

Linzer biol. Beitr.	45/2	1549-1559	20.12.2013
---------------------	------	-----------	------------

A revision of *Neosclerus* CAMERON III. Two new species from India and Laos, and additional records (Coleoptera: Staphylinidae: Paederinae)

V. ASSING

A b s t r a c t : Two species of the paederine genus *Neosclerus* CAMERON 1924, *N. macer* nov.sp. (Laos) and *N. obscurus* nov.sp. (NE-India), as well as the previously unknown male sexual characters of *N. assamensis* (CAMERON 1931) are described and illustrated. Additional records of seven species are reported, among them several new country records and the first records of *Neosclerus* from Laos. The distributions of eight species are mapped. The genus now includes 29 species.

K e y w o r d s : Coleoptera, Staphylinidae, Paederinae, Medonina, *Neosclerus*, Oriental region, Palaearctic region, taxonomy, new species, distribution, new records.

Introduction

According to a recent revision (ASSING 2011a, b), the medonine genus *Neosclerus* CAMERON 1924 is distributed in the Oriental region, with some species also ranging into the south of the East Palaearctic, and previously included 27 species. The regions with the highest diversity are southern China and Taiwan (both seven species), as well as northern India and Thailand (five species each). No *Neosclerus* species had been recorded from Laos.

Since the previous contributions, additional material has become available from several public and private collections. An examination of this material yielded two species new to science, as well as the first male of *N. assamensis* (CAMERON 1931) and some records of zoogeographic interest, particularly the first records of the genus from Laos. Including the new taxa described below, the genus now includes 29 species.

Material, methods, and measurements

The material referred to in this study is deposited in the following public institutions and private collections:

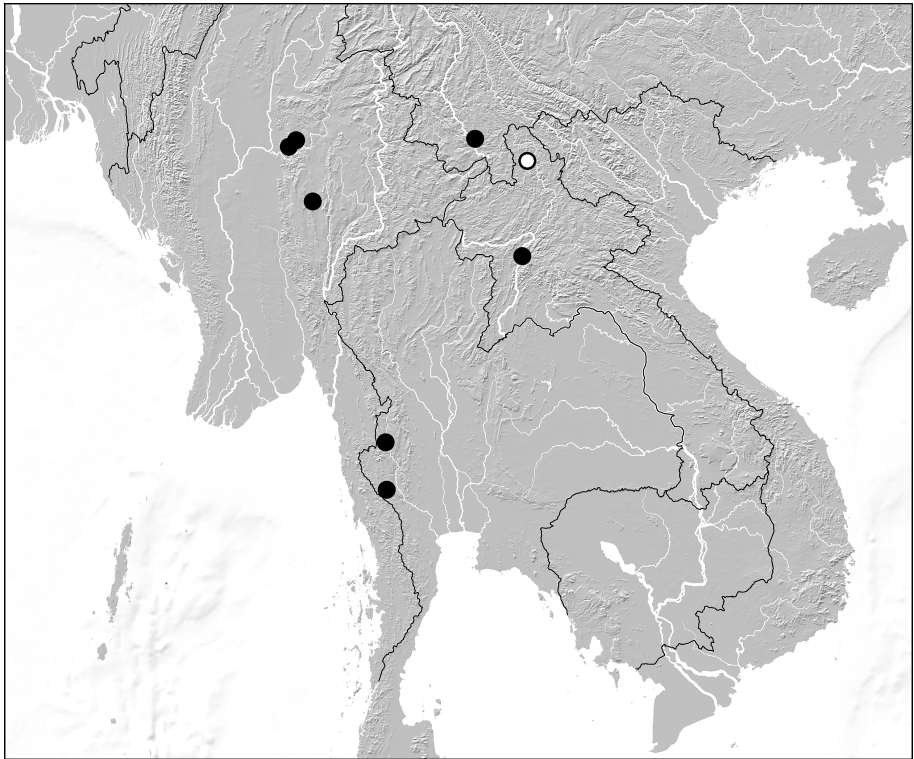
MHNG Muséum d'Histoire Naturelle, Genève (G. Cuccodoro)

NHMB Naturhistorisches Museum Basel (M. Brancucci, M. Geiser)

NME Naturkundemuseum Erfurt (M. Hartmann)
cAss..... author's private collection
cSha..... private collection Alexey Shavrin, Daugavpils
cSme..... private collection Aleš Smetana, Ottawa

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs. The maps were created using MapCreator 2.0 (primap) software.

