ACTA ENTOMOLOGICA MUSEI NATIONALIS PRAGAE
Published 30.xii.2014 Volume 54 (supplementum), pp. 277–281 ISSN 0374-1036
http://zoobank.org/urn:lsid:zoobank.org:pub:4E9193CD-2497-41D1-9A68-1E2D23B207B5

A new Afrotropical *Neobarombiella* species from Socotra Island (Coleoptera: Chrysomelidae: Galerucinae)

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Abstract. A new species of *Neobarombiella* Bolz & Wagner, 2012, a galerucine genus recently described from continental sub-Saharan Africa, is here described from Socotra Island, Yemen. *Neobarombiella socotrana* sp. nov. is most similar to *N. nigrocaerulea* (Jacoby, 1897), *N. nigrita* (Jacoby, 1894), *N. punctata* (Laboissière, 1920), and *N. punctatolineata* (Jacoby, 1899), but can be distinguished from these species by both external and genital characters. An updated key to the species of the Afrotropical genus *Neobarombiella* is given.

Key words. Coleoptera, Chrysomelidae, Galerucinae, *Neobarombiella*, new species, taxonomy, Yemen, Socotra

Introduction

Most galerucine species traditionally placed in the genera *Barombia* Jacoby, 1903 and *Barombiella* Laboissière, 1931, are characterized by the following: a trapezoidal pronotum that narrows towards the anterior; posterior angles more or less pointed; third antennomere usually much longer than the second; and a slender, parallel-sided, tube-like median lobe, with a more or less deeply incised apex that lacks distinct endophallic spiculae. Species displaying these characteristics were recently transferred to the newly described genus *Neobarombiella* Bolz & Wagner, 2012. Besides the *Barombia* and *Barombiella* species, some species originally placed in *Monolepta* Chevrolat, 1836 and *Candezea* Chapuis, 1879 were also transferred to the new genus. *Neobarombiella* embraces several newly described species and currently comprises 35 valid species which are distributed across continental sub-Saharan Africa. Recently, expeditions were undertaken to Socotra, an island off the coast of Somalia and part of the Republic of Yemen, by Czech scientists. Material collected revealed a high diversity of endemic Galerucinae (Bezděk 2012), including a new and probably endemic species of *Neobarombiella*, which is described below.

HÁJEK J. & BEZDĚK J. (eds.): Insect biodiversity of the Socotra Archipelago II. *Acta Entomologica Musei Nationalis Pragae* **54 (supplementum):** i–vi + 1–440.

Material and methods

Endophallic structures have been omitted from figures in ventral view. Label data for type material are given verbatim. Examined material is housed in the following collections:

NMPC Národní muzeum, Prague, Czech Republic (Jiří Hájek);
ZFMK Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany (Dirk Ahrens).

Taxonomy

Neobarombiella socotrana sp. nov.

(Figs 1–5)

Type locality. Yemen, Socotra Island, Dixam plateau, Tudhen, 12°33.7′N, 53°59.9′E.
Type material examined. Holotype: ♂, 'YEMEN, Socotra Island, Dixam plateau, Tudhen, shrubland with *Commiphora planifrons*, 18.+22.vi.2012, 12°32.7′N, 53°59.9′E, 1135m' / 'SOCOTRA expedition 2012, J. Bezděk, J. Hájek, V. Hula, P. Kment, I. Malenovský, J. Niedobová & L. Purchart leg.' / 'HOLOTYPE, Neobarombiella socotrana, Bolz & Wagner 2013' / 'AfriGa, specimen ID, 1901, specimen data documented, 9.1.2014' (NMPC). Paratypes: 1 ♂ 2 ♀♀, same data as holotype (2 ♀♀ in NMPC, 1 ♂ in ZFMK).

Description. Body length: 3.4–4.0 mm (mean: 3.7 mm, holotype 3.5 mm) (n = 4).

Colouration. Labrum, labial and maxillary palpi brown or brownish-yellow; antennomeres I–VI (VII) yellow, becoming darker towards apex, following antennomeres brown and also darker towards apex. Head except for brown frontal tubercles, pronotum and elytron metallic green. Legs brownish-yellow or yellow; meso-, metathorax and abdomen entirely dark brown (Fig. 5).

