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Description of *Cerochusa gesinae* sp. nov. from Thailand (Coleoptera: Staphylinidae: Pselaphinae)

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Abstract: A second species of the genus *Cerochusa* Yin & Nomura, 2012, *C. gesinae* Yin & Kleeberg, sp. nov., is described and illustrated from Chiang Mai, Thailand. The new species can be easily distinguished from *C. cilioceps* Yin & Nomura, 2012 from China and Thailand by the less strongly modified male head, distinct discal striae of the elytra, dense pubescence along the posterior margin of the elytra, and different shape of the aedeagus.

Keywords: *Cerochusa*, new species, taxonomy, Thailand.

INTRODUCTION

The monotypic ant-loving beetle genus *Cerochusa* Yin & Nomura, 2012 (Batrisitae: Batrisini) was erected to hold a robust-looking species from Hainan Island, southern China (Yin *et al.*, 2012). Later collection records of the type species, *C. cilioceps* Yin & Nomura, 2012, illustrated a wider distributional range of this species in Southeast Asia (Yin & Li, 2014). In November, 2019 the second author conducted a field work in northern Thailand. Among the pselaphines collected at Doi Suthep National Park, an additional species of *Cerochusa* was recognized, which is described in the present paper. The diagnosis of the genus is updated in light of the discovery of a second species.

MATERIAL AND METHODS

The type material of the new species described in this paper is deposited in the Museum für Naturkunde Berlin, Germany (MNB). The text of the specimen label is quoted verbatim in quotation marks, supplemental information is included in parentheses.

Genital parts were dissected and preserved in Euparal on a plastic slide that was placed on the same pin with the specimen. The habitus image of the beetle was taken using a Canon 5D Mark III camera in conjunction with a Canon MP-E 65mm f/2.8 1-5X Macro Lens, and a Canon MT-24EX Macro Twin Lite Flash was used as the light source. Images of the morphological details

were produced using a Canon G9 camera mounted to an Olympus CX31 microscope under reflected or transmitted light. Zerene Stacker (version 1.04) was used for image stacking. All images were optimized and grouped into plates using Adobe Photoshop CC 2018.

The abdominal tergites and sternites are numbered following Chandler (2001) in Arabic (starting from the first visible segment) and Roman (reflecting true morphological position) numerals, e.g., tergite 1 (IV), or sternite 1 (III).

TAXONOMY

Cerochusa Yin & Nomura, 2012

Cerochusa Yin & Nomura in Yin *et al.*, 2012: 66.

Type species: *Cerochusa cilioceps* Yin & Nomura (in Yin *et al.*, 2012: 68).

Revised diagnosis: Body robust in form, with thick antennae and legs. Head roundly triangular; vertex convex medially, with U-shaped sulcus or impression connecting vertexal foveae; ocular canthi distinct, thick. Pronotum strongly transverse, with large spines at lateral sides, posterolateral corners spinose or angulate; disc with distinct median longitudinal sulcus, discal carinae weakly to strongly indicated, lateral longitudinal sulci present or absent. Elytra broad, transverse, truncate at bases and apices; each elytron with two distinct basal foveae; sutural striae complete, discal striae absent or distinct. Abdomen with tergite 1 (IV) twice length of

tergite 2 (V). Tergite 1 (IV) with complete or incomplete inner marginal carinae, outer marginal carinae complete, discal carinae short. Aedeagus with large and round basal capsule; basoventral projection prominent.

Composition: The genus contains two species (including the new species described here) distributed in southern China (Hainan) and Thailand (Loei, Nan, Chiang Mai).

Cerochusa gesinae Yin & Kleeberg, sp. nov.
(Figs 1-2)

Type locality: Doi Suthep National Park, Chiang Mai, Thailand.

Type material: Holotype; ♂; THAILAND, 'North-Thailand, west of Chiang Mai, Doi Suthep National Park, Nov. 2019, Montha Than Waterfall, N18°49'01.6", E98°55'32.7" (695 m), 07.11.2019, leg. A. Kleeberg' (MNB).



Fig 1. Dorsal habitus of *Cerochusa gesinae* male. Scale bar: 0.5 mm.

