A new species of Pigeocaulinus Kaszab, 1984 (Coleoptera: Tenebrionidae: Stenochiinae) from Koh Chang Island, southeastern Thailand

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Source: Integrative Systematics: Stuttgart Contributions to Natural History, 6(1) : 47-50

Published By: Stuttgart State Museum of Natural History

URL: https://doi.org/10.18476/2023.900114

RESEARCH ARTICLE

A new species of *Pigeocaulinus* Kaszab, 1984 (Coleoptera: Tenebrionidae: Stenochiinae) from Koh Chang Island, southeastern Thailand

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Abstract

The tenebrionid genus *Pigeocaulinus* Kaszab, 1984 is classified in the subfamily Stenochiinae, tribe Cnodalonini, and was known as monotypic and endemic to Sumatra. New collections on Koh Chang Island in southeastern Thailand yielded a second species, which is described herein as *Pigeocaulinus skalei* **sp. n.**

Keywords: darkling beetles, Oriental Region, Stenochiinae, taxonomy.

Zusammenfassung

Die Tenebrioniden-Gattung *Pigeocaulinus* Kaszab, 1984 ist der Unterfamilie Stenochiinae, Tribus Cnodalonini zugeordnet und war monotypisch und endemisch für Sumatra bekannt. Neue Aufsammlungen auf der Insel Koh Chang in Südost-Thailand ergaben eine zweite Art, die hier als *Pigeocaulinus skalei* **sp. n.** beschrieben wird.

Introduction

The tenebrionid genus *Pigeocaulinus* Kaszab, 1984 is classified in the subfamily Stenochiinae, tribe Cnodalonini, and was listed by Bouchard et al. (2021) as a synonym of *Leprocaulinus* Kaszab, 1982. However, *Leprocaulinus* Kaszab, 1982 is a homonym of *Leprocaulinus* Uvarov, 1940 (Phasmida). Therefore, we consider *Pigeocaulinus* as the valid name of the genus.

So far, *Pigeocaulinus* was known as monotypic and endemic to Sumatra (Indonesia). New collections on Koh Chang Island in southeastern Thailand yielded a second species of the genus, which is described herein as new.

Koh Chang Island is situated opposite the southeastern coast of mainland Thailand, near the border with Cambodia. Therefore, the new finding is far from Sumatra, from where the genus was previously known. When assuming a continuous distribution for *Pigeocaulinus*, then further records might be expected from a wider Oriental distribution area.

The particular morphology of the inner surface of the male anterior tibia found in *Pigeocaulinus*, with an excavation, dense setation, and a tooth or spine, occurs in several tenebrionids belonging to different clades. These characters are probably associated with mating behaviour. An internal spine or tooth on the male protibia has evolved, for example, also in the Oriental genera *Rhopalobates* Fairmaire, 1897 and *Promethis* Pascoe, 1869.

Material and methods

The treated specimens are deposited in the Staatliches Museum für Naturkunde in Stuttgart, Germany (SMNS) and in the collection of André Skale in Gera, Germany (CASG). The designated male holotype and female paratype are provided with printed red labels. The aedeagus of the holotype is mounted with a water-soluble glue on a card pinned together with the specimen. The photographs were taken with a Visionary Digital photography system (LK Imaging System) equipped with a Canon EOS 5DSR digital camera, and were subsequently processed with the Helicon Focus Pro, Adobe Lightroom and Adobe Photoshop CS6 software.

Taxonomy

Pigeocaulinus skalei **sp. n.**
(Figs. 1–2)

Type material

Holotype (♂): S Thailand, Island Koh Chang, 0–200 m, 14–28.VI.2018, leg. A. Skale, SMNS (lacking right hind leg).

Paratype: Same data as for the holotype, 1 ♀, CASG.

[1] Contribution to Tenebrionidae n. 175; for n. 174, see Zootaxa **5926** (2023)

Figs. 1–2. *Pigeocaulinus skalei* **sp. n.**, ♂ holotype, SMNS. **1**. Dorsal view. **2**. Aedeagus. Scale bar: 3.0 mm

Description

Body length 6.5–7.0 mm (Fig. 1). Dorsal and ventral surfaces brown, without metallic lustre, densely and irregularly covered with clavate scales of two types, either white and broader, or brown and narrower. Head covered only with white scales, widest across eyes, g*enae not elevated, with evenly rounded lateral margins,* clypeal suture impressed, clypeus straight, clypeolabral membrane exposed, labrum without scales, but its anterior margin with long, white, acute setae; eyes reniform, frons between the eyes wider than two eye diameters, no subocular furrow; antennae long, surpassing posterior margin of pronotum, 11-segmented, with weakly separated 4-segmented club, antennomeres with acute setae and without scales, antennomere 3 nearly 5x as long as antennomere 2; maxillary apical palpomere triangular; mentum pentagonal, with clavate setae and without an impression. Pronotum quadrate, as long as wide, lateral margins nearly parallel, anterior corners rounded, anterior margin straight, posterior margin slightly sinuate, surface basally with a weak transverse impression; prothoracic hypomera with dense scales as on pronotum. P*rosternal process comparatively wide, with clavate setae.* Scutellum visible, triangular. Elytra elongated, parallel-sided, with punctural rows partly hidden by the white and brown scales, intervals irregularly with small shining tubercles, apex not prolonged, humeral calli weakly humped; e*pipleura gradually narrow and almost reaching sutural angle. Hind wings present. V*entrites uniformly with white scales, intersegmental membranes between ventrites 3–5 visible, last ventrite unbeaded and without impressions. Legs covered with narrow scales and acute setae; all femora without teeth or angles; tibiae externally without a carina, male pro- and mesotibiae each internally with a distinct acute spine at distal third; tarsomeres of male not broader than those of female. Aedeagus with strongly bent basale, about 3x as long as apicale, apicale broadened, lanceolate, with narrow basal part (Fig. 2).

Diagnosis

Pigeocaulinus skalei **sp. n.** can be separated from *P. krikkeni* (Kaszab, 1982) by the broader scales of the integument, by numerous tiny tubercles on the elytral intervals, hidden by the scales (few large and prominent tubercles in *P. krikkeni*), and in particular by the broad, lanceolate aedeagal apicale (much narrower in *P. krikkeni*).

Etymology

Named in honour of André Skale (Gera, Germany), collector of the type series.

Pigeocaulinus krikkeni (Kaszab, 1982)

Leprocaulinus krikkeni Kaszab, 1982 (Kaszab 1982: 76).
Pigeocaulinus sumatranus Kaszab, 1984 (Kaszab 1984: 389).
Leprocaulinus sumatranus (Kaszab, 1982 [sic!]) (Masumoto 2003).

Remarks

No new material examined. A nomenclatural discussion and figures of the dorsal habitus and aedeagus were provided by Schawaller et al. (2013). Distribution: Sumatra.

Acknowledgements

We cordially thank André Skale (Gera, Germany) for entrusting us with the examination of his newly collected tenebrionids, and for the generous gift of the holotype to SMNS. Two referees and the editor Daniel Whitmore kindly revised the manuscript.

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ZooBank registration: https://zoobank.org/References/D6EA1D56-30E6-479C-ABFC-2652DCBFF97B

Manuscript received: 05.IV.2023; accepted: 07.VI.2023.