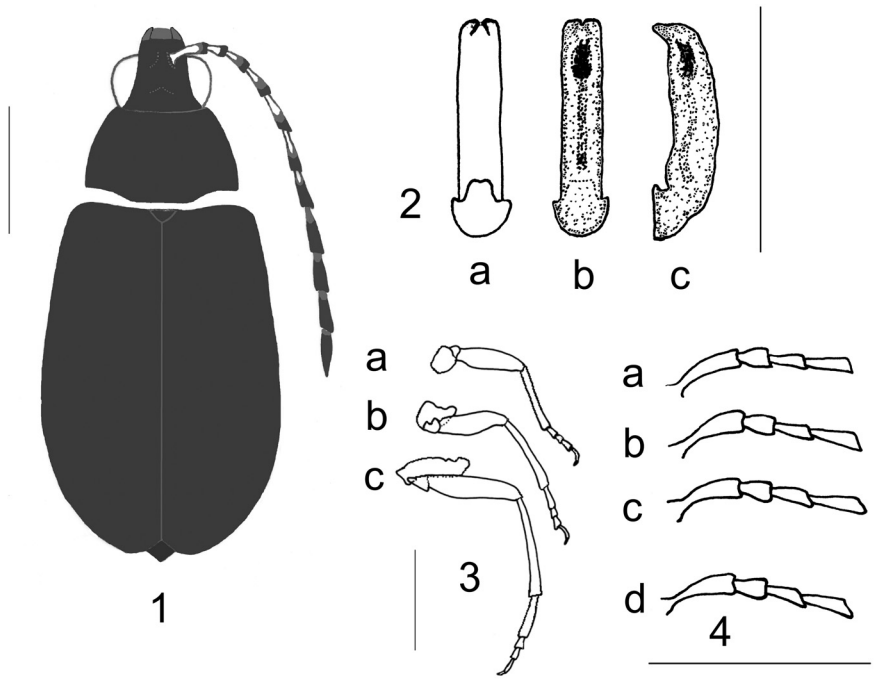
Sculpture and structures. *Head.* Antennomeres short, length ratio of second to third antennomere 0.78–0.86 (mean: 0.84), and length ratio of third to fourth antennomere 0.74–0.82 (mean: 0.78) (Figs 1, 3). Eyes disk-like and widely separated (Fig. 1), ratio of maximum eye width to interocular distance 0.44–0.45 (mean: 0.45).

Thorax. Pronotum coarsely and deeply punctated; trapezoidal; pronotal width 1.2–1.4 mm (mean: 1.25 mm), pronotal length 0.7–0.8 mm (mean: 0.73 mm), and pronotal length to width ratio 0.57–0.59 (mean: 0.58). Elytron coarsely and deeply punctated; elytral length 2.6–2.9 mm (mean: 2.73 mm), elytral width 1.7–2.1 mm (mean: 1.84 mm), and ratio of maximal width of both elytra to length of elytron 0.65–0.71 (mean: 0.67) (Fig. 1). Metatibia less than double the length of basi-metatarsus; length ratio of basi-metatarsus to metatibia 0.40–0.42 (mean: 0.42) (Fig. 4).

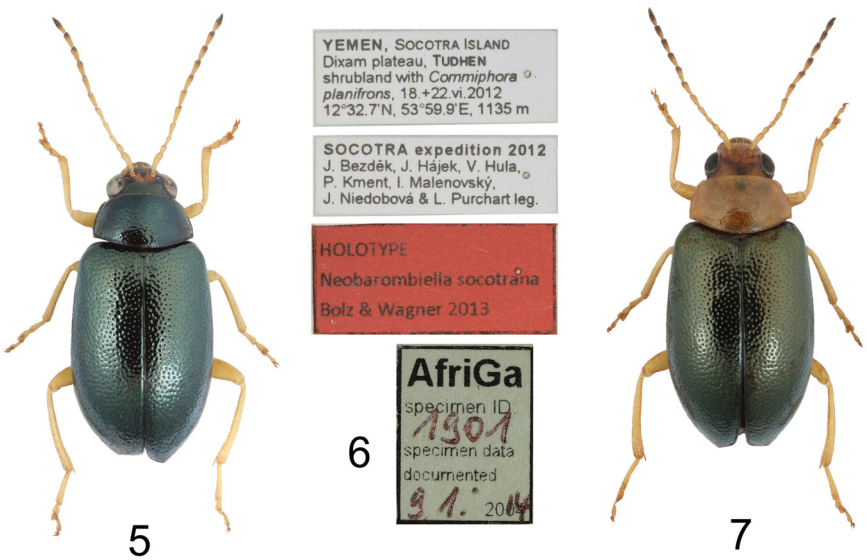
Abdomen. Male genitalia with short, slender, and parallel-sided median lobe; broad apically in dorsal view, and slightly down-curved in lateral view, with small sclerotised ventral projections alongside apical incision in ventral view (Fig. 2a); endophallic brush not protruding, basal orifice rectangular in ventral view; and dull.

Variability. The two females differ from males in colouration: they have head and pronotum completely pale brown (Fig. 7). As many *Neobarombiella* species are extremely variable in colour (cf. Bolz & Wagner 2012), and because only four specimens of the new species are known, we cannot affirm the colour differences to the sexual dimorphism.

