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A revision of *Neosclerus* CAMERON IV. Two new species and additional records from Taiwan (Coleoptera: Staphylinidae: Paederinae)

V. ASSING

Abstract: Two micropterous species of *Neosclerus* CAMERON, 1924 from Taiwan (Nantou Hsien) are described and illustrated, *N. brevispinosus* nov.sp. and *N. biaculeatus* nov.sp. Additional records of *N. bifidus* ASSING, 2011 are reported from Taiwan. Including the new species, the genus now includes 31 species and is represented in Taiwan by nine locally endemic species.

Key words: Coleoptera, Staphylinidae, Paederinae, Medonina, *Neosclerus*, Palaearctic region, Taiwan, taxonomy, new species, new records.

Introduction

The medonine genus *Neosclerus* CAMERON, 1924 is distributed in the Oriental region, with some species ranging into the south of the East Palaearctic, and previously included 29 species. The regions with the greatest diversity were Taiwan and southern China, each of them hosting seven species (ASSING 2011, 2013).

Among unidentified Paederinae from the collections of the Museum für Naturkunde der Humboldt-Universität Berlin, nearly 200 micropterous specimens of *Neosclerus* were discovered. An examination of the male sexual characters revealed that they belonged to three species, two of them undescribed.

Material, methods, and measurements

The material referred to in this study is deposited in the following collections:

MNHUB..... Museum für Naturkunde der Humboldt-Universität, Berlin (J. Frisch, J. Willers)
cAss..... author's private collection

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). The image of the forebody was created using a photographing device constructed by Arved Lompe (Nienburg) and CombineZ software. A digital camera (Nikon Coolpix 995) was used for the remaining photographs.

The length of the aedeagus was measured from the apex of the ventral process to the base of the aedeagal capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

Results

Neosclerus bifidus ASSING, 2011

Material examined: Taiwan: 35 exs., Kaohsiung, Tengchih, 1400 m, 29.-30.IV.2001, leg. Sugaya (MNHUB, cAss); 4 exs., same data, but 1.XI.2000 (MNHUB, cAss); 5 exs., same data, but 20.-22.IV.2001 (MNHUB); 14 exs., same data, but 21.-23.IV.2000 (MNHUB, cAss); 6 exs., same data, but 2.XI.2000, leg. Maruyama (MNHUB, cAss); 15 exs., same locality, but 1700 m, 2.-3.IV.2002, leg. Sugaya (MNHUB, cAss); 2 exs., same locality, but 2100 m, 19.IV.2001, leg. Sugaya (MNHUB); 30 exs., same data, but 19.-23.IV.2001 (MNHUB, cAss).

Comment: The above material was found near one of the localities where the type specimens were collected. *Neosclerus bifidus* has been recorded only from Kaohsiung Hsien.

Neosclerus brevispinosus nov.sp. (Figs 1-7)

Type material: Holotype ♂: "Taiwan: Fengchifu, Chiai, 1950 m, 12-13.XI.2000, leg. H. Sugaya / Holotypus ♂ *Neosclerus brevispinosus* sp.n. det. V. Assing 2014" (MNHUB). Paratypes: 2 ♂♂, 1 ♀: same data as holotype (MNHUB, cAss).

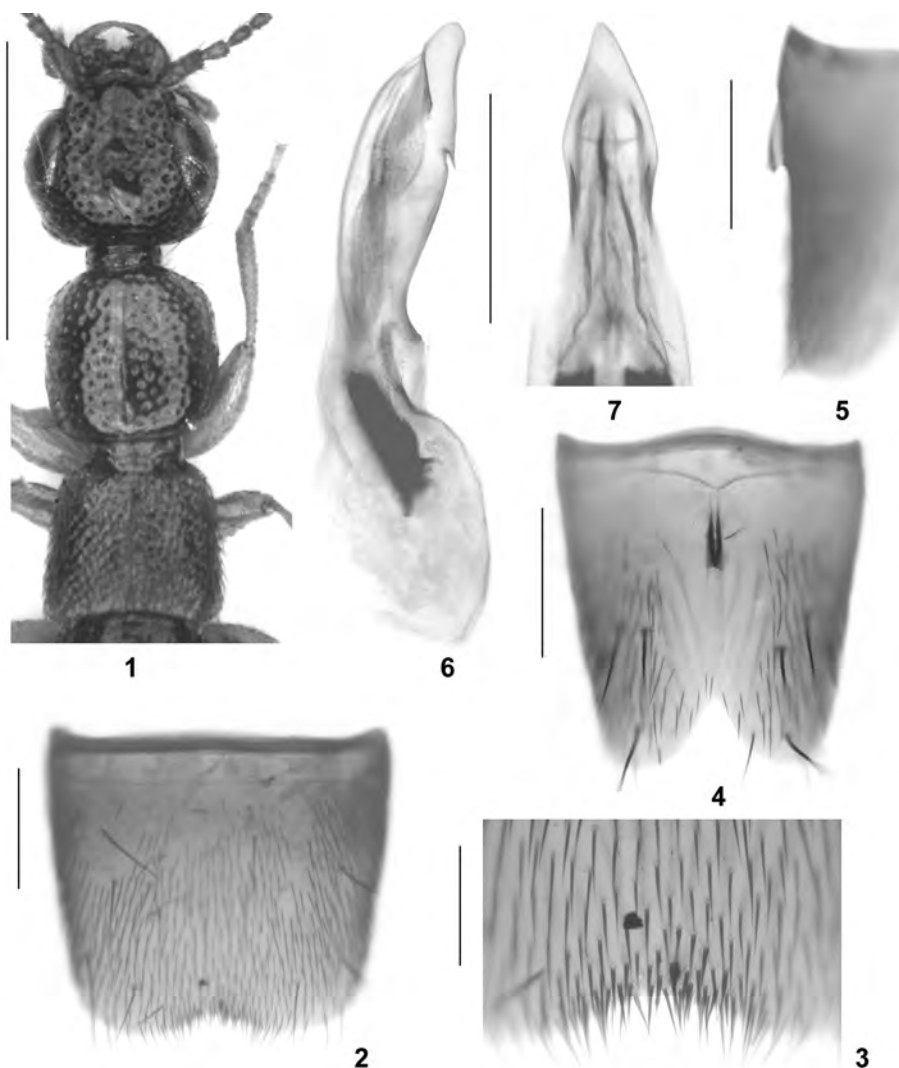
Etymology: The specific epithet (Latin, adjective) refers to the short spine-like process on the male sternite VIII.

