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# New species of Heteroceridae from Papua New Guinea and Myanmar

(Insecta: Coleoptera)

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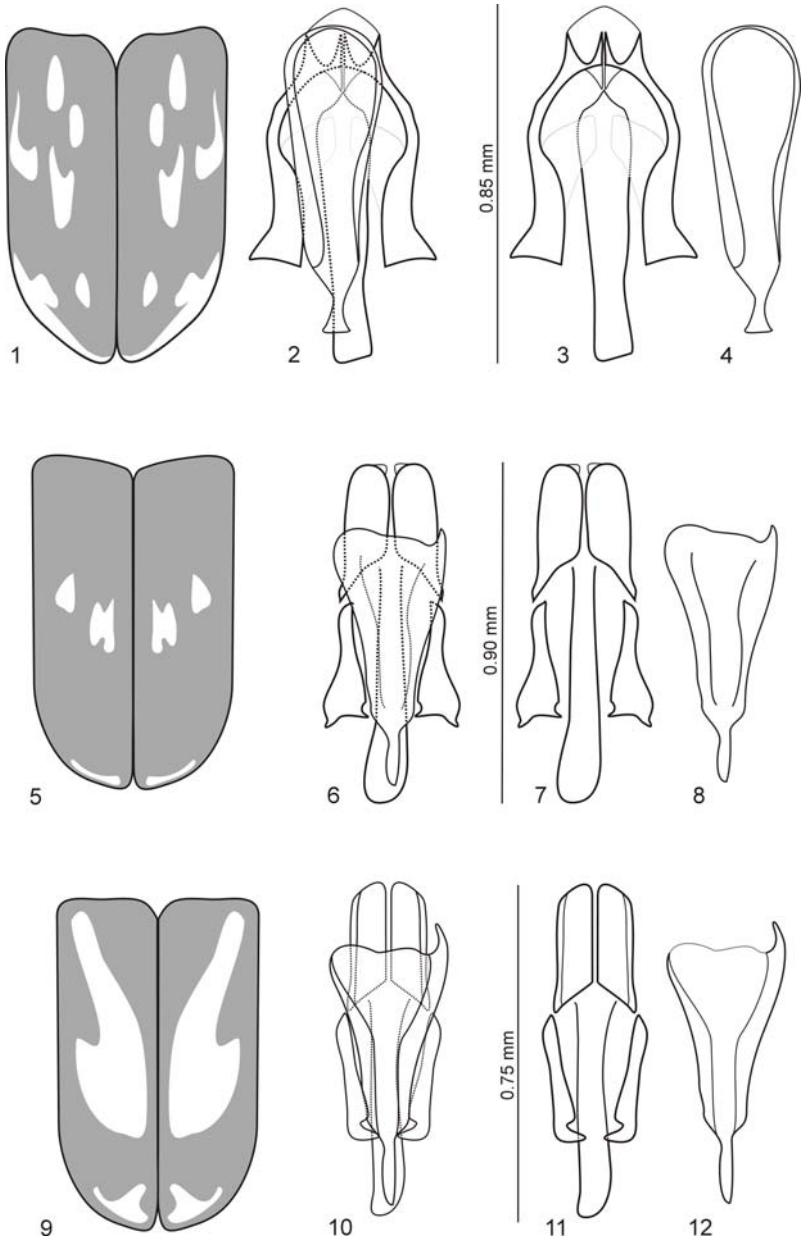
Abstract: Two similar new species of Heteroceridae belonging to "*H. philippensis*" group: *Heterocerus heissi* **n. sp.** and *H. sinecroniger* **n. sp.** from Papua New Guinea and *H. ernsti* **n. sp.** from Myanmar related to *H. lorenzevae* Mascagni, 1993, are described, illustrated and compared with similar species.

Key words: Taxonomy, Coleoptera, Heteroceridae, new species, Papua New Guinea, Myanmar

## Introduction

The present paper is supplement to the recent paper on the *Heterocerus philippensis* species group by MASCAGNI & SKALICKÝ 2006, extending the group with two new species from Papua New Guinea: *H. heissi* **n. sp.** and *H. sinecroniger* **n. sp.** *H. ernsti* **n. sp.** from Myanmar is described moreover. All species were collected by Prof. Dr. Ernst HEISS during his travels and are deposited in the author's and collector's collections.

