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A new species of *Euxestoxenus* Arrow (Coleoptera: Euxestidae) from Thailand

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A new species of *Euxestoxenus* Arrow (Coleoptera: Euxestidae) from Thailand

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Abstract. A **new species** of *Euxestoxenus* Arrow (Coleoptera: Euxestidae), *E. thomasi* Ślipiński, is described from northern Thailand. The species differs from all Oriental and most of African species of *Euxestoxenus* by a 10-segmented antenna and glabrous, polished dorsum.

Key words. Taxonomy, new species, termitophile, myrmecophile.

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Introduction

Euxestidae is a small and poorly known family of Coccinelloidea that currently includes 11 genera and about 70 species distributed mostly in the Old-World tropics and subtropics but extending into temperate areas of North America and Australia (Ślipiński 1990). The biology of the Euxestidae is mostly unknown but it appears that all species are fungivores, commonly found in rotten wood, forest litter, in the ant galleries and in the fungus gardens of the fungus growing termites in the genus *Odontotermes* Holmgren (Jiang et al. 2020).

The first species of *Euxestoxenus* was described by G.J. Arrow in the family Erotylidae in the volume of the Fauna of British India (Arrow 1925). The specimens of *E. striatus* Arrow were collected by H.G. Champion in the Northern India (Kumaon, Haldwani District) within the comb of a common termite species *Odontotermes obesus* (Rambur). *Euxestoxenus* was later found (John 1968) to be a senior synonym of two African genera, the common and speciose *Elytrotetrantus* John, 1941 and more obscure and monotypic *Tachyoryctidium* Jeannel and Paulian, 1945. The African taxa have been collected at light, sifted from decaying litter and fruits, from subterranean mammal nests and from ant nests of the genus *Myrmicaria* Saunders. The ant-nest inhabiting species have been put into a subgenus *Anaulakous* John (John 1963) characterised by almost glabrous and irregularly micropunctured elytra.

Interestingly a similar, glabrous *Euxestoxenus* species has been found among the unidentified Euxestidae from Thailand deposited at the Natural History Museum in Geneva. The new species is the second Oriental species of *Euxestoxenus*, different from the Indian species, *E. striatus,* but more similar to the myrmecophilous species from Angola and Democratic Republic of the Congo (John 1964). The species from Thailand was collected by sifting from the "pied d'arbre" [foot of the tree] but the potential association with the ants has not been recorded.

Euxestoxenus is diagnosed by having 8–10 segmented antenna bearing large, asymmetrical 1-segmented club received by concave hypomeron, lightly sculptured elytra and the prosternal process broad and expanded apically (Ślipiński 1990). The taxonomic status of the approximately 60 African species is unclear due to a large number of synonyms created by the late Hans John that remain unrevised.

Material and Methods

The type series of the new species is deposited at the Natural History Museum in Geneva (MHNG), one paratype at the Natural History Museum London (BMNH), and the dissected paratype in the Australian National Insect Collection (ANIC). Dry mounted specimens were relaxed in warm water then cleared in 10% KOH. Structures in open slides in glycerol were photographed with Leitz Diaplan microscope using Leica digital camera. The

habitus image was taken using a Dun Ink BK Lab Plus system, and source images were then aligned and stacked in Helicon Focus.

Results

***Euxestoxenus thomasi* Ślipiński, new species**
(Fig. 1–8)

Diagnosis. This species can be easily separated from the only known Oriental species, *E. striatus* in having 10-segmented antenna and the dorsal surfaces devoid of striae and setae. Of the three African glabrous species, *E. thomasi* is most similar to *E. nudus* John but differs by a shorter and more compact antennal segments, rounded antennal club and strongly flattened and expanded femora and tibiae.

Description. Length 1.2–1.4 mm; body elongate oval (Fig. 1), 1.4–1.5 times longer than wide, moderately convex; colour light brown to dark brown; dorsal surfaces smooth and shiny; vestiture apparently absent, very short hairs barely traceable under 100× magnification. Eyes somewhat reduced, coarsely facetted (Fig 2). Clypeus coarsely punctate and setose; punctures about 0.5 times as large as eye facets and 1 diameter apart; interspaces smooth and shiny. Frons slightly convex; punctures 0.5–0.8 times as large as these on clypeus, 1–2 diameters apart; interspaces smooth and shiny. Antenna 10-segmented (Fig. 3); antennal club small, transverse, diameter at broadest point about 0.3 length of pronotum. Pronotum transverse, length 0.45–0.50 times width, widest at base, weakly narrowing anteriorly; anterior angles blunt; anterior margin arcuate at middle; lateral sides weakly curved, lateral carina smooth with complete but narrow bead entirely visible from above; pronotal base arcuate not distinctly prominent medially, slightly overlapping scutellum; prothoracic hypomeron concave but without delimited cavity (Fig. 6). Disc convex, punctures small, mostly as large as those on frons or slightly smaller, 2–3 diameters apart, interspaces smooth and shiny. Scutellum as broad as long, triangular, glabrous. Elytra about 1.1–1.2 times longer than wide, widest at basal third, jointly rounded apically; margins narrow, invisible at apical fifth from above. Elytron without striae, surfaces with fine irregular punctures (Fig. 4), punctures as large or slightly larger than those on pronotum 1–3 diameters apart; interspaces smooth, shiny. Femora and tibiae broad (Fig. 5, 7). Aedeagus with weakly asymmetrical tegmen and penis with fused basal struts (Fig. 8).

