Stenus esseri nov.sp. – a remarkable new species of Stenus LATREILLE, 1797 from Mindanao, Philippines (Coleoptera, Staphylinidae, Steninae)

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A b s t r a c t : One new species of *Stenus* LATREILLE, 1797 is described: *Stenus esseri* nov.sp. (Mindanao, Philippines). As the new species cannot be assigned to any of the existing Oriental species groups, the new *esseri*-group is established.

K e y w o r d s : Coleoptera, new species, entomology, new species group, Oriental region

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Introduction

The Philippine fauna of *Stenus* LATREILLE, 1797 has not yet been fully researched. To date, only around 100 species are known from this biodiversity hotspot. The fact that around 130 species have been reported alone from Central Europe (PUTHZ 2011), which is far less species-rich than the tropics in general, suggests that there are many more undescribed Philippine *Stenus* species. Despite decades of taxonomic work on the genus *Stenus* from the Philippines (e.g. L. BENICK, 1929; PUTHZ 1974, 1995, 1998, 2013; MAINDA 2020, 2024), interesting new species continue to appear from this archipelago. A particularly remarkable species is described here from the island of Mindanao. In addition, the new species is assigned to a new species group, which will may include further species in the future.

Material and methods

The material mentioned below is deposited in the following collection:

cTM private collection Tobias Mainda, Greifswald, Germany.

The morphological studies were carried out using a stereoscopic microscope (Euromex DZ 1105) and a compound microscope (Euromex BB.1153.PLI). Habitus images were taken using a Canon EOS R camera with a Mitutoyo 10x ELWD Plan Apo objective. The objective was attached to a Carl Zeiss Jena Sonnar 3.5/135 MC as focus lens. Three SN-1 LED segments from Stonemaster were used for illumination (www.stonemaster-onlineshop.de). The stacks were fused and edited using Helicon Focus, Adobe Lightroom

and Photoshop software. The image of the aedeagus was obtained using a Touptek microscope camera (ToupCam 14MP). Image stacks were captured with ToupView Lite (MacOS) and processed using Zerene Stacker.

The following acronyms are used:

BL	.length of body (except mandibles);
DE	.distance between eyes (in middle of eye length)
EL	.maximal length of elytra
EW	.maximal width of elytra
FBL	.length of forebody (head, pronotum, elytra)
HW	.head width
PL	.pronotal length
PW	.pronotal width
SL	sutural length of elvtra.

Results

Description of a new species

Stenus esseri nov.sp.

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T y p e m a t e r i a l : ♂ Holotype: white label "Philippines: Mindanao, Lanao d. Sur, Wao" / red label " ♂ HOLOTYPE, *Stenus esseri* nov. sp., design. Mainda, 2025" (cTM).

D e s c r i p t i o n : Measurements of the holotype: BL: 6.20 mm, DE: 0.51 mm, EL: 1.38 mm, EW: 1.23 mm, FBL: 3.1 mm, HW: 1.08 mm, PL: 1.03 mm, PW: 0.83 mm, SL: 1.10 mm.

Habitus as in Fig. 1. Macropterous; body black, shining, with weak microsculpture and short white pubescence / distinct erect yellowish pubescence on sternites; maxillary palpi, legs, antennae and labrum yellowish.

Head 0.88 times smaller than elytra, median portion of frons about half as wide as lateral portions, indistinctly elevated, not reaching height of inner eye margin. Median portion separated from lateral portions by two inconspicuous lateral furrows. Punctation sparse, diameter of punctures about as large as basal cross-section of antennomere III. Antennae slender, when reflexed protruding posterior pronotal margin.

Pronotum 1.24 times as long as wide; widest in middle; sides towards anterior margin convexly, towards posterior margin concavely narrowed. Punctation sparse, partly coalescent, largest punctures in dorsal middle as large as basal cross-section of antennomere III, interstices mostly as large as diameter of punctures. Legs slender; metatarsomere I as long as combined length of metatarsomeres II–III, tarsomeres II–IV bilobed.

Elytra 1.12 times as long as wide; humeral angles prominent; sides nearly parallel but concavely narrowed to posterior margin. Punctation sparse, not coalescent, punctures about as large as those on pronotum; interstices larger than diameter of punctures, their size about as large as ommatidium at median eye-margin up to middle cross-section of antennomere III.

Abdomen cylindrical; with short pubescence; basal impression of tergites I deep; puncta-

tion fine, interstices much wider than diameter of punctures; tergite VIII with posteromedian patch of dense setae.

Male: Femora dilated, metatibia with tiny subapical tooth. Median portion of sternite III flattened in posterior third, set with dense yellowish setae (III in Figs 2, 4); sternite IV broadly flattened and elevated at posterior margin, ventrally set with dense yellowish setae (IV in Figs 2, 4); sternite V extremely posteriolaterally extended; extended posterolateral portions ventrally set with dense yellowish setae (V in Figs 2, 4); sternite VI distinctly extended posteriorly (less than sternite V), ventrally set with dense yellowish setae (VI in Figs 2, 4); sternite VII with impression in anterior half, posterior half flattened and with middle furrow (VII in Figs 2, 4); sternite VIII with deep emargination in posterior third, set with long erected setae (Fig. 6); sternite IX apicalaterally acute (Fig. 5); tergite X with rounded posterior margin. Median lobe of aedeagus acutely narrowed, internal sac asymmetric; parameres longer than median lobe, tips extended, with 18-19 setae at inner side (Fig. 3).