The following acronyms are used in the text to indicate the depository of the material examined:
CEH --Coll. Prof. Dr. E. HEISS Innsbruck, Austria
CSU -- Coll. S. SKALICKÝ, Ústí nad Orlicí, Czech Republic
MZLU -- Museum of Zoology, Lund University, Sweden
Locality data are cited verbatim in "quotation marks".


1
2
0.85 mm
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12

Figs. 1–4: *Heterocerus ernsti* **n. sp.** holotype: 1) elytra, dorsal view; 2: male genitalia, dorsal view; 3) tegmen, dorsal view; 4) penis, dorsal view. Fig. 1 not in scale.

Figs. 5–8: *Heterocerus heissi* **n. sp.** holotype: 5) elytra, dorsal view; 6) male genitalia, dorsal view; 7) tegmen, dorsal view; 8) penis, dorsal view. Fig. 6 not in scale.

Figs. 9–12: *Heterocerus sinecroniger* **n. sp.**, holotype: 9) elytra, dorsal view; 10) male genitalia, dorsal view; 11) tegmen, dorsal view; 12) penis, dorsal view. Fig. 9 not in scale.

## Taxonomy

### *Heterocerus ernsti* n. sp.

(Figs. 1–4)

Type material: Holotype ♂: "Myanmar / Burma Inle Lake 12 II 2003 E: Heiss" (CSU). Paratype (Allotype) ♀: the same data as holotype (CSU). Paratypes 2 specimens: (♂) the same data as holotype (CSU), (♀) "Myanmar (Burma) Mandalay 9 II 1998 E. Heiss" (CEH).

Description: Holotype ♂: Total length 4.50 mm; elytra 2.75 mm long, 1.65 mm wide across shoulders. Ground colour brown to black; elytra with pale brown pattern as in Fig. 1. Mandibles and legs pale brown, tibiae dark brown with middle part pale brown. Ventral surface ferrugineous, epipleura reddish, abdomen dark brown, lighter laterally. Mandibles relatively short, robust, dorsal subapical tooth short, rounded. Prostheca without notch, only with series of teeth. Labrum semicircular, as wide as long, surface finely granular, anterior margin serrate with dense short setae. Antennae 11-segmented, with 7-segmented club; antennomeres I and II with long setae, antennomeres V – XI with dense short setae. Clypeus without pair of anterior horns; anterior margin shallowly emarginate, with short, brownish, semi-erect setae intermixed with sparse and long erect ones. Head finely granular, setae short, adjacent, intermixed with long erect setae above eyes. Pronotum oval, wider than long (ratio 1.65 : 1), slightly narrower than base of elytra; pronotal base completely rimmed. Surface of pronotum finely granular (granules approximately as large as eye facets) without intermixed larger punctures. Setae on pronotum yellowish, short, sparse, with longer and erect setae laterally. Scutellum pointed, triangular. Elytra without longitudinal furrows; humeral depressions short, deep, scutellar depressions shal-

low. Surface of elytra finely granular, granules intermixed with punctures approximately twice as wide as eye facets. Setae on elytra dense and longer than on pronotum, erect, golden, intermixed with sparse, short erect black setae. Epipleural ridges absent. Ventral surface relatively densely and coarsely granular; setae adjacent, long. Metasternum with post-mesocoxal ridge. Mesosternum spinose in front of each mesocoxa. Post-metacoxal line absent. Stridulatory arch without transverse striae. Protibia with 11 stout spines, mesotibia with 9 weak spines. Spines of metatibia weak, concealed by setae. Spiculum gastrale V-shaped, arms firmly connected apically. Aedeagus (Figs. 2–4) elongate, 0.80 mm long, well sclerotized; parameres short, fused with phallobasis. Supporting sheath bordered posteriorly. Penis with internal sac, without processus accessorius.

Paratype (Allotype) ♀: Total length 4.55 mm (to apex of labrum); elytra 2.75 mm long, 1.75 mm wide across shoulders. Externally similar to male.

