

## A NEW GENUS AND A NEW SPECIES OF ENCYRTIDAE (HYMENOPTERA: CHALCIDOIDEA) FROM CHINA

Yan-Zhou Zhang and Da-Wei Huang

*Institute of Zoology, Chinese Academy of Sciences, Beijing, 100080, P.R.China. (All correspondence to second author)*

**ABSTRACT.** – A new genus of Encyrtidae, *Profundiscrobi*s, is described with type-species *Profundiscrobi*s *flagelliformis* from Beijing, China. *Profundiscrobi*s, new genus, is close to *Tachardiaephagus* Ashmead, *Choreia* Westwood because of similar interantennal prominence. The types are deposited in Institute of Zoology, Chinese Academy of Sciences, Beijing.

**KEY WORDS.** – Hymenoptera, Encyrtidae, *Profundiscrobi*s, new genus, *Profundiscrobi*s *flagelliformis*, new species, China.

### INTRODUCTION

Only a few encyrtid genera, such as *Tachardiaephagus* Ashmead, *Choreia* Westwood, have the following characters: 1). antennal scrobes deeply impressed and more or less sharply margined laterally; 2). interantennal prominence long, reaching more than half way between antennal toruli and anterior ocellus, sharp at its apex and not confluent with frontovertex. We examined specimens collected in Beijing by the junior author. At first, it was treated as a species of *Tachardiaephagus* because of its similar interantennal prominence. After studying the keys (Tachikawa, 1963; Noyes & Hayat, 1984; Trjapitzin, 1989) and comparing with *Tachardiaephagus* Ashmead, we recognized the two genera are different in many ways.

The description is based on the dried specimens mounted on cards. The drawings were made with a Leica M 10. The terminology and morphological interpretations used in this paper, if not specified, follow that of Noyes & Hayat (1984). The types are deposited in Institute of Zoology, Chinese Academy of Sciences, Beijing.

### TAXONOMY

#### *Profundiscrobi*s, new genus

Type species. – *Profundiscrobi*s *flagelliformis*, new species.

**Description.** – Female.

Head: In dorsal view (Fig. 1), a little more than twice as wide as its median length; frontovertex slightly less than half head width; occipital margin rounded; ocelli forming an angle of a little more than 90°; posterior ocellus about its own diameter from inner eye margin, more than twice its own diameter from occipital margin; eye oval, covered with very short translucent setae which not longer than the diameter of a facet, posteriorly separated from occipital margin by about half the diameter of a posterior ocellus. In facial view (Fig. 2), head a little broader than long; interantennal prominence, narrow and long, more or less sharp laterally; antennal scrobe deep and long, reaching more than half way between antennal toruli and anterior ocellus; torulus about twice its longest length from mouth margin, its lower margin slightly below level of lower margin of eye. Sculpture on head reticulate, with small, scattered piliferous punctures. Antenna relatively long (Fig. 3), with scape cylindrical, about five times as long as wide; pedicel conical in lateral view, about twice as long as wide; all funicle segments greatly longer than wide; club three segmented. Malar sulcus present; malar space slightly longer than half eye length in facial view; mandible tridentate (Fig. 4); maxillary palpus 4-segmented, labial palpus 3-segmented.

Thorax: In lateral view, dorsum moderately convex; mesopleuron not posteriorly expanded, and so metapleuron and propodeum together narrowly in contact with hind coxa. In dorsal view, pronotum no more than one quarter of mesoscutum length; mesoscutum about one and a half times as wide as its median length, with posterior margin slightly convex; axillae slightly separated; scutellum a little longer

than wide; propodeum medially no more than one eighth scutellum length. Sculpture on pronotum and mesoscutum reticulate; mesoscutum with small, scattered piliferous punctures; scutellum with slightly elongated reticulate sculpture clearly deeper than on mesoscutum, apex of scutellum smooth. Forewing hyaline (Fig. 5); linea calva not interrupted posteriorly; filum spinosum present; submarginal vein with an apical hyaline break; marginal vein about twice as long as wide; postmarginal vein nearly as long as marginal vein; stigmal vein straight, a little longer than postmarginal vein, forming an angle of about  $45^\circ$  with postmarginal vein; hindwing hyaline; middle leg with tibial spur about as long as basal tarsal segment.

Gaster: About as long as thorax and broadly joined with thorax; cercal plates located at middle of gaster; paratergites absent; hypopygium more or less reaching apex of gaster; ovipositor very slightly exserted.

