Trogoxylyctus australiensis a new genus and species of Trogoxylini Lesne, 1921 (Coleoptera, Bostrichidae, Lyctinae) from Australia

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ABSTRACT. New species representing a new genus of Bostrichidae Trogoxylyctus australiensis gen. nov., sp. nov. is described from Australia. In the general outlook it resembles the African genus Lycthoplites Lesne of the tribe Lycitini, but morphological similarity is in this case evidently a result of convergence. A key to the identification of know Australian representatives of Trogolxylini is given.

1. INTRODUCTION

The tribe Trogoxylini Lesne, 1921 contains 25 known species classified in 5 genera: Tristaria Reitter, 1878, Phylyctus Lesne, 1911, Cephalotoma Lesne, 1911, Lyctopsis Lesne, 1911 and Trogoxylon LeConte, 1862 (Borowski & Węgrzynowicz 2012). Representatives of these genera occur on all continents. Only three species of the Trogoxylini – Tristaria groudleii Reitter, 1878, Trogoxylon punctipenne (Fauvel, 1904) and Trogoxylon ypsilon Lesne, 1937 – have been hitherto known to inhabit Australian Region (Borowski & Węgrzynowicz 2007; Borowski & Węgrzynowicz 2012). Lawrence & Ślipiński (2013) have published the key to the identification of Australian genera of Lyctinae.

In the course of revision of the Bostrichidae in the Natural History Museum (HNHM) in Budapest we found two specimens whose general outlook, and especially structure of pronotum, resembled Lycthoplites armatus Lesne, 1935 – a species of the tribe Lycitini known from tropical Africa. Analysis of morphological characters have shown, however, that the Australian species belongs to the Trogoxylini, even though being so different from all the hitherto known genera that the description of new species and erection of new genus was necessary. This is done below.

2. RESULTS – DIAGNOSIS, DESCRIPTION, REMARKS and KEYS

Trogoxylyctus gen. nov.
Gender: masculine.
Type species: Trogoxylyctus australiensis sp. nov., here designated

2.1. Diagnosis. Strongly swollen femora and distinct pronotal carinae make the attribution of the new genus to Trogolxylini straightforward, but equally straightforward is its distinction from all known representatives of the tribe: prosternal process, broad, flat and conspicuously widened apically in other genera, is here very narrow and pointed. Also pronotal structure (all angles sharp and protruding, two prominent carinulae in anterior part) is distinctive.

2.2. Description. Antennae 11-jointed, with two-jointed club (Fig. 6). Eyes large, strongly convex, distinctly protruding from head outline (Figs. 2, 3). Mandibulae with one sharp preapical denticle. Labrum markedly emarginated at middle (Fig. 3). Epistome poorly separated, distinctly narrower than front, both epistome and lower part of front laterally bordered with almost vertically elevated
lamellar ridges (Fig. 3). All pronotal margins very well marked, entirely visible from above. Angles prominent, sharp. Anterior margin slightly wavyly emarginated, with, to both sides of emargination, pair of upward protruding costulae not reaching middle of pronotum. Anterior part of pronotum, between costulae and lateral margins, with fine and sparse granules (Fig. 4). Scutellum small, transverse, clearly visible. Humeral tubercles well marked. Elytra narrowly ovately elongated, glabrous, inconspicuously punctulated, distinctly rounded apically (Fig. 5). Ventral surface lustrous, almost glabrous. Prosternum glabrous medially, shallowly punctured on sides. Prosternal process strongly narrowed towards apex where it appears as narrow sharp lamella (Fig. 11). Mesosternum finely punctulated and very shortly, inconspicuously pubescent. Metasternum and abdomen almost smooth. First sternite as long as the following two together. Procoxae about as long as wide. Femora strongly swollen at middle, excavated on ventral side to receive tibiae (these excavations are deepest at base of tibiae becoming shallower towards femoral midlength where they vanish). Protibiae slightly widened to apices (Fig. 7), meso- and metatibiae of similar width all along. Protibial apices with broadly triangular thorn on outer margin and curved spur reaching almost to the end of first visible tarsomere (Fig. 9). Ovipositor almost as long as pronotum and elytra together.

_Trogoxylyctus australiensis_ sp. nov. (Figs. 1-7, 11)

Fig. 1. _Trogoxylyctus australiensis_ gen. nov., sp. nov., holotype


Description. Length 2.3-2.9 mm. Body elongated, shining, yellowish-brown, pronotum and head darker reddish-brown (Fig. 1). Antennomeres elongated, slightly pubescent (Fig. 6). Last joint of club ovate, distinctly longer than wide and somewhat longer than penultimate (Fig. 6). Front and narrow epitome join into almost uniform flat surface, separated from one another with only fine inconspicuous line (Fig. 3). Sides of front and epitome bordered with almost vertically elevated lamellar ridges. Front at middle with several fine granules and punctures bearing short setulae (Fig. 3).
Anterior part of pronotum with erect pubescence, posterior almost glabrous (Fig. 4). Costulae running from anterior margin finely crenulated. Pronotal sides uniformly divergent from basal angles anterad, with maximum width at apical angles. Basal angles slightly protruding outwards. Surface not microsculptured, punctuation sparse, shallow, coarser at middle than on sides. Lower margin of pronotum almost straight (Fig. 4). Scutellum subtrapezoidal (Fig. 5). Elytra glabrous, widest at midlength. Punctures very fine and shallow, inconspicuous, tending to form longitudinal rows on sides (Fig. 5). Sides of prosternum densely, shallowly, in posterior part confluentely punctured. Metasternum smooth. Abdominal setulae sparse, very short, recumbent. Protibiae widened towards apices (Fig. 7), more conspicuously pubescent than other pairs.

Figs. 2-7. *Trogoxylyctus australiensis* gen. nov., sp. nov.: (2) head; (3) head, semilateral; (4) pronotum; (5) elytra; (6) antenna; (7) front tibia. All scales = 0.1 mm
2.3. Remarks. As mentioned in the introduction, although in pronotal structure the new species resembles African *Lyctoplites armatus* Lesne, they are not related and belong to different tribes, so the similarity is evidently convergent: living in the same environment (wood) they developed similar morphological features, in this case the specifically formed pronotum facilitating extrication from wood. Interesting is also striking length of ovipositor, which may indicate that *Trogoxylyctus* gen. nov. lays eggs into external cracks of wood, not entering the galleries of other bostrichids as do representatives of related genera like *Cephalotoma* Lesne – also in this respect the new genus resembles those of Lycitini.

2.4. Key to the identification of Australian species of the tribe Trogoxylini

1 Protibial spur conspicuous, large, arcuately curved, reaches at least to apex of second visible tarsomere (Fig. 8). …………………………………………………………………………………...Tristaria grouwellei Reitter

- Protibial spur inconspicuous, small, straight or slightly curved, reaches at most to apex of first visible tarsal joint (Fig. 9). ………………………………………………………………………………………………………2.

2 Prosternal process clearly visible, flattened, narrowed at midlength and distinctly widened to apex (Fig. 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