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A NEW SPECIES OF *BARYCNEMIS* FÖRSTER, 1869 (HYMENOPTERA: ICHNEUMONIDAE: TERSILOCHINAE) FROM THE RUSSIAN FAR EAST

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ABSTRACT

A new species of the subfamily Tersilochinae, *Barycnemis sugonyaevi* sp. nov., is described from the Russian Far East. This species is readily distinguished from other species in this genus by its extremely short antennal flagellomeres, short basal area of the propodeum and short hind basitarsus. It resembles the genus *Tersilochus* as it has a short and weak foveate groove of the mesopleuron, short basal area of the propodeum and short thyridial depression, but other important features, such as a globose head, laterally compressed mesosoma, thickened femora, apically curved hind tibial spurs, and a short and robust ovipositor, indicate that this species belongs in *Barycnemis*.

Key words: new species, Palaearctic, Primorskiy Territory, Russia, taxonomy

НОВЫЙ ВИД *BARYCNEMIS* FÖRSTER, 1869 (HYMENOPTERA: ICHNEUMONIDAE: TERSILOCHINAE) С ДАЛЬНЕГО ВОСТОКА РОССИИ

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РЕЗЮМЕ

В подсемействе Tersilochinae с Дальнего Востока России описан новый вид *Barycnemis sugonyaevi* sp. nov. Этот вид хорошо отличается от других видов этого рода чрезвычайно короткими флагелломерами антенны, коротким базальным полем проподоума и коротким задним базитарзусом. Слабой и короткой бороздой на мезоплеврах, коротким базальным полем проподоума и коротким тиридиальным вдавлением он напоминает род *Tersilochus*, однако другие важные признаки, такие как шаровидная голова, сжатая с боков мезосома, утолщенные бедра, загнутые на вершине шпоры задней голени и короткий и крепкий яйцеклад, свидетельствуют о его принадлежности к *Barycnemis*.

Ключевые слова: новый вид, Палеарктика, Приморский край, Россия, систематика

INTRODUCTION

Barycnemis is a predominantly Holarctic genus with 35 described species. Horstmann (1981), in his revision of the European fauna of *Barycnemis*, included 16 species. Two more species were described by Schwarz (2003); and the entire Palaearctic fauna, containing 24 species, was reviewed by Khalaim (2004). One species has been described from Henan province of China (Sheng 2002).

In the Nearctic region, 13 species occur in the U.S.A. and Canada (Horstmann 2010) and two species have been described from central and northeast Mexico (Khalaim 2002). Only two species are known beyond the Holarctic region; one species was described from Costa Rica (Khalaim and Broad 2012) and another from northeast India (Khalaim 2011).

Many species of *Barycnemis*, much more so than in any other tersilochine genus, have a wide range. In particular, eight of twenty five Palaearctic species

(32%) are transcontinental, and seven (28%) are distributed both in the Palaearctic and Nearctic regions.

Species of *Barycnemis* have been reported as parasitoids of the coleopterous genera *Byrrhus* L. (Byrrhidae), *Bledius* Leach (Staphylinidae) and *Pissodes* Germar (Curculionidae) (Horstmann 1981; Wyatt and Foster 1989; Viereck 1912). Females of many species possess a strongly elongate body, stout legs with thickened femora and tibiae, and a short and robust ovipositor. Males are usually not or only weakly specialised, and therefore are much more difficult to identify than females.

Nine species of *Barycnemis* have been recorded from the Russian Far East (Khalaim 2007); all these species are more or less abundant and eight of them are transcontinental. In this paper, a tenth – rare and unusual – species of *Barycnemis* from south of the Russian Far East, is described and illustrated.

MATERIAL AND METHODS

The holotype of the new species is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZIN). Wing venation and morphological terms predominantly follow Townes (1969, 1971) with changes according to Khalaim (2011).

Photographs were taken at ZIN with a DFC 290 digital camera attached to a Leica MZ16 stereomicroscope; images were combined using Helicon Focus software. Photographs of wings were taken from microscope slides prepared with Canada balsam.

SYSTEMATICS

Family Ichneumonidae Latreille, 1802

Subfamily Tersilochinae Schmiedeknecht, 1910

Genus *Barycnemis* Förster, 1869

Barycnemis sugonyaevi sp. nov.