Differential diagnosis. *Neobarombiella socotrana* sp. nov. is characterized by deep, irregular punctation of the elytra; elongate trapezoidal pronotum; the length ratio of the second and third antennomeres, each about two-thirds of the following antennomere (Fig. 4), and the distinct shape of the median lobe (Fig. 2).



Figs 1–4. *Neobarombiella socotrana* sp. nov. 1 – habitus, schematic view; 2 – aedeagus (a – ventral view, b – dorsal view, c – lateral view); 3 – legs (a – prothoracic, b – mesothoracic, c – metathoracic); 4 – antennomeres I–IV of three different males (a, b, c) and one female (d). Scale bar = 1 mm.



Figs 5–7. *Neobarombiella socotrana* sp. nov. 5 – habitus of male holotype (3.5 mm); 6 – holotype labels; 7 – habitus of female paratype (3.8 mm).

Tab. 1. Distinctive body measurement ratios of representative *Neobarombiella* species.

	***N. socotrana* sp. nov.**	***N.nigrita*** (Jacoby, 1894)	***N. nigro-caerulea*** (Jacoby, 1897)	***N. punctata*** (Laboissière, 1920)	***N. punctato-lineata*** (Jacoby, 1899)
Total length (mm)	3.4–4.0	3.4–4.6	3.1–4.9	2.4–3.3	3.4–4.8
Ratio of maximal width of both elytra to length of elytron	0.65–0.71	0.72–0.82	0.62–0.72	0.68–0.78	0.59–0.71
Length ratio of pronotal length to width	0.57–0.59	0.53–0.59	0.45–0.53	0.48–0.55	0.45–0.54
Length ratio of second to third antennomere	0.78–0.86	0.63–0.71	0.50–0.65	0.70–0.83	0.56–0.71
Ratio of maximum eye width to intero-cular distance	0.44–0.45	0.43–0.57	0.30–0.42	0.47–0.62	0.56–0.71

Nevertheless, there are some rather similar species of *Neobarombiella* from continental sub-Saharan Africa, namely *N. nigrocaerulea* (Jacoby, 1897), *N. nigrita* (Jacoby, 1894), *N. punctata* (Laboissière, 1920), and *N. punctatolineata* (Jacoby, 1899). Most are discernible by rather short second, and more elongate third, antennomeres (for comparison of the relevant ratios see Tab. 1); in *N. socotrana* sp. nov., the second antennomere is more than two-thirds of the length of the third antennomere. In *N. socotrana* sp. nov., the pronotum is also comparatively long, whilst being shorter in other similar *Neobarombiella* species. *Neobarombiella nigrita* has broader and more convex elytra; *N. punctata* is smaller in size; the eyes of *N. nigrocaerulea* are smaller with wider interocular distance; whereas *N. punctata* has larger eyes and smaller interocular distance. The median lobe of *N. nigrocaerulea* is more conical apically and has a broader incision when compared to the nearly parallel-sided median lobe of *N. socotrana* sp. nov., which has a broad apex and small medial incision.

Etymology. Named after Socotra Island; adjective.

Distribution. So far this species is only known from the type locality: Tudhen, Socotra, Yemen.

Modified key to the species of *Neobarombiella*

The following key is based on data given in the recent revision of *Neobarombiella* (Bolz & Wagner 2012), but has been adapted to accommodate the new species:

4 Pronotum brownish, dark brown, reddish-black, or black, with a slight metallic green lustre; legs brownish-yellow or yellowish-brown; elytron dark brown, brownish-black, or black, with a slight metallic green lustre; coarsely punctated and/or distinctly broad and convex; ratio of maximal width of both elytra to length of elytron 0.68–0.82. .... 4a

– Different set of characters, paler coloration or more slender body shape; ratio of maximal width of both elytra to length of elytron 0.55–0.68. 7

4a Basi-metatarsomere nearly half as long as metatibia (ratio of length of basi-metatarsomere to metatibia 0.44–0.55), apex of median lobe elongate and down-curved in lateral view, and sclerotized; at least one distinguishable pair of pointed tips in ventral view. Continental Africa. 5

– Basi-metatarsomere shorter, less than half as long as metatibia (ratio of length of basi-metatarsomere to metatibia 0.40–0.42), median lobe broad apically, slightly down-curved in lateral view, with small sclerotized ventral projections alongside the apical incision in ventral view, but lacking distinguishable pointed apical tips; and dull. Endemic to Socotra Island. ..... ***N. socotrana* sp. nov.**

Acknowledgements

We wish to express our gratitude to Jan Bezděk (Mendel University, Czech Republic, Brno) for providing us with the specimens of the new species. Thanks are also due to S. Schöler for her assistance with the graphic layout.

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