To the study of Australian Tersilochinae
(Hymenoptera: Ichneumonidae)

К изучению австралийских терсилохин
(Hymenoptera: Ichneumonidae: Tersilochinae)

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ABSTRACT. Holarctic genus *Barycnemis* with a new species *B. australica* sp.n. is recorded from Australia and Southern Hemisphere for the first time. New material on two species, *Australochus clypeator* and *Diaparsis proterva*, is provided, and colour photographs of these species are given for the first time. Taxonomic status of the genus *Australochus* is discussed.

Material and Methods

Material for this study was obtained from the following institutions: American Entomological Institute, Gainesville, Florida, U.S.A. (AEIC); Zoological Institute RAS, St. Petersburg, Russia (ZISP); and New Zealand Arthropod Collection, Auckland, New Zealand (NZAC). I am thankful to curators of these collections, David Wahl in AEIC and Darren Ward in NZAC, for loan of valuable tersilochine material.

The morphological terminology is mostly that of Khalaim [2011]. Photographs were taken at ZISP with a DFC 290 digital camera attached to a Leica MZ16 stereomicroscope; images were combined using Helicon Focus software. All photographs were taken from holotypes.

Results

Subfamily Tersilochinae

Genus *Australochus* Khalaim, 2004

Type species: *A. clypeator* Khalaim, 2004

The genus comprises one species, *A. clypeator*, known only from the holotype female from Australia.

*Australochus* belongs to the *Stethantyx* genus-group, assigned by Khalaim & Broad [2013] for two Neotropical genera, *Stethantyx* Townes, 1971 and *Megalochus* Khalaim et Broad, 2013, as it has fore wing with an obtuse-angled cubitus between intercubitus and second recurrent vein (Fig. 10). In this genus-group, *Australochus* is apparently related to the genus *Stethantyx* as both have first metasomal tergite with distinct glymma joining by furrow to the ventral part of postpetiole and possess unspecialized antennae, but *Australochus* differs from this genus by its prepectal carina with...
upper end strongly curved and reaching anterior margin of mesopleuron near the level of centre of pronotum (in Stethantyx this carina not joining anterior margin of mesopleuron, usually continuing above and backwards to the subtegular ridge), propodeum deeply impressed along midline (Figs 11, 14), strongly transverse second metasomal tergite (Fig. 15) (in Stethantyx this tergite is subsquare to very long), and ovipositor apically with a weak nodus and fine teeth ventrally (Fig. 16).

Stethantyx is a large Neotropical genus with 43 described [Khalaim, Broad, 2013; Khalaim, Ruiz-Cancino, 2013; Khalaim et al., 2013] and many undescribed species. Three species of Stethantyx, S. argentiensis (Blanchard, 1945), S. parkeri (Blanchard, 1945) and one unidentified species, occur in Australia, all were introduced from South America to control Listroderes obliquus Klug, 1829 (Coleoptera: Curculionidae), a pest of many cultivated vegetables [Kerich, 1961; Wilson, Wearne, 1962; Gauld, 1984]. Australochus clypeator strongly differs from the three introduced species of Stethantyx, and also does not correspond to any Neotropical species of this genus from a large material I was able to examine from Costa Rica, Ecuador, Peru, French Guiana, Venezuela, Brazil and Argentina.

Therefore, A. clypeator is unlikely to have a Neotropical origin, and I believe that Australochus is a native Australian genus, but its taxonomic status and relationship with Stethantyx require further investigation.

Australochus clypeator Khalaim, 2004

Figs 1–16.

MATERIAL EXAMINED. Australia: “Port Arthur Tasmania II.7–III.1”, 1 female (AEIC).

REMARKS. Here I provide additional characters which were not mentioned in the original description. Mandibles rather short, with apices slightly overlapping (Fig. 3). Flagellomeres 4–6 bearing conspicuous finger-shaped subapical structures on outer side (Fig. 2, arrows). Scutellum with lateral longitudinal carinae short, developed only at extreme base of scutellum. Prepectal carina distinct, its upper end strongly curved and reaching anterior margin of mesopleuron.