Female: Unknown.



Figs 1-6: *Stenus esseri* nov.sp.: (1) habitus forebody; (2) sternites III-VII ventrally; (3) aedeagus; (4) sternites III-VII laterally; (5) sternite IX; (6) sternite VIII. Scales: Figs. 1, 4 = 1 mm; Figs 2, 3, 5, 6 = 0.5 mm.

Differential diagnosis: *Stenus esseri* nov.sp. seems to be closely related to *Stenus maquilinganus* BERNHAUER, 1915 from Luzon Island, a species of the *coelogaster* group (PUTHZ 2013). From this species *S. esseri* nov.sp. is best distinguished by distinctly posteriorly elongated sternites V and VI and thinner and longer median lobe of aedeagus with apically narrower, distinctly longer elongated parameres.

E t y m o l o g y : With the choice of the species epithet "*esseri*" (noun, derived from the German surname Esser), I dedicate this remarkable new species to my good friend and entomological mentor Jens Esser (Berlin, Germany), a specialist for Cryptophagidae and connoisseur of almost all Western Palearctic beetle species. In the early 2010s, Jens introduced me to scientific coleopterology, and has been at my side with help and advice ever since. Numerous excursions and research trips took me with him to interesting areas of Germany and Europe and were always an amusing experience. One of his ironic (but clearly true!) quotes will always accompany me on my expeditions: "There is no bad weather, there are only bad collectors!" (On Euboea, Greece, February 2020 in a snow-storm on the way to sift leaf litter).

Proposal to establish the new S. esseri-group

Stenus esseri nov.sp. cannot be assigned to any of the existing Oriental species groups. A close relationship seems to exist to the *coelogaster* group, whose species, however, have a serrated sternite IX. The new group may include other species that have not yet been described or that are currently assigned to other groups. Further studies will have to be carried out in the future. It therefore seems sensible to establish a new species group (which should contain more than one taxon according to the name), even though only one species is currently assigned to it.

The new group is here characterized by the combination of the following characters:

Macropterous species from Mindanao, Philippines, blackish colored; median portion of frons indistinctly elevated; pronotum distinctly longer than wide; elytra longer than wide, humeral angles present; legs slender, tarsomere IV bilobed, metatibia with tiny subapical tooth; abdomen without paratergites; tergite VIII with a posteromedian patch of dense setae; sternite IX acute, with moderately long tooth; sternites III-VI with very conspicuously dense and adjacent pubescence and with distinct posterior extensions of sternites V and VI; aedeagus slender, apical portion of median lobe long acute-angled with ventral keel, parameres very long, apically thinly elongated, pointed, apically without setae.

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Zusammenfassung

Stenus esseri nov.sp. – eine bemerkenswerte neue Art der Gattung Stenus LATREILLE, 1797 von Mindanao, Philippinen (Coleoptera: Staphylinidae, Steninae). Eine neue Art der Gattung Stenus LATREILLE, 1797 wird von der Insel Mindanao, Philippinen beschrieben: Stenus esseri nov.sp. Da die neue Art keiner der bisher bekannten orientalischen Artgruppen zugeordnet werden kann, wird

die Aufstellung der esseri-Gruppe vorgeschlagen, welche mitunter künftig noch weitere Arten umfassen könnte.

References

- BENICK L. (1929): Die *Stenus*-Arten der Philippinen (Col. Staphyl.). Deutsche Entomologische Zeitschrift: 33-64 + 81-112 + 241-277.
- MAINDA T. (2020): Stenus praedator sp. nov. from the Philippines and a new species group in Stenus Latreille, 1797 (Coleoptera; Staphylinidae, Steninae). — Zootaxa 4759 (3): 405-412. doi.org/10.11646/zootaxa.4759.3.6
- MAINDA T. (2024): Review of the *azurescens*-group, with the description of six new brachypterous species of *Stenus* LATREILLE, 1797 from the Philippines (Coleoptera, Staphylinidae, Steninae). Soil Organisms **96** (3): 167-181.
- PUTHZ V. (1974): Beiträge zur Kenntnis der Steninen CXLVII Über einige Steninen von den Philippinen (Staphylinidae, Coleoptera). — Philippia 2: 154-171.
- PUTHZ V. (1995): Beiträge zur Kenntnis der Steninen CCXLIV Zwei neue *Stenus*-Arten von den Philippinen (Staphylinidae, Coleoptera) Philippia 7: 195-199.
- PUTHZ V. (1998): Neue Arten der Gattung Stenus LATREILLE aus der Orientalis, vorwiegend von den Philippinen (Coleoptera: Staphylinidae). — Mitteilungen des internationalen entomologischen Vereins Frankfurt am Main 23: 115-149.
- PUTHZ V. (2011): Gattung Stenus LATREILLE, 1797: pp. 286-317. In: ASSING V. & M. SCHÜLKE: Die Käfer Mitteleuropas, Band 4 (Staphylinidae (exklusive Aleocharinae, Pselaphinae und Scydmaeninae), 2. Auflage. Heidelberg.
- PUTHZ V. (2013): Übersicht über die orientalischen Arten der Gattung *Stenus* LATREILLE 1797 (Coleoptera, Staphylinidae). Linzer biologische Beiträge **45** (2): 1279-1470.

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