Differential diagnosis: *H. ernsti* **n. sp.** is similar to *H. lorenzevae* Mascagni, 1993, widely distributed in Bangladesh, India, Laos, Myanmar, Nepal, Pakistan, Thailand, Vietnam (MASCAGNI & SFORZI 1999, MASCAGNI 2003, SKALICKÝ 2004) in several characters, such as the number of antennomeres, presence of post-mesocoxal ridge and spines in front of mesocoxa, absence of clypeal horns and epipleural ridge. It differs in the morphology of the male genitalia and different elytral pattern (compare Figs. 7–8 in MASCAGNI (1993) and Figs. 1–4 in this paper). *H. maindroni* Grouvelle, 1903 from India and Sri Lanka (MASCAGNI & SFORZI 1999) is apparently related in external marks to *H. lorenzevae* and *H. ernsti*. It differs from the two later species especially in the absence of the paired clypeal horns in the males of *H. lorenzevae* and *H. ernsti*, which are present in *H. maindroni*.

Distribution: Known only from the type locality.

Etymology: Dedicated to Prof. Dr. Ernst HEISS (Innsbruck, Austria), who collected the type specimens.

### ***Heterocerus heissi* sp. n.**

(Figs. 5–8)

Type material: Holotype ♂: "PAPUA NEW GUINEA East Sepik Prov. LF Sepik at Kariwari river 29.viii.2004, E. HEISS lgt" (CSU). Paratype

(Allotype) ♀: the same data as holotype (CSU). Paratypes 33 specimens: (22 ♂♂, 11 ♀♀) the same data as holotype (CSU, 3 ♂♂, 3 ♀♀ CEH); 109 specimens: (53 ♂♂, 56 ♀♀) the same data as holotype only: "28.viii.2004" (CSU, 5 ♂♂, 5 ♀♀ CEH, 3 ♂♂, 3 ♀♀ MZLU).

Description: Holotype ♂: Total length 4.60 mm; elytra 2.40 mm long, 1.45 mm wide across shoulders. Ground colour dark brown. Elytra with diffuse orange pattern as in Fig. 5. Mandibles, prostheca and tibiae pale brown. Mandibles short with acute apex, dorsal subapical tooth very small. Prostheca with teeth on dental lobe, without notch. Labrum almost as wide as long, rounded laterally; softly granular, with short adjacent setae. Antennae 11-segmented, with 7-segmented club; antennomeres I and II with long sparse brownish erect setae, antennomeres V–XI with dense short setae. Clypeus with pair of anterior horns, anterior margin deeply emarginate; finely granular with dense setae. Head finely granular; setae dense, short, intermixed with long erect ones above eyes. Pronotum wider than long (ratio 1.65 : 1), as wide as base of elytra; pronotal base completely rimmed; surface of pronotum finely granular, setae sparse, short. Scutellum pointed, triangular. Elytra with shallow longitudinal furrows; humeral depressions short, shallow. Setae on elytra short, semi-erect, yellowish. Surface of elytra finely granular with intermixed punctures approximately as large as eye facets. Epipleural ridges absent. Ventral surface sparsely and finely granular. Metasternum with post-mesocoxal ridge; mesosternum with spines in front of each mesocoxa. Post-metacoxal line present. Stridulatory arch marked with striae. Protibia with 10 stout spines, Meso- and metatibia with uncertain number of thin spines. Spiculum gastrale V-shaped, arms connected by membrane apically. Aedeagus soft, 0.95 mm long, well sclerotized, shape as in Figs. 6–8. Flaps of parameres long, distinctly separated from rest of phallobasis . Penis with short processus accessorius; supporting sheath border posteriorly.

Paratype (Allotype) ♀: Total length 4.80 mm (to apex of labrum); elytra 2.85 mm long, 1.85 mm wide across shoulders. Externally similar to male.

Variability: Total length 4.95 mm to 3.65 mm (both sexes). Mean length about 4.60 mm.Ground colour in the type series is dark brown to black-brown, a few specimens have dark brown colour of the body without design. A few male specimens are with hypermandibles. Elytral

longitudinal furrows are barely present in some paratypes. No other substantial morphological variability observed in the type series.