Figs 1–6. Australochus clypeator, female (holotype): 1 — antenna, lateral view; 2 — base of antenna, lateral view; 3 — head, frontal view; 4 — head and mesoscutum, dorsolateral view; 5 — head and anterior part of mesosoma, dorsal view; 6 — hind leg, lateral view.

Рис. 1–6. Australochus clypeator, самка (голотип): 1 — антенна, сбоку; 2 — основание антенн, сбоку; 3 — голова, спереди; 4 — голова и мезоскутум, сверху-сбоку; 5 — голова и передняя часть мезосомы, сверху; 6 — задняя ного, сбоку.
somewhat above the level of centre of pronotum, not extending upwards to subtegular ridge. Apical area of propodeum strongly impressed along midline, especially anteriorly (Figs 11, 14). Fore wing with first and second abscissae of radius meeting at obtuse angle (Fig. 10); intercubitus and abscissa of cubitus between intercubitus and second recurrent vein long and slender. Tergite 2 of metasoma very short, strongly transverse (Fig. 15).

The female from Tasmania exactly corresponds with the holotype in structure and coloration but is conspicuously smaller.

Genus Barycnemis Förster, 1869
Type species: Porizon claviventris Gravenhorst, 1829.
Moderately large predominantly Holarctic genus with 35 species, including one species in India [Khalaim, 2011]
and one species in Central America [Khalaim, Broad, 2012]. This is the first record of Barycnemis from Australia and Southern Hemisphere.

**Barycnemis australica** Khalaim, sp.n.

Figs 17–23.


COMPARISON. The new species is a distinct member of Barycnemis as it has a long and somewhat compressed laterally mesosoma; long, slightly upcurved anteriorly foveate groove of mesopleuron (Fig. 20); long basal part of propodeum (Fig. 21); thickened femora and tibiae (Fig. 22); rather strongly curved hind tibial spurs (Fig. 22); and short and robust ovipositor (Fig. 23). **Barycnemis australica** sp.n. is

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Figs 13–19. Australochus clypeator, female (holotype): 13 — metasoma, lateral view; 14 — posterior part of mesosoma, posterolateral view; 15 — postpetiole and tergites 2 and 3, dorsolateral view; 16 — apex of ovipositor, lateral view. **Barycnemis australica** sp.n., female (holotype): 17 — head with antennae, lateral view; 18 — head, frontal view; 19 — head and mesoscutum, dorsal view.

readily distinguished from all known Northern Hemispheric species in this genus by its very slender base of flagellum (Fig. 17), propodeum with distinct basal keel (Fig. 21), long distance between the propodeal spiracle and pleural carina (Fig. 20), and first metasomal tergite with isolated vestigial glymma (Fig. 20).

DESCRIPTION. Female. Body length 5.5 mm. Fore wing length 4.0 mm.

Head rounded behind eyes in dorsal view (Fig. 19); temple 0.65 times as long as eye width. Eyes bearing short sparse hairs. Clypeus lenticular, 3.4 times as broad as long (Fig. 18); in lateral view, weakly convex in upper part and flat in lower part; smooth and shining in lower half, dull and finely punctate on very finely granulate background in upper half. Mandible with upper tooth much longer than lower tooth. Malar space 0.65 times as long as basal width of mandible. Antennal flagellum (Fig. 17) basally very slender, with 21 flagellomeres; second flagellomere almost 3.5 times, and subapical flagellomeres 1.3–1.4 times as long as broad. Face with small but high and sharp median tubercle in upper part (somewhat below the level of lower margin of antennal sockets). Face, frons and vertex with very fine (mostly indistinct) punctures on strongly
granulate background, dull. Temple finely granulate with fine sparse punctures, dull. Occipital carina complete.

