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A new species of *Ochterus* LATREILLE (Heteroptera: Ochteridae) from Brunei

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Abstract

A new member of the Ochteridae, *Ochterus bruneiensis* sp.n. from Brunei is described. It is the third species of the family known from Borneo.

Key words: Heteroptera, Ochteridae, *Ochterus*, new species, Brunei, Borneo.

Zusammenfassung

Eine neue Art der Ochteridae, *Ochterus bruneiensis* sp.n., wird aus Brunei beschrieben. Es handelt sich um die dritte Art dieser Familie, welche aus Borneo bekannt wird.

Introduction

Ochteridae belong to the Nepomorpha group of true bugs (Heteroptera). In contrast to most of the other related families, which are fully aquatic, the Ochteridae, commonly known as “velvety shore bugs” are terrestrial and are usually associated with the banks of various kinds of freshwater habitats. Their small size (c. 3.5 - 10.0 mm) and the cryptic habitats of some species, such as mossy rocks along forested mountain streams and walls of waterfalls, have made it difficult to observe them in the field to learn more about their biology and ecology (GAPUD 2003). Some other species, which inhabit more exposed habitats such as sand banks, are very sensitive to disturbance and escape netting by quick flight. *Ochterus* LATREILLE, 1807 is the only genus of Ochteridae found in the Malesian Region. Only two species are recorded from Borneo, the widespread *Ochterus marginatus* (LATREILLE, 1804) and *Ochterus xustos* NIESER & CHEN, 1992 from Sabah (CHEN & al. 2005). In comparison, a wealth of ten endemic species is now known from the Philippines (GAPUD 2003). The family was hitherto unknown from Brunei. We describe here a new species which was collected at a site used, but not developed, for recreation not far from the countries’ capital city.

Material and methods

The type material was originally collected in alcohol, but later dry-mounted and glued on card boards for closer examination. Genitalia of males were dissected.

The digital photographs (Figs. 1, 2) were taken with a Leica DFC camera attached to a Leica MZ16 binocular microscope with the help of Image Manager IM50 and processed with Auto-Montage Pro and Adobe Photoshop 7.0 programmes.

Drawings (Figs. 3 - 5) were prepared with the help of a camera lucida attached to binocular microscopes (Leica Wild M10, Nikon SMZ 1500).

Terminology follows GAPUD (2003) and CHEN & al. (2005).

***Ochterus bruneiensis* sp.n.** (Figs. 1 - 5)

Type material: Holotype (male), labelled "Brunei: Brunei/Muara\ Sg. Akar, water fall area\ 22.11.2008, N 04°56'\ E 114°59', 47m GPS\ leg. H. Zettel (16)", deposited in the Brunei Museum. Paratypes: 3 males, 2 females, same label data as holotype, in the Natural History Museum Vienna and in the Biology Department, Universiti Brunei Darussalam.

Type locality and habitat: Brunei, Brunei-Muara District, Sungai Akar, waterfall area near main road, 47 m a.s.l., N 04°56'45" E 114°59'13" (GPS), collected from small sand bank at a narrow, slowly flowing stream in sand stone area, meandering through secondary rainforest.

Diagnosis: Very small (3.8 - 3.9 mm), more slender than most congeners. Pronotum and sides of forewings with orange marks. Forewings with fine pattern of numerous small frosted spots (Fig. 1). Frontal plate with long median carina and with numerous fine, transverse, more or less irregular wrinkles (Fig. 2). – Male: Forefemur with very long pilosity at basal three fourths of flexor side. Process of pygophore long and slender (Fig. 3). Right appendage of right paramere vestigial, left one long and slender (Fig. 4). – Female: Subgenital plate with shallow medial emargination (Fig. 5).

Description of male: Size: Body length 3.79 - 3.82 mm. Maximum body width approximately at midlength of forewings, 1.98 - 2.03 mm. Head width 1.13 - 1.15 mm. Pronotum width 1.84 - 1.91 mm.

Colour: Dorsum (as in female, Fig. 1) black to dark brown; pronotum with orange sides (anteriorly yellowish) and orange mark at middle of hind margin; embolium with broad membrane with very narrow yellow to orange margin; entire forewings speckled with irregular, grayish-white frosted marks. Eyes dark red or silverish (as in female, Fig. 2); frontal plate with yellowish white anterior margin. Labrum, buccula and rostrum orange to brownish orange. Antennomeres 1 and 2 yellowish white, 3 and 4 brown. Venter of body dark brown, large areas on abdomen rather orange brown. Acetabula with yellowish margins (broad at proacetabula, narrow at others). Legs yellow, apices of femora, tibiae and tarsi narrowly infuscated (often inconspicuous).