Body length was measured from the anterior margin of the mandibles (in resting position) to the abdominal apex, the length of the forebody from the anterior margin of the mandibles to the posterior margin of the elytra, head length from the anterior margin of the frons to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the aedeagus 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.



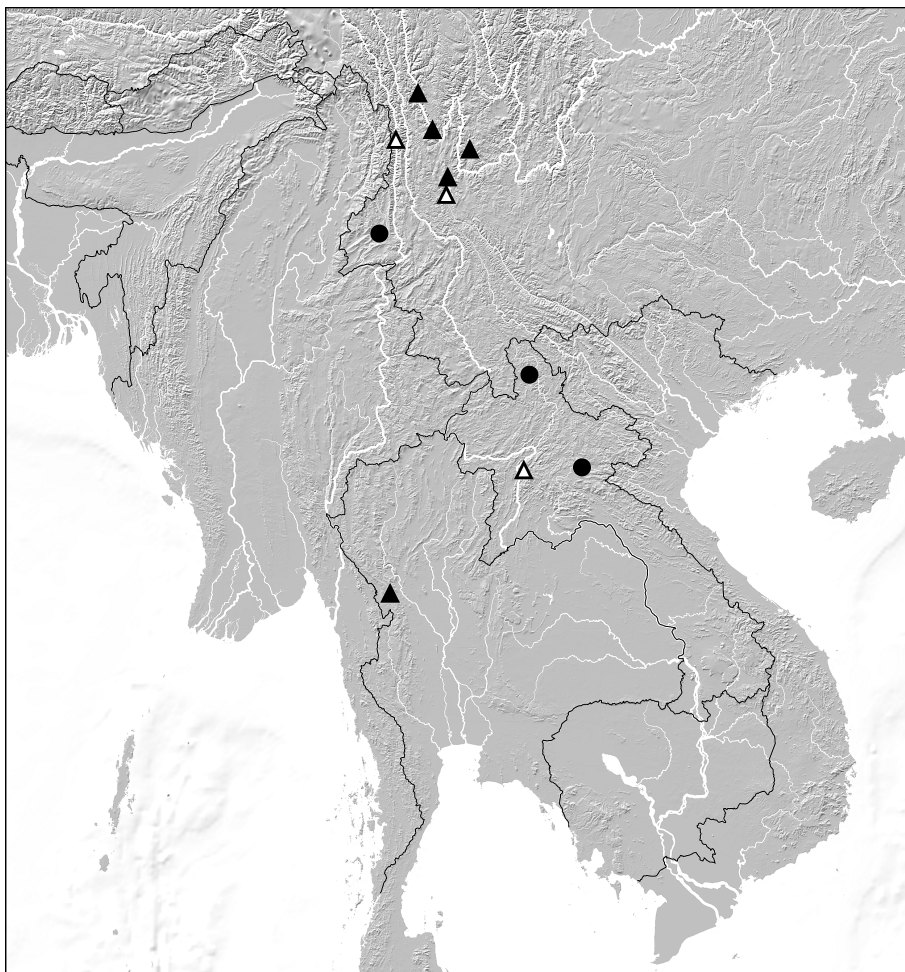
Map 1: Distributions of *Neosclerus macer* nov.sp. (open circle) and *N. barbatulus* ASSING (filled and open circles) in South Asia.

Species description and records

Neosclerus barbatulus ASSING 2011 (Map 1)

Material examined: Laos: 1 ex., Phongsaly province, Phongsaly env., 21°41'N, 102°06'E, ca. 1500 m, 6.-17.V.2004, leg. Kubán (NHMB); 1 ex., Louangphrabang, Thong Khan, 19°35'N, 101°58'E, ca. 750 m, 11.-21.V.2002, leg. Kubán (cAss).

Comment: The previously known range of *N. barbatulus* included Myanmar, the Chinese province Yunnan, and Thailand (ASSING 2011a). The above specimens represent the first records from Laos. The currently known distribution is illustrated in Map 1.



Map 2: Distributions of *Neosclerus praeacutus* ASSING (filled triangles: male-based records; open triangles: female-based records) and *N. schuelkei* ASSING (circles) in South Asia.