**Male.** Generally similar to female except as follows: In dorsal view, frontovertex slightly more than half head width; ocelli forming an obtuse angle of about  $120^\circ$ ; eye a little shorter than minimum width of frontovertex. Interantennal prominence distinct but not as strong as in female; antennal scrobes not as deep and long as in female; antennal torulus more than twice its longest length from mouth margin, its lowest margin above level of lower margin of eye. Antenna (Fig. 6) with scape somewhat cylindrical, about three times as long as wide; pedicel as long as wide in dorsal view; flagellum with six funicle segments and a solid club; all funicle segments with long, distinct hairs.

**Etymology.** – The genus name is from the Latin *profoundus* (meaning deep) and *Scobis*, referring to the deep antennal

scrobes. Gender: masculine.

**Remarks.** – *Profundiscrobis* is close to *Tachardiaephagus* Ashmead, *Choreia* Westwood because of the similar interantennal prominence. But in *Tachardiaephagus* Ashmead and *Choreia* Westwood, females have the following characters: 1). mesopleurum enlarged and more or less touching basal segment of gaster so that when viewed from side it clearly separates hind coxa from metapleurum and propodeum; 2). occipital margin sharp; 3). interantennal prominence becoming broader ventrally; and 4). antennal torulus below level of lower margin of eye. Males of them have the interantennal prominence hardly or not exerted. According to the key by Trjapitzin (1989), *Profundiscrobis* runs to 312, where it can be easily separated from *Mayrenencyrtus* Hincks by its strongly exerted interantennal prominence. By the key of Noyes & Hayat (1984), *Profundiscrobis* keys to couplet 325a and can be separated from *Copidosoma* Ratzeburg by its forewing with sensillae at apex of stigmal vein asymmetrical and not arranged in a square.

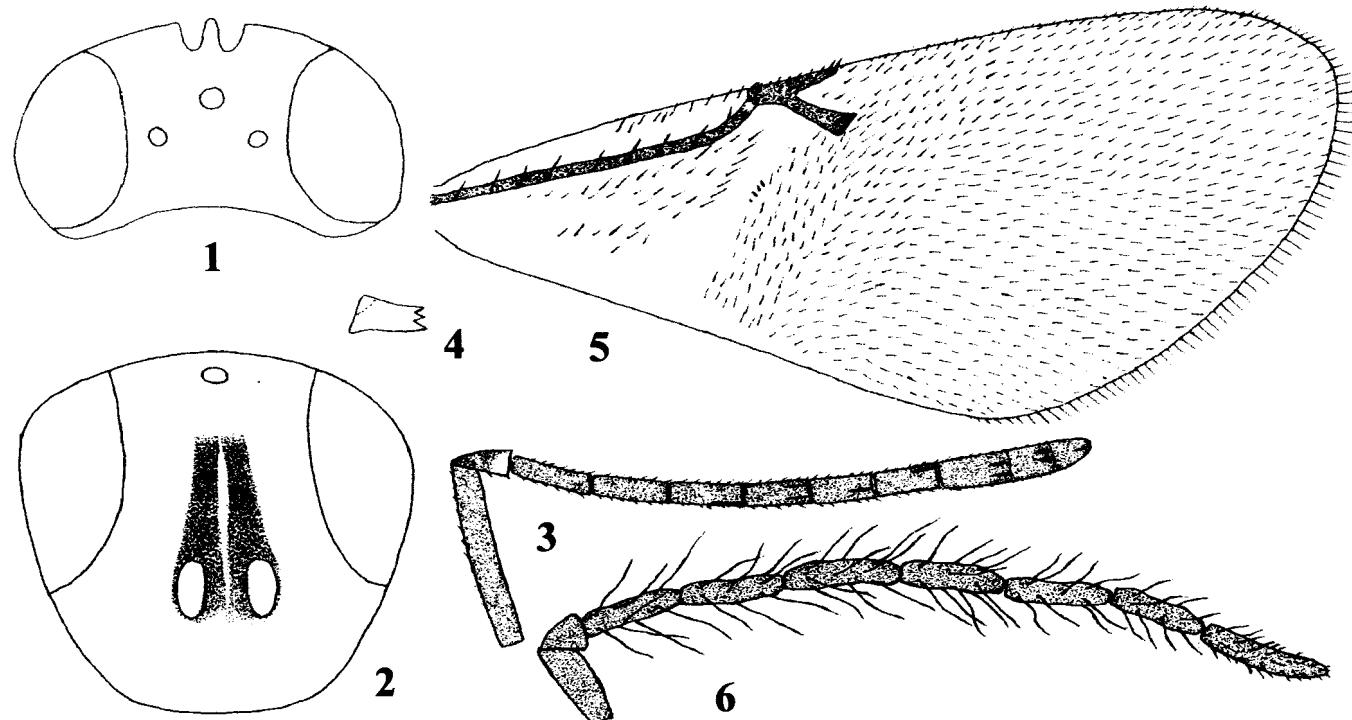
***Profundiscrobis flagelliformis*, new species**  
(Figs. 1-6)

