

ISSN 2226-0773

**HUMANITY SPACE
INTERNATIONAL ALMANAC**

**ГУМАНИТАРНОЕ ПРОСТРАНСТВО
МЕЖДУНАРОДНЫЙ АЛЬМАНАХ**

**Том 8, No 9
Volume 8, No 9**

БИОЛОГИЧЕСКИЕ НАУКИ / BIOLOGICAL SCIENCES

2019

**A new species of a new subgenus of *Toxexutes* Newman, 1840
(Coleoptera, Cerambycidae) from Australia**

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Key words: Coleoptera, Cerambycidae, *Prioninae*, *Aegosomatini*, *Toxexutes*, new subgenus, new species, Australia.

Abstract: *Toxexutes* (*Methylethelius*, **subgen n.**) *kozlovantoni*, **sp. n.** is described from Australia.

Introduction

Genus *Toxexutes* (type species: *Prionus arcuatus* Fabricius, 1787) is known from Tasmania to Philippines. Six species and two subgenera were included up to now. Five species belong to subgenus *Catypnes* Lameere, 1904 (type species: *Catypnes macleayi* Pascoe, 1864). A single species *T.* (s. str.) *arcuatus* (Fabricius, 1787) of the nominative subspecies is known from Tasmania only. *T.* (*Catypnes*) *pascoei* (Lameere, 1904) and *T.* (*Catypnes*) *macleayi* (Pascoe, 1864) are known from continental Australia. The analysis of the new species shows that it is close to *T. arcuatus* and *T. pascoei*, but has a range of differences that show its independence as species and shows necessity to be put in a new subgenus.

Material and methods

The authors have used methods of morphological examination. Comparative analysis is made using stereo microscope Zeiss Stemi 2000-C.

The following abbreviations are used to locate the storage of type specimens:

AT - the private collection of Andrey Yu. Titarenko (Moscow,

Russia)

RBINS - Royal Belgian Institut of Natural Sciences (Belgium, Bruxelles)

Toxeutes (Methylethelius subgen. n.)

Type species. *Toxeutes (Methylethelius) kozlovantoni*, **sp. n.**

Genus *Toxeutes* Newman, 1840 was described on the basis of curved spines of pronotum of males and unarmed tibia. Subgenus *Catypnes* (Lameere, 1904) was based on the absence of pubescence on male abdomen and big primitive mandibles in males of *Catypnes macleayi*.

Description. Eyes of *T. kozlovantoni*, **sp. n.** are almost round with a small uneven recess at the top in male and almost no sign of recess in female; eyes of *T. arcuatus* and *T. pascoei* have big recess in the middle; pronotum in male of *T. pascoei* and in both sexes of *T. arcuatus* with no denticle in the bases; shape of female pronotum in *T. pascoei* and in other species of *T. (Catypnes)* is very different, wide, glossy with small denticles of different shape; but in *T. kozlovantoni*, **sp. n.** pronotum is similar to pronotum of the genus *Rhineimegopsis* Komiya & Drumont, 2001. *T. arcuatus* has 2 long curved denticles on each side of pronotum that makes it highly distinctive. All *T. (Catypnes)* except male of *T. pascoei* have wide glossy head and pronotum, bigger mandibles that show their attribution to one subgenus; 3rd antennal segment in *T. (Methylethelius subgen. n.)* is long, much longer than the 1st segment; 3rd segment in *Toxeutes* (s. str.) is also long, but in all *T. (Catypnes)* 3rd segment is only slightly longer than the 1st segment.

Discussion. The new subgenus shows a number of morphological differences from *Toxeutes* (s.str.) and *T. (Catypnes)*, and so can't be attributed to any of these subgenera. The main character of the new subgenus is the similarity of males and females. While high level of sexual dimorphism is typical for *T. (Catypnes)* and *T. (s.str.)*. It might be that the female of *T. pascoei* stored in the Belgian museum doesn't belong to this specie; if it is so the subgenus of *T. pascoei* should be revised. Until now *T. pascoei* rests in *T. (Catypnes)* as its female

shows same characters as all *T. (Calyptnes)*.