Differential diagnosis: Due to the shape of aedeagus, 11-segmented antennae, presence of the post-mesocoxal ridge on metasternum and spines in front of each mesocoxa the new species belongs to the *Philippensis* group. This group contained six previously described taxa: *H. philippensis philippensis* Grouvelle, 1896 (Indonesia (Sulawesi), Myanmar, The Philippines), *H. philippensis cinctus* Motschulsky, 1858 (India (Andaman Island), Pakistan, Sri Lanka), *H. philippensis javanicus* Grouvelle 1896 (India, Indonesia (Java, Nias), Nepal, Pakistan, Thailand, Vietnam), *H. jaccoudi* Mascagni 2006 (Indonesia (Sulawesi), Malaysia, south western Borneo, western Thailand), *H. stastnyi* Skalický, 2006 (Malaysia) (MASCAGNI & SKALICKÝ 2006) and *H. schodli* Skalický, 2002 (Philippines) (SKALICKÝ 2002). Two new species: *H. heissi* **n. sp.** and *H. sinecroniger* **n. sp.** (both from Papua New Guinea) are described in this paper. *H. heissi* **n. sp**. differs from them in the morphology of the male genitalia, in the shape of elytral pattern and in the presence of longitudinal furrows in elytra. Compare Figs. 1–20 in MASCAGNI & SKALICKÝ (2006), Figs. 4–6 in SKALICKÝ (2002) and Figs. 5–12 in this paper.

Distribution: Known only from the type locality.

Etymology: Dedicated to Prof. Dr. Ernst HEISS (Innsbruck, Austria), who collected the type specimens.

### ***Heterocerus sinecorniger* n. sp.**

(Figs. 9–12)

Type material: Holotype ♂: "PAPUA NEW GUINEA East Sepik Prov. LF Sepik at Kariwari river 29.viii.2004, E. HEISS lgt" (CSU). Paratype (Allotype) ♀: the same data as holotype (CSU). Paratypes 2 specimens: (♀♀) the same data as holotype (CSU, CEH).

Description: Holotype ♂: Total length 3.40 mm; elytra 2.05 mm long, 1.25 mm wide across shoulders. Ground colour brown, labrum, head and eyes brown to black, elytra with paler diffuse pattern as in Fig 9. Ventral surface pale brown. Dorsal subapical tooth of mandibles short, not projecting from outline of lateral margin (developed as notch in lateral margin). Mandibles short with acute apex. Prostheca very finely bristled, without notch. Labrum as wide as long, laterally curved, anterior angles

softly serrate in median portion. Antennae 11-segmented, with 7-segmented club; antennomeres I and II with long sparse erect setae. Clypeus without pair of anterior horns, anterior margin emarginate; finely granular with dense short setae. Setae on head dense and short except for long erect setae above eyes. Pronotum wider than long, as wide as base of elytra, softly granular, pronotal base completely rimmed. Setae on pronotum sparse and short, with dense setae at anterior margin. Scutellum pointed, triangular. Elytra with feebly marked longitudinal furrows and with shallow short humeral depressions. Scutellar depressions absent. Setae of elytra short, sparse, adjacent, yellowish (golden), without intermixed longer setae. Elytra microscopically granular with intermixed punctures approximately twice as large as double times eye facets. Epipleural ridges absent. Ventral surface softly granular. Metasternum with post-mesocoxal ridge; mesosternum serrate in front of each mesocoxa. Post-metacoxal line absent. Stridulatory arch marked with striae. Protibia with 9 stout spines, meso- and metatibia with 8 long weak spines. Spiculum gastrale V-shaped, arms connected by membrane apically. Aedeagus 1.00 mm long, shape as in Figs. 10–12, partly sclerotized. Flaps of parameres long, distinctly separated from rest of phallobasis. Penis with short processus accessorius; supporting sheath bordered posteriorly.

Paratype (Allotype) ♀: Total length 4.05 mm; elytra 2.50 mm long, 1.60 mm wide across shoulders. Externally similar to male.

Differential diagnosis: Due to the shape of aedeagus, 11-segmented antennae, presence of the post-mesocoxal ridge on metasternum and spines in front of each mesocoxa, the new species belongs to the *philippensis* group. *A. sinecroniger* **n. sp.** is closely related to *H. heissi* **n. sp.** Both species differ in the ground colour, elytral pattern, setae and punctures of body and in the morphology of male genitalia (compare Figs. 5–8 and 9–12).

Distribution: Known only from the type locality.

Etymology: the specific epithet is the Latin adjective *sinecroniger* (without horns). It refers to the absence of the paired clypeal horns in males.

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