Description: Body length 3.1-3.8 mm; length of forebody 1.9-2.0 mm. Indistinctly bicoloured species: head blackish; pronotum and elytra brown; abdomen blackish-brown with paler apex; legs yellowish; antennae reddish. Other external characters (Fig. 1) as in *N. configans* ASSING, 2011 and other micropterous representatives of the *N. hlavaci* group from Taiwan.

♂: sternite VII (Fig. 2) weakly transverse and with dense pubescence, posterior margin weakly concave in the middle, near this concavity with ill-defined cluster of dense and weakly modified short setae (Fig. 3); sternite VIII (Figs 4-5) approximately as long as broad, anteriorly with short median spine-like process, posterior excision moderately deep, moderately broad, and nearly V-shaped; aedeagus (Figs 6-7) approximately 0.55 mm long and with slender ventral process; subapical indenture distinctly closer to apex than to base of ventral process.

Comparative notes: Among the Taiwanese representatives of the *N. hlavaci* group, *N. brevispinosus* is most similar to *N. configans* from Nantou. It differs from this species by the chaetotaxy of the male sternite VII (pubescence near posterior concavity longer and denser), the shorter anterior spine-like process of the male sternite VIII, and by the shape of the ventral process of the aedeagus (*N. configans*: indenture approximately in the middle between apex and base of ventral process). For illustrations of *N. configans* and other Taiwanese *Neosclerus* species see ASSING (2011).

Distribution and bionomics: The type locality is probably identical to Fen-ch'i-hu (23°30'N, 120°41'E) at the western foot of Ali Shan, Chiai Hsien, and situated at an altitude of 1950 m.