Mesoscutum distinctly granulate, dull, with moderately dense punctures. Scutellum with lateral longitudinal carinae developed only in its anterior 0.3. Notaulus with longitudinal wrinkle anterolaterally and long longitudinal impression behind this wrinkle (Figs 17, 19). Mesopleuron densely punctate, finely granulate, centrally almost smooth and weakly shining, peripherally dull. Foveate groove extending in anterior 0.7 of mesopleuron, reaching upper end of prepectal carina anteriorly, moderately broad, with transverse wrinkles, upcurved anteriorly (Fig. 20). Dorsolateral area of propodeum almost smooth and weakly shining anteriorly to finely granulate and dull posteriorly, with fine but sharp punctures. Propodeum with distinct basal keel which is about as long as apical area (Fig. 21). Propodeal spiracle separated from pleural carina by 2.5–3.0 times diameter of spiracle (Fig. 20). Transverse carina of propodeum with short adjacent wrinkles. Apical area flat, widely rounded anteriorly; apical longitudinal carinae strong, reaching transverse carina anteriorly.

Fore wing with second recurrent vein postfurcal (Fig. 23). Intercubitus short and thick, distinctly shorter than abscissa of cubitus between intercubitus and second recurrent vein. First abscissa of radius distinctly longer than width of pterostigma. First and second abscissae of radius meeting at right angle. Metacarpus almost reaching apex of fore wing.

Figs 26–30. Diaparsis proterva, female (holotype): 26 — head with antennae, frontal view; 27 — propodeum, dorsal view; 28 — posterior part of mesosoma and first tergite, lateral view; 29 — tergites 1 and 2, dorsal view; 30 — metasoma with ovipositor, lateral view.

Postnervulus intercepted distinctly below its middle. Hind wing with nervellus somewhat reclivous.

Legs robust, femora and tibiae conspicuously thickened (Fig. 22). Hind femur short and thick, 3.0 times as long as broad and 1.05 times as long as tibia. Hind basitarsus 0.6 times as long as hind tibia. Spurs of hind tibia strongly curved apically. Tarsal claws rather large, not pectinate.

First metasomal tergite slender, 4.0 times as long as posteriorly broad, entirely smooth, its dorsal margin strongly and evenly rounded in lateral view (Fig. 20). Glymma isolated (furrow between glymma and ventral part of postpetiole absent), vestigial, situated on ventrolateral side of the tergite near its midlength (Fig. 20). Second tergite 2.35 times as long as anteriorly broad. Thyridial depression about twice as long as broad. Ovipositor robust, weakly and evenly upcurved, with weak dorsal subapical depression (Fig. 23); sheath about 1.4 times as long as first tergite and 1.7 times as long as hind tibia.

Head and mesosoma black (lower corner of pronotum and upper anterior corner of mesopleuron reddish brown). Palpi, mandible (teeth reddish) and tegula brownish yellow; clypeus reddish brown in upper half and yellow in lower half. Antenna with scape and pedicel brown, flagellum black. Wings slightly infumate with brown, pterostigma dark brown. Legs entirely yellowish brown. First metasomal segment dark brown. Metasoma behind first tergite yellow ventrally and predominantly brown laterally and dorsally.

Male. Flagellum with 24 flagellomeres, slender, strongly tapered towards apex. Malar space shorter, almost half as long as basal mandibular width. Propodeum with basal keel about 1.7 times as long as apical area. Legs less robust than in female; hind femur slightly thickened; hind tibia about as long as femur. Spurs of hind tibia strongly curved apically. Metasoma compressed laterally; second tergite longer than in female. Wings slightly infumate with brown.

ETYMOLOGY. From the type locality, Australia.

DISTRIBUTION. Australia.

Genus *Diaparsis* Förster, 1869

*Type species*: *Ophion nutritor* Fabricius, 1804.

Large almost worldwide genus with about 80 described species. The genus is species rich in Holarctic, Afrotropical and Oriental regions, but rare or entirely absent in the Neotropical region. Gauld [1984] reported about nine species in Australia, but only one, *D. proterva* Khalaim, is described.

*Diaparsis proterva* Khalaim, 2008

Figs 24–30.

MATERIAL EXAMINED. Australia: Australian Capital Territory, Canberra, CSIRO, grass/clover, 15 October 1988, coll. R. Macfarlane, 1 female (NZAC). Northern Territory, Mt. Sander, 1300 m, 21 September, 1 female (AEIC). Tasmania, Strahan, March 14–26, 2 females (AEIC).

REMARKS. Most abundant Australian species of *Diaparsis*. All examined specimens are rather uniform, with minor variation in structure and coloration.

References