***Neosclerus schuelkei* ASSING 2011** (Fig. 8, Map 2)

Material examined: Laos: 6 exs., Phongsaly province, Phongsaly env., 21°41'-42'N, 102°06'-08'E, ca. 1500 m, sifted, 28.V.-20.VI.2003, leg. Pacholátko (NHMB, cAss); 5 exs., Xieng Khouang province, 30 km NE Phonsavan, Phou Sane mountain, 19°37'-38'N, 103°20'E, 1400-1500 m, 10.-30.V.2009, leg. Kraus (NHMB, cAss).

Comment: This species was previously known only from the type locality in the southwest of the Chinese province Yunnan (ASSING 2011a). The aedeagus of one of the males from Laos is illustrated in Fig. 8. The currently known distribution is illustrated in Map 2.

***Neosclerus smetanai* ASSING 2011**

Material examined: Taiwan: 3 ♂♂, Ilan Hsien, Shen-Mi Lake, 24°23'N, 121°44'E, 1110 m, 10.V.1995, leg. Smetana (cSme, cAss)

Comment: The known distribution of this species is confined to Yilan province in northeastern Taiwan (ASSING 2011a).

***Neosclerus cf. praeacutus* ASSING 2011** (Map 2)

Material examined: Laos: 1 ♀, Louangphrabang, Thong Khan, 19°35'N, 101°58'E, ca. 750 m, 11.-21.V.2002, leg. Kubán (cAss).

Comment: Based on external characters, the above female may belong to *N. praeacutus*, but males would be needed to confirm the presence of this species in Laos. The distribution of *N. praeacutus* is illustrated in Map 2.

***Neosclerus macer* nov.sp.** (Figs 1-7, Map 1)

Type material: Holotype ♂: "Laos, Phongsaly prov., 21°41'N, 102°6'E, Phongsaly env., 6.-17.v.2004, ~1500 m, Vít Kubán leg. / Holotypus ♂ *Neosclerus macer* sp.n. det. V. Assing 2011" (NHMB).

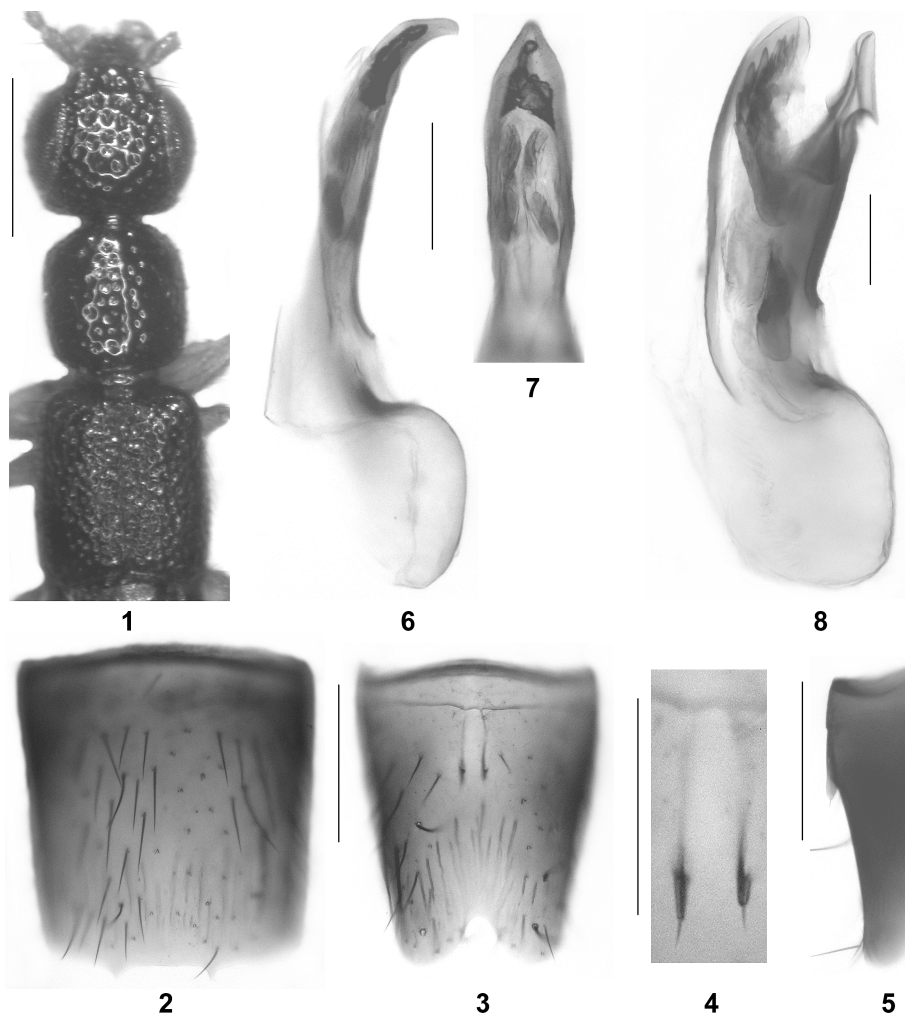
Etymology: The name (Latin, adjective: skinny) refers to the slender habitus, one of the characters distinguishing this species from similar congeners.