Material examined. Holotype: "Thailand, Chiang Rai, 10 km W Wiang Pa Pao, Ban Huay Ya Sal, 780 m, 28.i.1988, P. Schwendinger" (MHNG). Paratypes; "Lampoon [Lamphun ?], 16.viii.1979, pied arbre, J. Roberts" (4, MHNG; 2, ANIC).

Etymology. The species is named after the late Dr. Michael C. Thomas for his contributions to beetle taxonomy.

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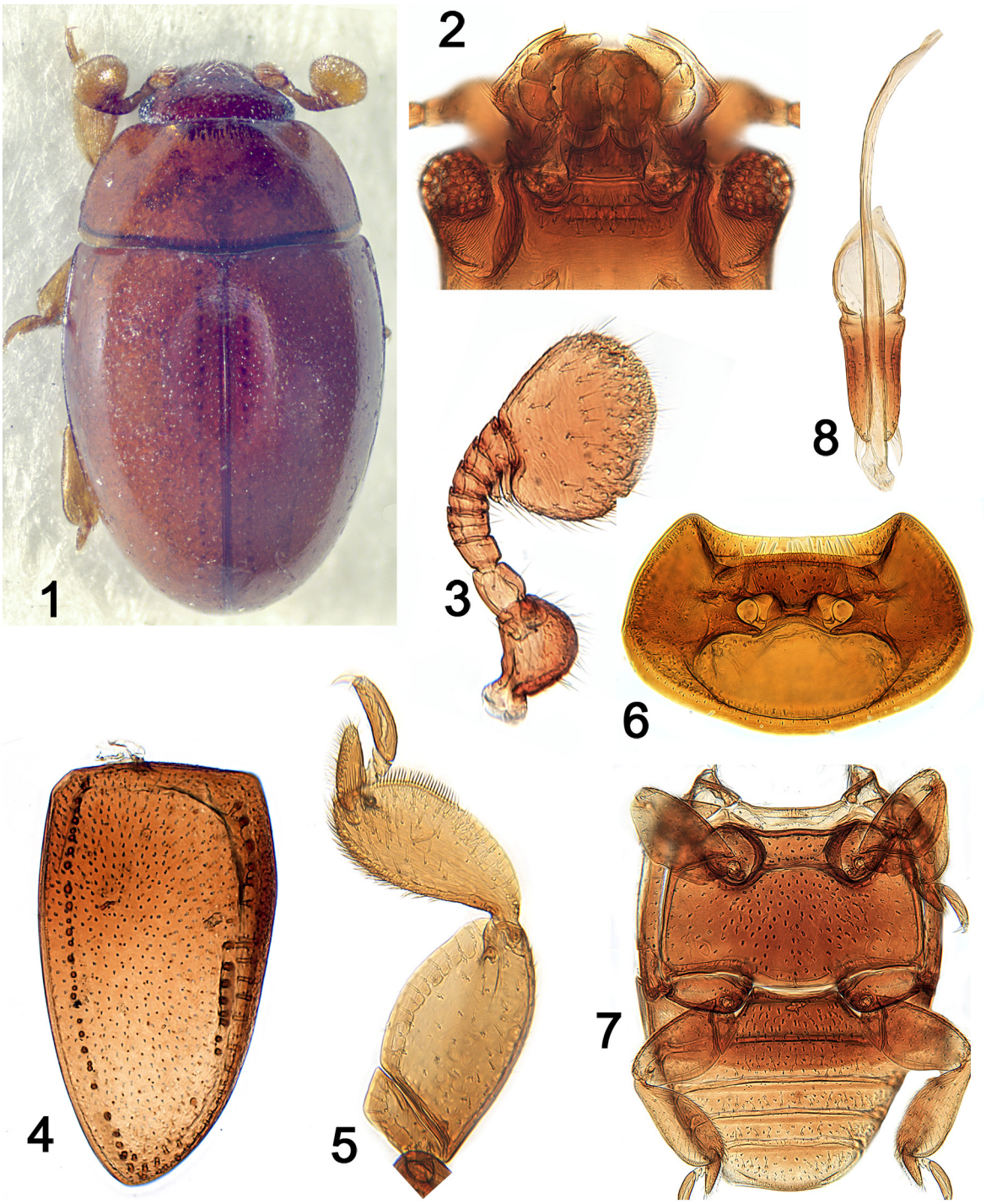

Figures 1–8. *Euxestoxenus thomasi* sp.nov. **1)** Dorsal habitus. **2)** Head ventral. **3)** Antenna. **4)** Elytron. **5)** Anterior leg. **6)** Prothorax ventral. **7)** Pterothorax and abdomen, ventral. **8)** Aedeagus.