(Figs. 1–8)

Holotype. Female – RUSSIA: Primorskiy Territory, Ussuriysk District, Gornotaezhnoe, Malaise trap, 10–20 May 2002, coll. M.V. Mikhailovskaya (ZIN).

Etymology. Named in memory of Eugeny Sugonyaev (1931–2014), the well-known Russian entomologist, expert on parasitoids and their application in biological control.

Differential diagnosis. The new species is readily distinguished from other species in this genus by its extremely short antennal flagellomeres (Fig. 1), short basal area of the propodeum (Fig. 7) and short hind basitarsus (Fig. 5). It resembles the genus *Tersilochus* as it has a short and weak foveate groove of the mesopleuron (Fig. 4), short basal area of propodeum and short thyridial depression, but other important features, such as the globose head (Fig. 3), laterally compressed mesosoma, thickened femora (Fig. 5), apically curved hind tibial spurs and a short and robust ovipositor (Fig. 6) indicate that this species belongs in *Barycnemis*.

Description. Female (holotype). Body length 2.7 mm. Fore wing length 2.3 mm.

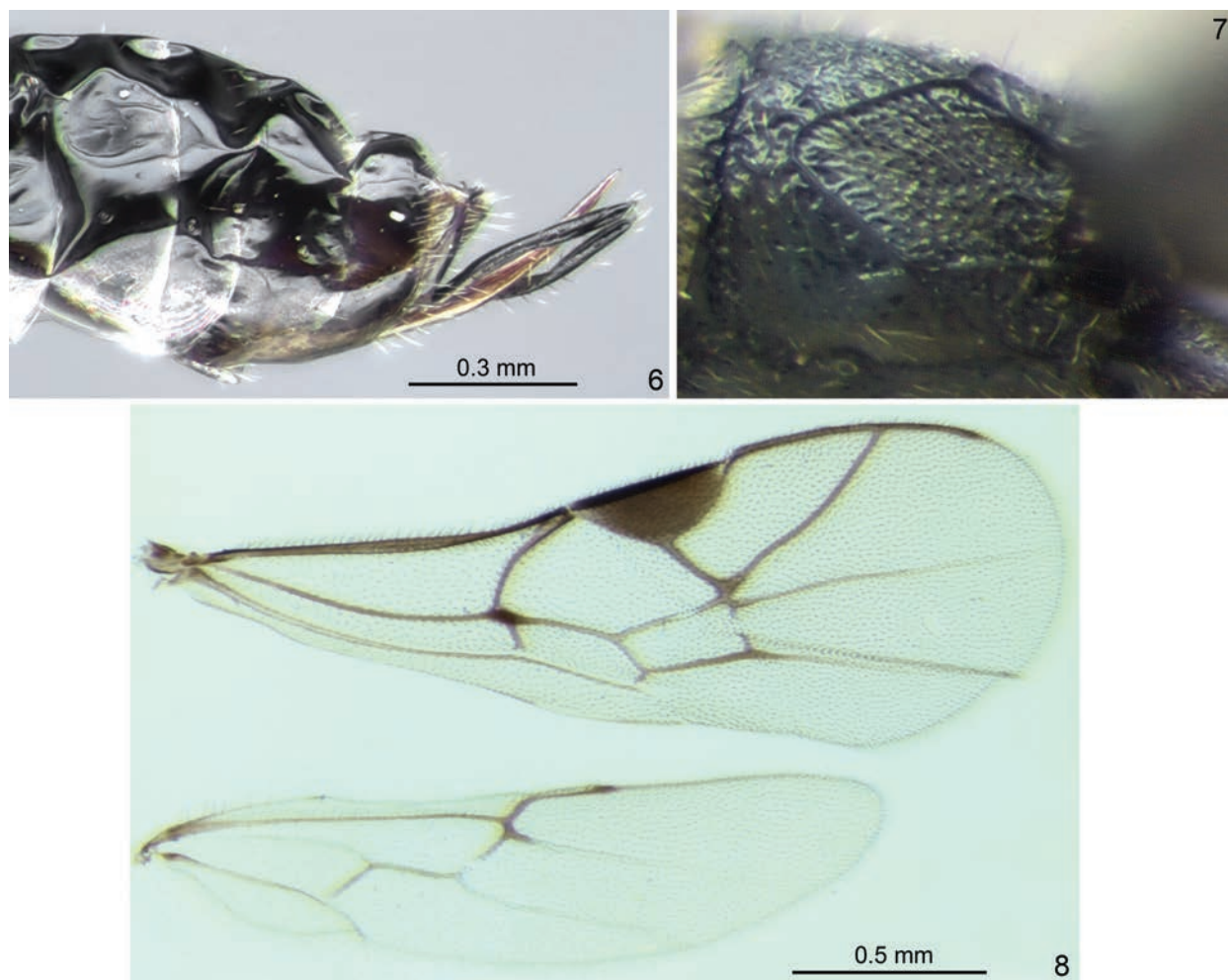
Head rounded behind eyes in dorsal view; temple 0.75 times as long as eye width. Eyes with short sparse setae. Clypeus with lower margin slightly truncate, almost entirely smooth and shining, finely granulate and finely punctate near its upper margin (Fig. 2). Mandible with upper tooth longer than lower tooth. Malar space about as long as basal mandibular width. Antennal flagellum thick and short, about half as long as fore wing, with 13 flagellomeres; subbasal flagellomeres 1.2–1.3 times as long as broad, mid flagellomeres about as long as broad, and subapical flagellomeres slightly transverse (Fig. 1). Face, frons, vertex and temple with very fine (mostly indistinct) punctures on finely granulate background, dull to weakly shining; temple centrally almost smooth. Occipital carina complete.