Description: Small and slender species, 2.7 mm. Coloration: Head blackish; pronotum blackish-brown; elytra dark-brown; abdomen blackish, with the apex (segments VII-X) dark-brown. Legs and antennae yellowish.

Head moderately transverse, approximately 1.15 times as broad as long; punctuation conspicuously coarse and dense, only slightly sparser in posterior portion of dorsal surface (Fig. 1); interstices without microsculpture and glossy. Eyes large, but not reaching posterior margin of head; postocular portion short, but noticeable.

Pronotum approximately as long as broad and 0.85 times as wide as head; punctuation as coarse and almost as dense as that of head (Fig. 1); midline narrowly impunctate; interstices without microsculpture and glossy.

Elytra approximately as long as pronotum (Fig. 1); punctuation dense, defined, and relatively coarse, but distinctly less so than that of head and pronotum. Hind wings fully developed. Metatarsomere I longer than II, but shorter than the combined length of II and III.



Figs 1-8: *Neosclerus macer* nov.sp. (1-7) and *N. schuelkei* ASSING (8): (1) forebody; (2) male sternite VII; (3) male sternite VIII in ventral view; (4) anterior carinae of male sternite VIII in ventral view; (5) male sternite VIII in lateral view; (6, 8) aedeagus in lateral view; (7) apical portion of aedeagus in ventral view. Scale bars: 1: 0.5 mm; 2-3, 5: 0.2 mm; 4, 6-8: 0.1 mm.

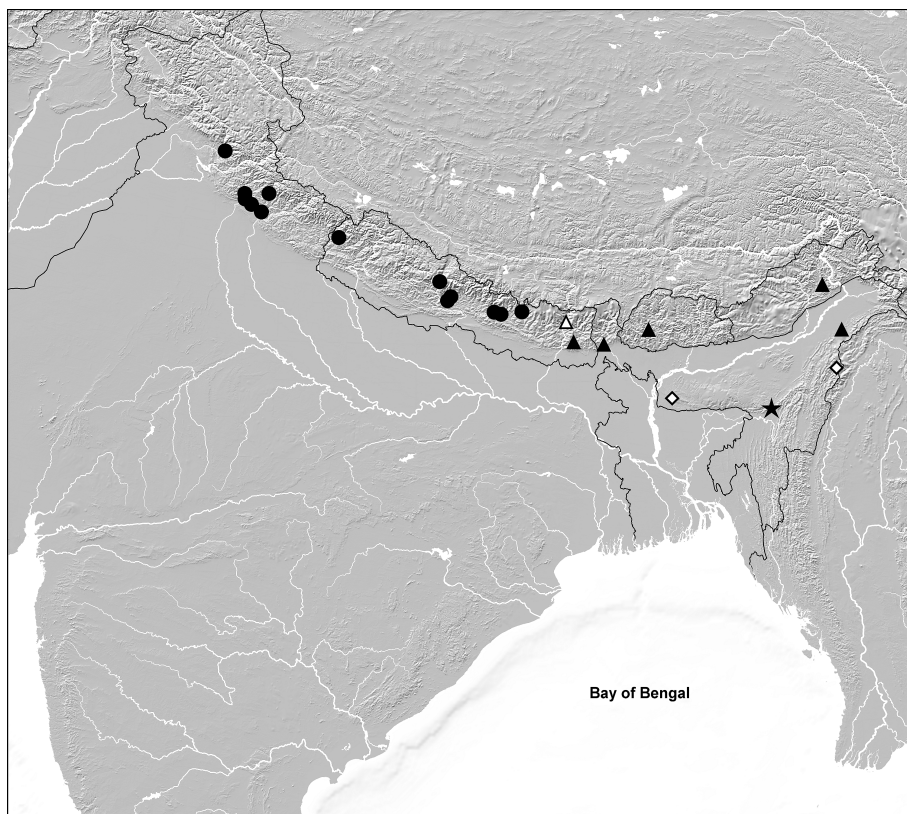
Abdomen distinctly narrower than elytra; posterior margin of tergite VII with palisade fringe.