Diagnosis: Male body length 2.5 mm. Vertex with Y-shaped sulcus; frontal-clypeal carina distinct. Pronotum with incomplete lateral longitudinal carinae. Discal striae of elytra strongly curved and carinate; posterior margin with dense long setae. Inner marginal carinae of tergite 1 (IV) oblique, extending to apical 2/3 of tergal length. Apices of tibiae with bunch of long setae. Aedeagus with broad and flat median and dorsal lobes; parameres fused to form membranous plate. Female unknown.

Description: Male. Body (Fig. 1A) length 2.52 mm (from anterior margin of clypeus to apex of abdomen); reddish brown. Head (Fig. 2A) roundly triangular, transverse, length from anterior margin of clypeus to head base (excluding occipital construction) 0.48 mm, width across eyes 0.61 mm; posterior margin of head notably concave at middle; vertex strongly transverse, with distinct Y-shaped sulcus at middle; frons and clypeus clearly demarcated by carina, anterior margin of frons angulate, pointed at middle. Eyes prominent, each composed of about 65 facets; ocular canthi thick, triangular. Length of antennae 1.03 mm, antennomeres 1 large, antennomeres 2-8 moniliform, antennomeres 9-10 successively wider, antennomeres 11 large and coniform. Pronotum (Fig. 2A) strongly transverse, trapezoidal, length along midline 0.47 mm, maximum width 0.79 mm; lateral margins with large spines near base, posterolateral corners distinctly angulate; median longitudinal sulcus broad, with short median carina at base; discal carinae moderately curved, extending from base to apical 2/5. Elytra (Figs 1A, 2B) broad, truncate both anteriorly and posteriorly, length along suture 0.70 mm, maximum width 0.90 mm; each elytron with two small but distinct basal foveae; sutural striae complete, discal striae strongly curved, carinate along inner margin, extending to apical 1/4; posterior margin with row of dense setae pointed posteriorly. Abdomen broadest at tergite 1 (IV), length along midline 0.81 mm, maximum width 0.80 mm; tergite 1 (IV) twice as long as tergite 2 (V), discal carinae short and slightly oblique; inner marginal carinae (Fig. 2B) oblique, extending to apical 1/3 of tergal length; tergites 2 (V) and 3 (VI) subequal in length, tergite 4 (VII) slightly longer than tergite 3. Sternite 7 (IX) membranous and paired. Legs short and robust, apices of tibiae with bunch of long setae. Aedeagus (Fig. 2C-E) moderately sclerotized, length 0.34 mm; basal capsule large and round; median lobe broad, truncate at apex; dorsal lobe flat, apically rounded and membranous; parameres fused, forming broad membranous ventral plate. Female. Unknown.

Distribution: Thailand (Chiang Mai).

Etymology: The new specific epithet is dedicated to Gesine Kleeberg, wife of the second author, for her unselfish support to Andreas Kleeberg's entomological work.



Fig. 2. Morphology of *Cerochusa gesinae* male. (A) Head dorsum and pronotum (B) Right elytron and base of abdomen (C-E) Aedeagus, in dorsal (C), lateral (D), and ventral (E) view. Scale bars: 0.3 mm in A, B; 0.1 mm in C-E.

Key to males

- 1 Head distinctly concave around vertexal foveae; frontal-clypeal carina slightly roundly curved at middle. Pronotum with distinct lateral longitudinal sulci. Elytra lacking discal striae; posterior margin lacking row of dense setae. Legs relatively slenderer; apices of tibiae lacking bunch of long setae. Tergite 1 (IV) with complete inner marginal carinae. Aedeagus with median lobe pointed at apex. (China: Hainan; Thailand: Loei, Nan) *C. cilioceps*
- Head barely concave around vertexal foveae; frontal-clypeal carina pointed at middle. Pronotum lacking lateral longitudinal sulci. Elytra with distinct discal striae; posterior margin with row of dense setae. Legs relatively shorter; apices of tibiae with bunch of long setae. Tergite 1 (IV) with incomplete inner marginal carinae. Aedeagus with median lobe broad at apex. (Thailand: Chiang Mai) *C. gesinae* sp. nov.

Notes: The small beetle was sieved near the upper part of the waterfall from material deposited near the banks, mainly wet leaves. The material obtained through a coarser beetle sieve (8 mm mesh size) was again sieved with a conventional kitchen sieve (2 mm mesh size) after several hours of drying.

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