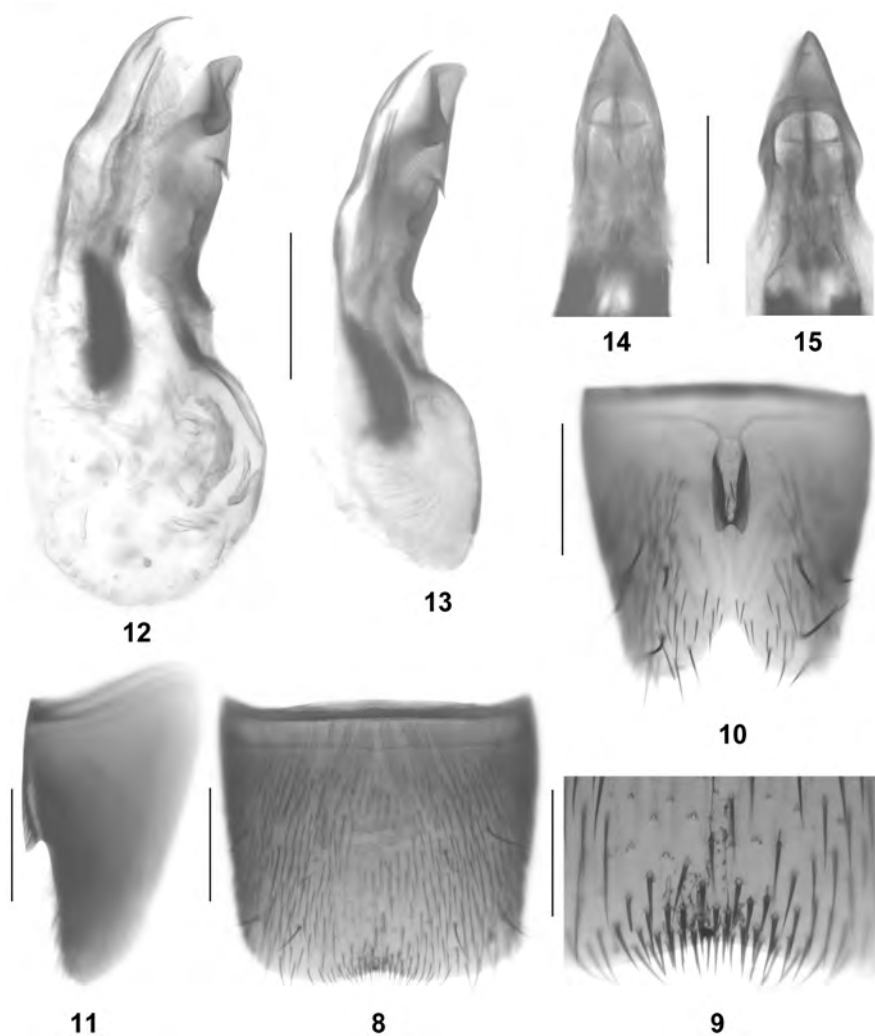


Figs 1-7: *Neosclerus brevispinosus* nov.sp.: (1) forebody; (2) male sternite VII; (3) postero-median portion of male sternite VII; (4) male sternite VIII in ventral view; (5) male sternite VIII in lateral view; (6) aedeagus in lateral view; (7) apical portion of aedeagus in ventral view. Scale bars: 1: 1.0 mm; 2, 4-7: 0.2 mm; 3: 0.1 mm.

***Neosclerus biaculeatus* nov.sp.** (Figs 5-18)

Type material: Holotype ♂: "Taiwan, Nantou, Maimu, litter, 1600 m, 30.iii.2002, leg. Hiroshi Sugaya / Holotypus ♂ *Neosclerus biaculeatus* sp.n. det. V. Assing 2014" (MNHUB). **Paratypes:** 66 exs.: same data as holotype (MNHUB, cAss); 3 exs.: "Taiwan, Nantou, Nanshanchi, 800 m, 27.x.2000, leg. H. Sugaya" (MNHUB, cAss).

Etymology: The specific epithet (Latin, adjective) refers to the pair of needle-shaped structures in the internal sac of the aedeagus.



Figs 8-15: *Neosclerus biaculeatus* nov.sp.: (8) male sternite VII; (9) postero-median portion of male sternite VII; (10) male sternite VIII in ventral view; (11) male sternite VIII in lateral view; (12-13) aedeagus in lateral view (12: Maimu; 13: Nanshanchi); (14-15) apical portion of aedeagus in ventral view (14: Maimu; 15: Nanshanchi). Scale bars: 8, 10-15: 0.2 mm; 9: 0.1 mm.

Description: Body length 3.2-4.3 mm; length of forebody 1.7-2.0 mm. Coloration: head blackish; pronotum brown to blackish-brown; elytra brown to dark-brown, often with the margins dark-reddish; abdomen blackish-brown, usually with reddish-brown apex; legs yellowish; antennae reddish. External characters as in other micropterous representatives of the *N. hlavaci* group from Taiwan.

♂: sternite VII (Fig. 8) weakly transverse and with dense pubescence, posterior margin weakly concave in the middle, near this concavity with ill-defined cluster of dense and weakly modified short setae (Fig. 9); sternite VIII (Figs 10-11) weakly transverse, anteri-

only with pair of relatively broadly separated carinae, median portion extensively without setae, posterior excision moderately deep, moderately broad, and nearly V-shaped; aedeagus (Figs 12-15) approximately 0.7 mm long and with ventral process of distinctive shape; internal sac with pair of long, semi-transparent needle-shaped structures.

Comparative notes: Among the Taiwanese representatives of the *N. hlavaci* group, the secondary sexual characters of *N. biaculeatus* most resemble those of *N. atsushii* SHIBATA, 1992, from which the new species is readily distinguished particularly by the completely different shape of the ventral process of the aedeagus. For illustrations of *N. atsushii* see ASSING (2011).

Distribution and bionomics: The species was found in two localities, Maimu (not identified) and Nanshanchi (= Nan-shan-hsi; 24°00'N, 121°04'E) in Nantou Hsien at altitudes of 800 and 1600 m. At least the specimens from the type locality were collected from leaf litter.

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Zusammenfassung

Zwei brachyptere, lokalendemische Arten der Gattung *Neosclerus* CAMERON, 1924 aus Taiwan (Nantou Hsien) werden beschrieben und abgebildet: *N. brevispinosus* nov.sp. und *N. biaculeatus* nov.sp. Weitere Nachweise von *N. bifidus* ASSING, 2011 werden aus Taiwan gemeldet. Einschließlich der neu beschriebenen Taxa enthält *Neosclerus* derzeit 31 Arten; in Taiwan ist die Gattung mit neun lokalendemischen Arten vertreten.

References

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Author's address:

Dr. Volker ASSING
Gabelsbergerstr. 2
D-30163 Hannover, Germany
E-mail: vassing.hann@t-online.de

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