♂: sternite VII weakly oblong and with sparse pubescence, posterior margin with pair of small tooth-like processes (Fig. 2); sternite VIII oblong, anteriorly with pair of carinae posteriorly extending into a short process with a terminal seta, posterior excision moderately deep (Figs 3-5); aedeagus 0.45 mm long, ventral process subapically bent and apically acute (Figs 6-7).

Comparative notes: Based on the synapomorphically derived shapes of the male sternites VII (bidentate posterior margin) and VIII (anteriorly bicarinate), as well as

on the similar general morphology of the aedeagus, *N. macer* is undoubtedly most closely related to *N. bicarinatus* ASSING 2011 from Vietnam, most likely its sister species. In the key in ASSING (2011a), the new species would key out at couplet 16, together with *N. glaber* ASSING 2011 and *N. bicarinatus*. It is distinguished from both by the shape of the aedeagus, the more slender pronotum, and the distinctly coarser punctuation of the elytra, from *N. glaber* additionally by the modifications of the male sternites VII and VIII, and from *N. bicarinatus* by the coarser and denser punctuation of the head, the uniformly dark coloration of the elytra (*N. bicarinatus*: humeral angles and posterior margin reddish), the more narrowly separated and differently shaped carinae on the male sternite VIII, as well as by the less pronounced posterior processes of the male sternite VII. For illustrations of *N. glaber* and *N. bicarinatus* see ASSING (2011a).

Distribution and bionomics: The type locality is situated in Phong-saly province in northern Laos (Map 1) at an altitude of 1500 m. The fully developed hind wings suggest that *N. macer* may be widespread.



Map 3: Distributions of *Neosclerus dupleseriatius* ASSING (circles), *N. brevipennis* (CAMERON) (filled triangles: male-based records; open triangle: female-based record), *N. assamensis* (CAMERON) (diamonds), and *N. obscurus* nov.sp. (star).

***Neosclerus dupleseriatatus* ASSING 2011 (Map 3)**

Material examined: Nepal: 1♂, Mahakali/Darchula, Chamliya Khola, Ghamna env., 29°41'N, 80°41'E, 800-850 m, 30.V.2005, leg. Weigel (NME). India: 4 exs., Uttarakhand, 14 km E Uttarkashi, 30°45'N, 78°34'E, 1450-1500 m, 10.-12.IV.2012, leg. Shavrin (cSha, cAss); 1♀, Uttarakhand, 15 km SW New Tehri, 30°16'N, 78°22'E, 870 m, 18.-20.IV.2012, leg. Shavrin (cSha).

Comment: This recently described species is rather widespread in the Himalaya, from Himachal Pradesh in the west to Nepal in the east (ASSING 2011a). The currently known distribution is illustrated in Map 3.

***Neosclerus obscurus* nov.sp. (Figs 9-17, Map 3)**

Type material: Holotype ♂: "India: Assam #9d, North Cachar Hills dist., Mt. Borail, Borail Peak-Notun Leikul, 1550 m, 20.x.2005, 25°06'51"N, 93°03'07"E / sifting moist broadleaf litter in mixed forest, Cuccodoro & Marletta / Holotypus ♂ *Neosclerus obscurus* sp.n. det. V. Assing 2013" (MHNG).

Etymology: The name (Latin, adjective: dark) refers to the blackish-brown legs and antennae, one of the characters distinguishing this species from its congeners.

Description: Body length 4.2 mm; length of forebody 2.25 mm. Habitus as in Fig. 9. Coloration: body black; legs and antennae blackish-brown.

Head (Fig. 10) distinctly transverse, nearly 1.2 times as broad as long; punctation coarse and moderately dense; interstices distinct, but narrower than diameter of punctures, without microsculpture. Eyes large, but not reaching posterior margin of head; postocular portion short, but noticeable.