**Material examined.** – Holotype – female, Tanzhesi, Beijing, coll. Da-Wei Huang, 19 May 1984.

Paratype – male, same data as holotype.

**Female (holotype).** – Body length: 1.7 mm.

Color: Body completely dark, mesoscutum purple-blue, scutellum green; antenna dark brown except yellow apex of



Figs. 1-6. *Profundiscrobis flagelliformis*, new species, female: 1, head in dorsal view; 2, head in facial view; 3, right antenna, outer aspect; 4, right mandible; 5, right forewing; male; 6, right antenna, outer aspect.

pedicel; forewing hyaline, the veins yellowish brown; foreleg with coxa and basal part of femur dark brown, the rest yellow; midleg with coxa dark brown, the rest yellow; hindleg with coxa and femur dark brown, the rest yellow.

Head: Sculpture reticulate, with small piliferous punctures separated by more than their own diameter, each puncture bearing a white seta; reticulation in ocellar area more or less punctate. Antennal toruli no more than their own diameter from each other; antenna with scape five times as long as wide; pedicel about twice as long as wide in lateral view; flagellum with short setae and sensor plates distinct on distal segments; the first funicular segment about four times as long as wide, sixth funicular segment more than two and a half times as long as wide; club about as long as first two funicular segments together, a little broader than funicle and apically rounded. Relative measurements: head width 61, median head length 25, head height 52, minimum frontovertex width 27, OOL 4, POL 14, malar space 20, eye length 35, eye width 27, scape length 29.

Thorax: Mesoscutum and scutellum with silvery white setae; forewing two and a half times as long as maximum width. Relative measurements: pronotum width 51, mesoscutum width 58, mesoscutum length 40, scutellum width 24, scutellum length 32, forewing length 180, forewing width 72, marginal vein length 7, postmarginal vein length 7, stigmal vein length 10.

Gaster: Relative measurement: length 70.

**Male (paratype).** – Body length: 1.4 mm.

Color: Nearly the same as female, except antennal pedicel completely dark brown.

Head: As in generic description. Relative measurements: head width 54, median head length 24, head height 45, minimum frontovertex width 30, OOL 4, POL 16, malar space 18, eye length 25.

Thorax: Similar to female; Relative measurements: pronotum width 45, mesoscutum width 50, mesoscutum length 38, scutellum width 32, scutellum length 30, forewing length 155, forewing width 70, marginal vein length 6, postmarginal vein length 6, stigmal vein length 8.

Gaster: About as long as thorax; cercal plates at middle of gaster; genitalia distinct. Relative measurements: gaster length 75; exerted genitalia length 15.

**Host.** – Unknown.

**Distribution.** – China.

**Etymology.** – The name *flagelliformis* pertains to the slender antenna.

## ACKNOWLEDGEMENTS

The project is supported by the National Natural Science Foundation of China (NSFC grant No. 39625004), partly funded by Young Scientist Grant of the Chinese Academy of Sciences (C-2999081). Thanks are due to Dr. Hui Xiao and Dr. Chao-Dong Zhu for reading the draft of the manuscript and help in preparing the paper.

## LITERATURE CITED

Noyes, J. S. & M. Hayat, 1984. A review of the genera of Indo-Pacific Encyrtidae (Hymenoptera: Chalcidoidea). *Bull. British Mus. Nat. Hist. (Ent.)*, **48**: 131-395.

Tachikawa, T., 1963. Revisional studies of the Encyrtidae of Japan (Hymenoptera: Chalcidoidea). *Mem. Ehime Univ.*, (6) **9**: 1-264.

Trjapitzin, V. A., 1989. Parasitic Hymenoptera of the family Encyrtidae of Palaearctics. (in Russian) *Opredeliteli po Faune SSSR, Izdavaemie Zoologicheskim Institutom Akademii Nauk SSR*, **158**: 1-489. Leningrad, Nauka.