Structures (measurements refer to holotype): Body generally of elongate shape (Fig. 1). Head (Fig. 2) with very large eyes, smallest interocular distance 0.30 times head width. Vertex dull. Frontal plate (as in female, Fig. 2) with long median carina, ending in short distance from anterior margin (approximately at transition to yellowish anterior margin); with inconspicuous longitudinal carinae along dorsal eye margins, and with numerous fine, transverse wrinkles; these wrinkles anteriorly more regular than posteriorly; yellow anterior margin, smooth, without wrinkles. Lengths of antennomeres 1 - 4 (Fig. 2), 0.09, 0.12, 0.27, 0.34 mm, antennomeres 1 and 2 distinctly thicker than 3 and 4. Rostrum long, surpassing hind coxae by length of last segment.

Pronotum strongly transverse, width 2.4 times median length; anterolateral angles blunt; anterolateral depressions deep and slender; lateral margins weakly convex; posterior margin trisinate; on disk with deep punctures, on collar with few small punctures, on sides without punctures. Mesoscutellum sparsely punctured. Hemielytron unevenly punctured;

on clavus with few punctures mostly along margins; on endocorium with numerous punctures mostly at base; on embolium with numerous punctures on medial part. Forefemur with very long pilosity at basal three fourths of flexor side.

Abdominal segments 7 and 8, and genitalia strongly asymmetrical. Pygophore with long, comparatively narrow, apically rounded process (Fig. 3) beset with very long pilosity. Right paramere (Fig. 4) with apically broadly rounded capitulum; hood fairly densely punctate and rounded; right appendage triangular and very small; left appendage long and slender, slightly widened towards apex, without incision, almost parallel with slender shaft.

Description of female: Size: Body length 3.88 - 3.90 mm. Maximum body width approximately at midlength of forewings, 2.08 - 2.14 mm. Head width 1.14 - 1.15 mm. Pronotum width 1.94 - 1.98 mm.

Colour (Fig. 1) and structural characteristics as in male except for the following: Distance between eyes slightly larger (0.35 times head width, Fig. 2) and pronotum marginally wider (2.5 times median length, Fig. 1) than in male. Forefemur without long pilosity (Fig. 2). Abdomen symmetrical. Sternite 7 (Fig. 5) slightly folded and strongly narrowed posteriorly; medial hind margin slightly concave, sides with 2+2 long setae near base.

Comparative notes: In *Ochterus* the structures of the capitulum of the males' right parameres yield most important characteristics for species distinction. A vestigial, triangular right appendage as in *O. bruneiensis* sp.n. (Fig. 4) is unknown from any described species in the whole western Malesian Region (compare GAPUD & SAN VALENTIN 1977, GAPUD 1981, 1995, 2003, NIESER & CHEN 1999). In some species, like *O. grandiusculus* NIESER & CHEN, 1992 from Sulawesi and *O. xustos* from northern Borneo (see NIESER & CHEN 1999) where the right appendage is relatively short, but still elongated, both appendages are of similar length. The long median carina on the frontal plate (Fig. 2), which almost reaches its anterior margin, distinguishes *O. bruneiensis* sp.n. from most congeners in the region, including the most common species, *O. marginatus*. *Ochterus xustos* from northern Borneo, which has a similar long carina, is much larger in body size (length 4.3 - 4.7 mm).

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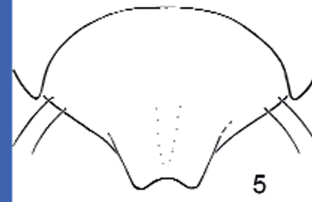
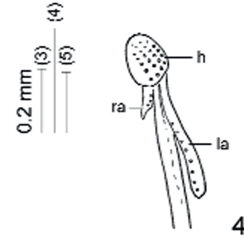
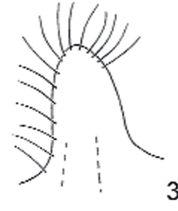
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Figs. 1 - 5: *Ochterus bruneiensis* sp.n., paratypes: (1) Habitus of female, dorsal aspect. (2) Head of female, frontal aspect. (3) Process of pygophore of male, caudoventral aspect. (4) Capitulum of right paramere of male, frontal aspect (h – hood, la – left appendage, ra – right appendage). (5) Subgenital plate (sternite 7) of female, ventral aspect. Figures 1-2: © NHMW Hemiptera Image Collection, published with permission.



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