) ($\times 140$). Fig. 2. Female mandible of *Z. argentipes* ($\times 300$). Fig. 3. Female forewing venation of *Z. argentipes* ($\times 140$).

Posterior half of mesoscutum with sparse silvery pubescence. Gaster as long as head and thorax combined; apical portion of syntergum acute. U.S.S.R. (Primorye Territory)

..... *Z. abas* (Trjapitzin) NEW COMBINATION⁵

6. Antennal club truncation small, only a little more than 0.33 times as long as ventral surface of club; septa dividing segments of club almost transverse (Fig. 1). Frontovortex noticeably less than 0.33 times maximal head width. Marginal vein of forewing somewhat longer than stigmal vein (Fig. 3). Middle tibia yellowish white, with dark ring near the base. All funicular segments white. West Indies (St. Vincent)

..... *Z. argentipes* (Howard)⁶

Antennal club truncation large, noticeably more than the length of ventral side of club; septa dividing segments of club oblique. Frontovortex about 0.33 times the maximal width of head. Marginal vein of forewing not longer than stigmal vein. Middle tibia more or less brown, with base and apex pale. Funicular segments 1-2 more or less brown, 3-6 ivory yellow. Senegal

..... *Z. ceroplastae* (Risbec) NEW COMBINATION⁷

The use of the name *Zaomma* instead of *Apterencyrtus* may disturb some encyrtid taxonomists and biological control specialists. *Apterencyrtus* has been widely used in the literature and is well represented in the Palearctic Region. However, the name *Zaomma* has not gone unused. Timberlake (1924) discussed it in his description of *Synaspidia* and provided additional descriptive notes. The International Commission should be consulted if workers believe that the use of *Zaomma* would cause instability of nomenclature.

The morphological characters used to identify this genus are similar to those of *Apterencyrtus* and *Metapterencyrtus*. We regard *Zaomma* as a member of the Cheiloneurini Hoffer as that tribe was characterized by Trjapitzin (1973). This tribe is composed of primary and secondary parasites of scale insects.

Species Previously Assigned to *Apterencyrtus*

1. *Apterencyrtus adeli* Traboulsi. Traboulsi (1968) provided a comprehensive diagnosis of this species and compared it to *Apterencyrtus microphagus*, *Apterencyrtus thomsoniscae* Alam, and *A. zonatus* Alam. Study of Traboulsi's description and illustrations shows that this species is conspecific with *Z. lambinus* (Walker).

Graham (1969) synonymized *A. thomsoniscae* and *A. zonatus* with *Encyrtus lambinus* Walker. *Encyrtus laminus* is considered valid because *lambinus* was an unused name. In this paper, we are using the name *lambinus*. The matter should be brought to the attention of the Commission of Zoological Nomenclature.

2. *Apterencyrtus africanus* Risbec. Annecke and Insley (1971) have cataloged the Ethiopian Encyrtidae and Aphelinidae. In that catalog they note that this species was misplaced in *Apterencyrtus*. Annecke and Mynhardt (1973) regard this species as a member of *Exoristobia* Ashmead and we agree.

3. *Apterencyrtus trichomasthoides* Hoffer. We regard this species as a member of *Metablastothrix* Sugonyayev NEW COMBINATION. Through the courtesy of Dr. A. Hoffer of Prague, V. A. Trjapitzin has studied a paratype female of this species. It is probably a synonym of *M. truncatipennis* (Ferrière).

Zaomma argentipes (Howard)

This species was originally described by Howard (1894a) on the basis of a single female specimen taken at St. Vincent, West Indies. Subsequently Girault removed a forewing and the head and mounted them in Canada balsam. The head was smashed and fragmented. Thus it is not possible to give a comprehensive description. We have reconstructed the antenna (Fig.

1), illustrate the mandible (Fig. 2), and illustrate key taxonomic characters of the forewing (Fig. 3).

The original description is generally accurate. In addition to the characters given in the key, the following characters may prove helpful in the identification of this species.

Pronotum, when viewed from dorsal aspect, short; posterior margin moderately concave; surface with rather bold, raised reticulate sculpture; mesoscutum about 1.8 times wider than long, broadly and convexly rounded from side to side, surface with sculpture as pronotum; axillae just meeting medially, with raised reticulate sculpture less pronounced; scutellum about as long as medial length of mesoscutum, robust, convexly rounded from side to side, surface, deeply, narrowly, convexly rounded, and extending to propodeum. Propodeal characters obscured by hindwing glued over metasomal terga.

Metasoma somewhat lanceolate, about as long as mesosoma; paratergite apparently absent; gonostylus slightly exserted.

U.S.N.M. Type number 2723.

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Footnotes

¹ Philipjuk and Trjapitzin, 1974: 1891 (*Apterencyrtus*).

² Ferrière, 1955: 117–118 (*Apterencyrtus*); Hoffer, 1957: 351–352 (*Apterencyrtus*); Erös, 1961: 418 (*T. niveicrus*); Tshumakova, 1961: 335–337 (*Apterencyrtus*); Tachikawa, 1963: 214–215 (*Metapterencyrtus eriococci* Tachikawa nec Ferrière); Erdös, 1964: 179, 180 (*Trichomasthus niveicrus*).

³ Philipjuk and Trjapitzin, 1974: 1890 (*Apterencyrtus*).

⁴ Walker, 1838: 422 (*Encyrtus*); Walker, 1844: 184 (*E. euryclea*); Mayr, 1876: 745, 746 (*Chiloneurus microphagus*); Ashmead, 1905: 5 (*Apterencyrtus pulchricornis*); Girault, 1915a: 282–284. (*Aphidencyrtus aspidioti*); Girault, 1915b: 169–170 (*Metallonoidea brittanica*); Ruschka, 1915: 403–404 (*Habrolepis mayri*); Mercet, 1921: 647–648 (*Chiloneurinus microphagus*); Nikol'skaya, 1952: 460 (*Chiloneurinus microphagus*); Alam, 1957: 439–441 (*Apterencyrtus thomosoniscae*); Alam, 1957: 438–439, 441 (*A. zonatus*); Hoffer, 1957: 350–351 (*A. microphagus*); Tachikawa, 1963: 119–121 (*A. microphagus*); DeSantis, 1963: 361–364 (*A. microphagus*); Peck, 1963: 441–443 (bibliography); Erdös, 1964: 301–302 (*A. microphagus*); Traboulsi, 1968: 348–354 (*A. adeli*); Graham, 1969: 270–271 (*Apterencyrtus*) (synonymy); Hayat et al., 1974: 57–60 (*A. microphagus*); Bouček, 1977: 151–152.

⁵ Trjapitzin, 1967: 183; 213–214.

⁶ Howard, 1894a: 95 (*Encyrtus*); Timberlake, 1924: 397–399.

⁷ Risbec, 1954: 1061–1074 (*Apterencyrtus*); Annecke and Mynhardt, 1973: 217 (*Apterencyrtus*).



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