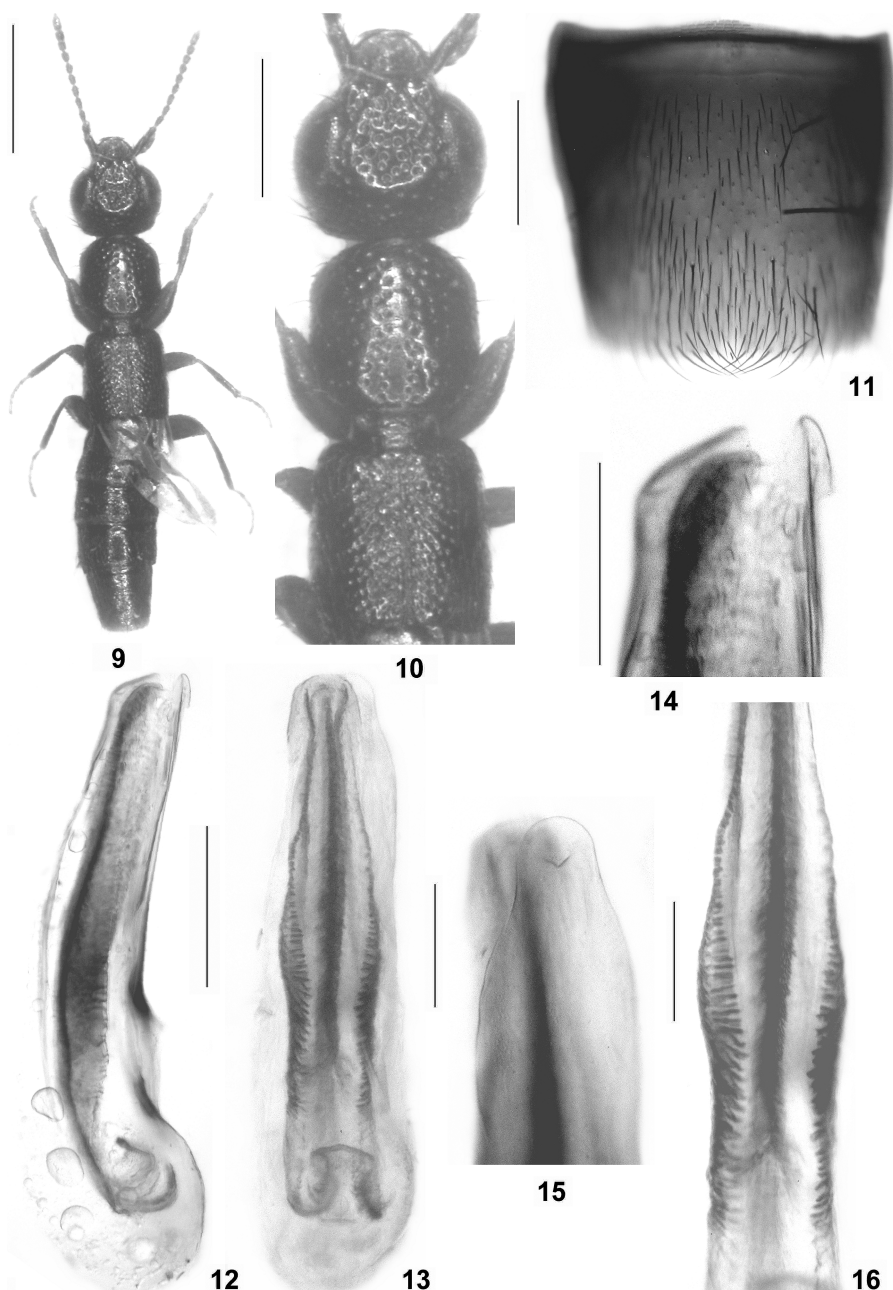
Pronotum (Fig. 10) approximately as long as broad and approximately 0.85 times as wide as head; punctation similar to that of head; impunctate midline of moderate breadth; interstices without microsculpture and glossy.

Elytra (Fig. 10) approximately 0.9 times as long as pronotum; punctation dense, moderately defined, and rather fine. Hind wings fully developed. Metatarsomere I longer than II, but shorter than the combined length of II and III.

Abdomen nearly as broad as elytra; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Fig. 11) weakly transverse and with dense pubescence, posterior margin indistinctly concave in the middle, at posterior margin with row of rather long black marginal setae, these setae directed diagonally postero-mediad in the middle; sternite VIII (Fig. 17) distinctly oblong, posterior excision V-shaped and of moderate size, anterior portion of sternite and pubescence unmodified; aedeagus (Figs 12-15) 0.77 mm long and slender; ventral process long, straight, apically hooked, and weakly sclerotized; internal sac with long series of minute spines (Fig. 16).