Etymology. The new subgenus is named after music band Methyl Ethel (Australia).

Toxeutes (Methylethelius) kozlovantoni, sp. n.

Figs. 1-2

Description. Male (body length 32 mm) dark-brown, almost black; head small, narrower than pronotum, almost same length as pronotum; mandibles very short; eyes small; distance between eyes approximately 2,5 times wider than eye width with slight impression in the middle; pronotum almost hexagonal, 1,4 times wider than long with uneven median impression; pronotum at the angles and in the middle of the sides has 6 small spines, all spines almost of the same size; elytra long, 2,3 times longer than wide; each elytron has two carinae near the suture and a very small denticle at the sutural apex; humerus is almost rectangular with rounded angle; head and pronotum in dense coarse small punctures; elytra in dense, coarse big punctures; scutellum small round, in rare punctures; whole body including antennae covered by small rare erect golden hairs seen only under magnification; legs thin; antennae narrow, cover 2/3 of the body length; 1st antennal segment slightly wider than other segments, approximately 2,5 times longer than wide; 3rd segment long, as long as 4th and 5th segments together; antennae with small coarse punctation.

Female similar to male (body length: 30 mm); antennae slightly longer than half of the body; pronotum slightly smaller and more rounded than in male; legs slightly narrower; eyes without recess, male's eyes have small recess at the upper front edge; all other characters do not show any differences.

Type material. Holotype, male, Australia, Queensland state, Darling Downs reg., Millmerran env., Western Creek SF, XII.2017 - RBINS; Paratype, female, Australia, Queensland, Girraween NP, I. 2019 - AT.

Differential diagnosis. The holotype has some similarities with *Toxeutes arcuatus* from Tasmania and *T. pascoei* (Figs. 3-8), but is closer to the second species. Female of the new species does not show similarities to females of the both species.

Head is similar to the head of *T. arcuatus*, but differs by

different punctuation, clypeus shape and eye shape; 3rd antennal segment in *T. arcuatus* two times longer than 1st segment and longer than in *T. kozlovantoni*, **sp. n.**

Male of *T. kozlovantoni*, **sp. n.** has narrow head; head of *T. pascoei* is wide, as wide as pronotum, but with about same shape (Figs. 9-10), as well as same shape of clypeus and eyes; head punctuation of *T. kozlovantoni*, **sp. n.** smaller and less deep than in *T. pascoei*; 3rd antennal segment in *T. arcuatus* is two times longer than 1st segment and longer than in *T. kozlovantoni*, **sp. n.**

Mandibles of *T. kozlovantoni*, **sp. n.** small and short; mandibles, in *T. pascoei* slightly bigger and wider.

Pronotum of *T. pascoei* more convex, covered with small punctuation, with 3 glossy callosities; *T. kozlovantoni*, **sp. n.** has coarser and denser punctuation all over its pronotum; pronotal denticles of *T. pascoei* bigger and longer, hind edge without denticles (like in *T. arcuatus*).

Elytra of *T. kozlovantoni*, **sp. n.** with big coarse dense punctuation; in *T. pascoei* elytral punctuation smaller, less dense and becomes smaller to the apex; elytral carinae of *T. kozlovantoni*, **sp. n.** very distinct, in *T. pascoei* - obliterated.

Male pronotum in *T. pascoei* with long golden pubescence becoming denser laterally, pronotum in *T. kozlovantoni*, **sp. n.** evenly covered with relatively short erect dark-golden pubescence in males and females.

Antennae in male of *T. pascoei* long, noticeably longer than half of the the body, antennae of *T. kozlovantoni*, **sp. n.** only a little longer than half of the body.

1st antennal segment of *T. pascoei* short, more widened than in *T. kozlovantoni*, **sp. n.**, with small coarse punctuation; 1st antennal segment in *T. kozlovantoni*, **sp. n.** narrow, a little curved, with smaller, sparser and less deep punctuation, similar to other segments; 3rd antennal segment in *T. pascoei* short, as long as 1st segment; in *T. kozlovantoni*, **sp. n.** 3rd segment long, 1,5 times longer than the 1st.