Mesoscutum impunctate, finely granulate and dull peripherally, almost smooth and weakly shining centrally. Notaulus virtually absent, discernible as very weak impression (Fig. 3). Mesopleuron impunctate, predominantly finely granulate and dull, almost smooth and weakly shining in upper posterior part. Foveate groove weak, moderately broad, with fine transverse wrinkles, weakly upcurved anteriorly, not reaching prepectal carina anteriorly (Fig. 4). Dorsolateral area of propodeum granulate, with irregular wrinkles. Basal area of propodeum rectangular, indistinct because of adjacent wrinkles, about 1.5 times as long as broad and 0.35 times as long as apical area (Fig. 7). Propodeal spiracle separated from pleural carina by almost 2.5 times diameter of spiracle (Fig. 4). Apical area flat, rounded anteriorly; apical longitudinal carinae anteriorly near transverse carina indistinct.

Fore wing (Fig. 8) with second recurrent vein postfurcal. Intercubitus short and thick, distinctly



Figs 1–5. *Barycnemis sugonyaevi* sp. nov., holotype, female. 1 – antenna, lateral view; 2 – head, front view; 3 – head, mesosoma and base of metasoma, lateral view; 4 – mesosoma, lateral view; 5 – hind femur, tibia and basitarsus, lateral view.



Figs 6–8. *Barycnemis sugonyaevi* sp. nov., holotype, female. 6 – apex of metasoma with ovipositor; 7 – propodeum, dorsolateral view; 8 – wings.

shorter than abscissa of cubitus between intercubitus and second recurrent vein. First abscissa of radius somewhat shorter than width of pterostigma. Metacarpus not reaching apex of fore wing. Postnervulus intercepted distinctly below its middle. Hind wing with nervellus distinctly reclivous.

Legs robust (Fig. 5). Hind femur short and thick, 3.1 times as long as broad and 0.75 times as long as hind tibia. Hind basitarsus short, 0.45 times as long as hind tibia. Spurs of hind tibia curved apically. Tarsal claws not pectinate.

First tergite 2.5 times as long as posteriorly broad, predominantly smooth, with petiole partly striate dorsally and laterally before glymma. Glymma well developed, joining ventral part of postpetiole by distinct

furrow. Second tergite as long as anteriorly broad. Thyridial depression strongly transverse. Ovipositor short and robust, upcurved, with weak dorsal subapical depression (Fig. 6); sheath about 1.1 times as long as first tergite and 0.9 times as long as hind tibia.

Head, mesosoma (including tegula) and first segment of metasoma black. Palpi fuscous. Mandible (teeth dark red) and lower 0.7 of clypeus yellow-brown. Antenna black. Pterostigma brown. Legs yellowish brown to brown; all femora more or less darkened with brown; mid and hind coxae dark brown. Metasoma behind first tergite entirely brownish black.

Male. Unknown.

Distribution. South of Russian Far East.

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