Comparative notes: Based on the synapomorphically derived morphology of the aedeagus, *N. obscurus* is closely allied to *N. fortepunctatus* CAMERON 1924, *N. dupleseriatatus*, and *N. barbatus* ASSING 2011. It differs from all of them by the shape of the ventral process of the aedeagus, by the dark colour of the legs and antennae, and additionally as follows:



Figs 9-16: *Neosclerus obscurus* nov.sp.: (9) habitus; (10) forebody; (11) male sternite VII; (12-13) aedeagus in lateral and in ventral view; (14) apical portion of aedeagus in lateral view; (15) apical portion of aedeagus in ventral view; (16) internal structures of aedeagus in ventral view. Scale bars: 9: 1.0 mm; 10: 0.5 mm; 11-13: 0.2 mm; 14-16: 0.1 mm.

from *N. barbatus* by the denser pubescence of the male sternites VII and VIII and by the sparse and less coarse punctation of the head and pronotum;

from *N. dupleseriatu*s by the shorter marginal setae of the male sternite VII and the smaller posterior excision of the male sternite VIII;

from *N. fortrepunctatus* by the less coarse and less dense punctation of the head and pronotum.

For illustrations of the compared species see ASSING (2011a).

Distribution and bionomics: The type locality is situated in Assam, Northeast India (Map 3). The holotype was sifted from moist leaf litter in a mixed forest at an altitude of 1550 m.

***Neosclerus brevipennis* (CAMERON 1943) (Map 3)**

Material examined: India: 1♂, Darjeeling district, Adheri Khola, 27.XII.1980, leg. Bhakta (NHMB).

Comment: The known distribution of *N. brevipennis* includes West Bengal, Assam, and Arunachal Pradesh in northern and northeastern India, as well as Bhutan; female-based records are known also from eastern Nepal (Map 3).

***Neosclerus assamensis* (CAMERON 1931) (Figs 18-21, Map 3)**

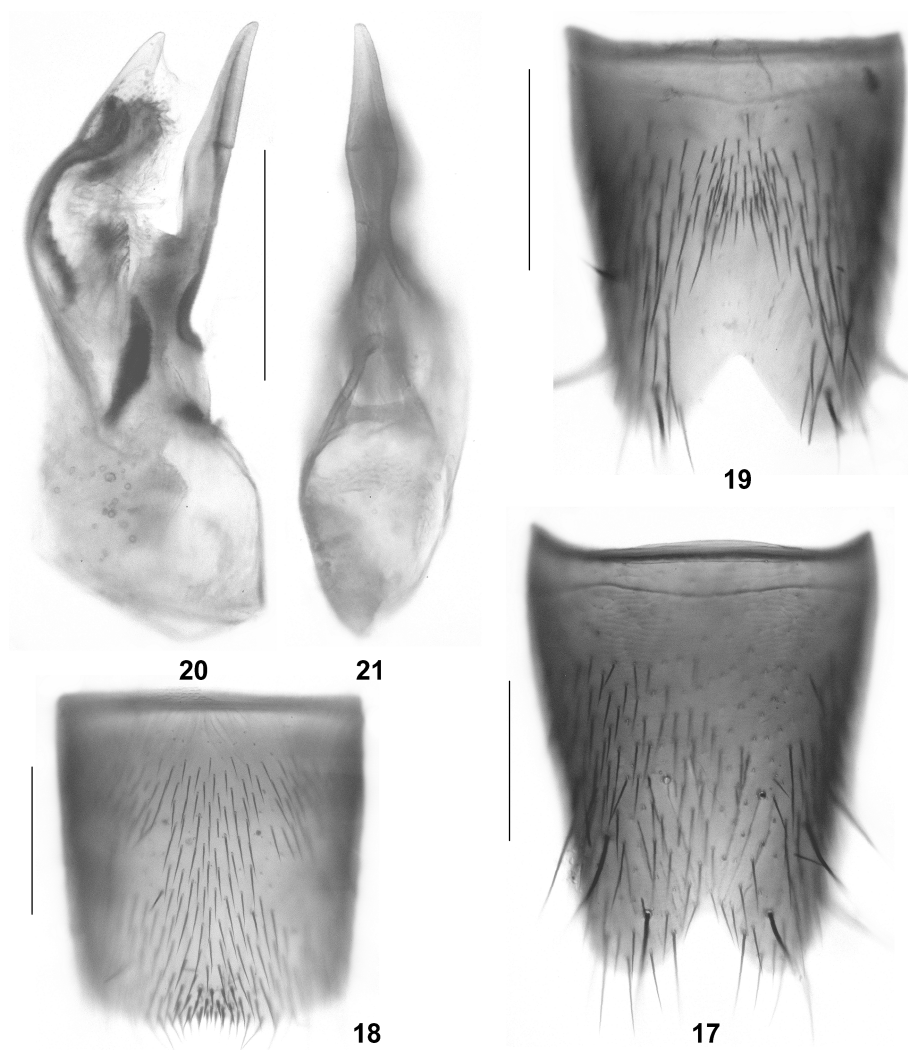
Material examined: India: 1♂, Meghalaya, West Garo Hills district, Mt. Nokrek National Park, 25°30'N, 90°15'E, 1200 m, 17.X.2004, leg. Cuccodoro et al. (MHNG).

Comment: The only previously known specimen is a single female syntype from Assam deposited in the Cameron collection. Except for the slightly darker pronotum, the above male is externally similar to the syntype, suggesting that it is conspecific. For a description and illustrations of the syntype see ASSING (2011a). The previously unknown male sexual characters are as follows:

♂: sternite VII (Fig. 18) as long as broad, posteriorly with cluster of modified short and stout black setae; posterior margin weakly concave in the middle; sternite VIII (Fig. 19) oblong, anteriorly with median cluster of short dark setae, median portion in posterior half without setae, posterior excision large and V-shaped; aedeagus (Figs 20-21) 0.54 mm long, ventral process straight, apically acute, and in the middle with ventral dent best seen in lateral view.

Based on the male sexual characters (shapes and chaetotaxy of sternites VII and VIII; morphology of the aedeagus), *N. assamensis* is most closely related to *N. brevipennis*, from which it differs by the longer elytra, paler coloration of the pronotum and the elytra, the shape and chaetotaxy of the male sternite VII (posterior concavity smaller; presence of cluster of stout black setae posteriorly), the shape and chaetotaxy of the male sternite VIII (posterior excision larger and deeper, anteriorly less strongly elevated and with more distinct cluster of setae), and by the slightly different shape of the aedeagus (ventral process straight in lateral view).

The currently known distribution is illustrated in Map 3.



Figs 17-21: *Neosclerus obscurus* nov.sp. (Fig. 17) and *N. assamensis* (CAMERON) (Figs 18-21): (17, 19) male sternite VIII; (18) male sternite VII; (20-21) aedeagus in lateral and in ventral view. Scale bars: 0.2 mm.

Acknowledgements

I am indebted to the colleagues indicated in the material section for the loan of specimens from the collections under their care. Benedikt Feldmann (Münster) proof-read the manuscript.

Zusammenfassung

Zwei Arten der Paederinengattung *Neosclerus* CAMERON 1924, *N. macer* nov.sp. (Laos) und *N. obscurus* nov.sp. (Nordostindien), sowie die bisher unbekannten männlichen Sexualmerkmale von *N. assamensis* (CAMERON 1931) werden beschrieben und abgebildet. Weitere Nachweise von sieben Arten, darunter mehrere Erstnachweise, werden gemeldet. Die Gattung wird erstmals aus Laos nachgewiesen. Die derzeit bekannten Verbreitungsgebiete von acht Arten werden anhand von Karten illustriert. Einschließlich der neuen Taxa umfasst *Neosclerus* derzeit 29 Arten.

References

- ASSING V. (2011a): A revision of the genus *Neosclerus* CAMERON (Coleoptera: Staphylinidae: Paederinae). — Beiträge zur Entomologie, Keltern **61** (1): 89-148.
- ASSING V. (2011b): A revision of the genus *Neosclerus* CAMERON. Supplement I (Coleoptera: Staphylinidae: Paederinae). — Beiträge zur Entomologie, Keltern **61** (1): 149-153.

Author's address:

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

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2013

Band/Volume: [0045_2](#)

Autor(en)/Author(s): Assing Volker

Artikel/Article: [A revision of Neosclerus CAMERON III. Two new species from India and Laos, and additional records \(Coleoptera: Staphylinidae: Paederinae\) 1549-1559](#)