Antennal segments in male of *T. pascoei* from 3rd to penultimate angular widened to the apex; antennal segments in *T. kozlovantoni*, **sp. n.** almost filiform.

Leg punctuation in *T. kozlovantoni*, **sp. n.** large, coarse and dense, in *T. pascoei* punctuation dense but smaller.

A.S. Zubov, A.Yu. Titarenko

Tibial apex on the inner sides in *T. pascoei* with 2 big black denticles as well as in *T. arcuatus*, *T. kozlovantoni*, **sp. n.**

Mesosternal process in *T. kozlovantoni*, **sp. n.** wide with truncated edge, in *T. pascoei* narrower and rounded.

Femura in *T. pascoei* noticeably wider.

Discussion. The new specie is similar to both *Toxeutes* (s.str.) *arcuatus* and *T. (Catypnes) pascoei*, but doesn't show full coincidence.

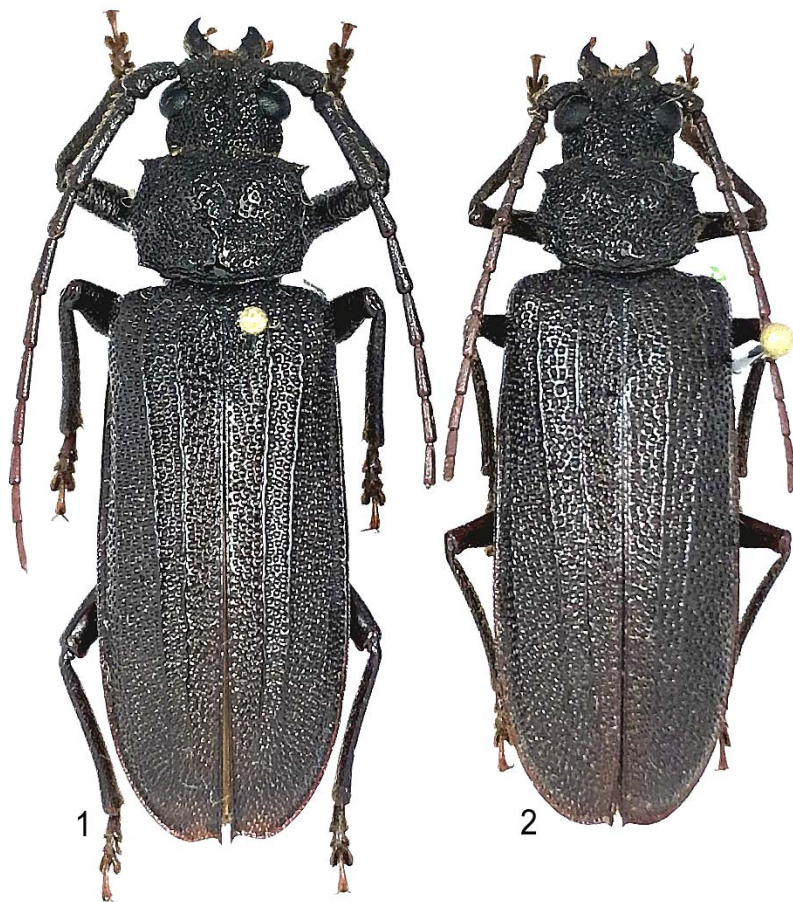
The new species shows evolutionary connection with *Rhineimegopsis rugicollis* (Komiya & Drumont, 2001), so its relation to *Toxeutes* and *Rhineimegopsis* needs further study.

Etymology. The new species is named after Anton Olegovich Kozlov (Moscow, Russia), Russian insect collector, who first suggested the attribution of the specimens to a new species.

Acknowledgements. We thank Alain Drumont (Bruxelles, Belgium) for the help in working with the collection of Belgium Museum and availability of Holotype of *Toxeutes pascoei* for comparision. Also we thank team of Belgium Museum and especially Florence Trus for sending us high quality photos of *T. pascoei* from the museum. We thank Alexey Kovalev (St. Peterersburg, Russia) for invaluable help in improving quality of the work and error indication. We thank Anton Kozlov (Moscow, Russia) for letting us explore specimen he received.

REFERENCES

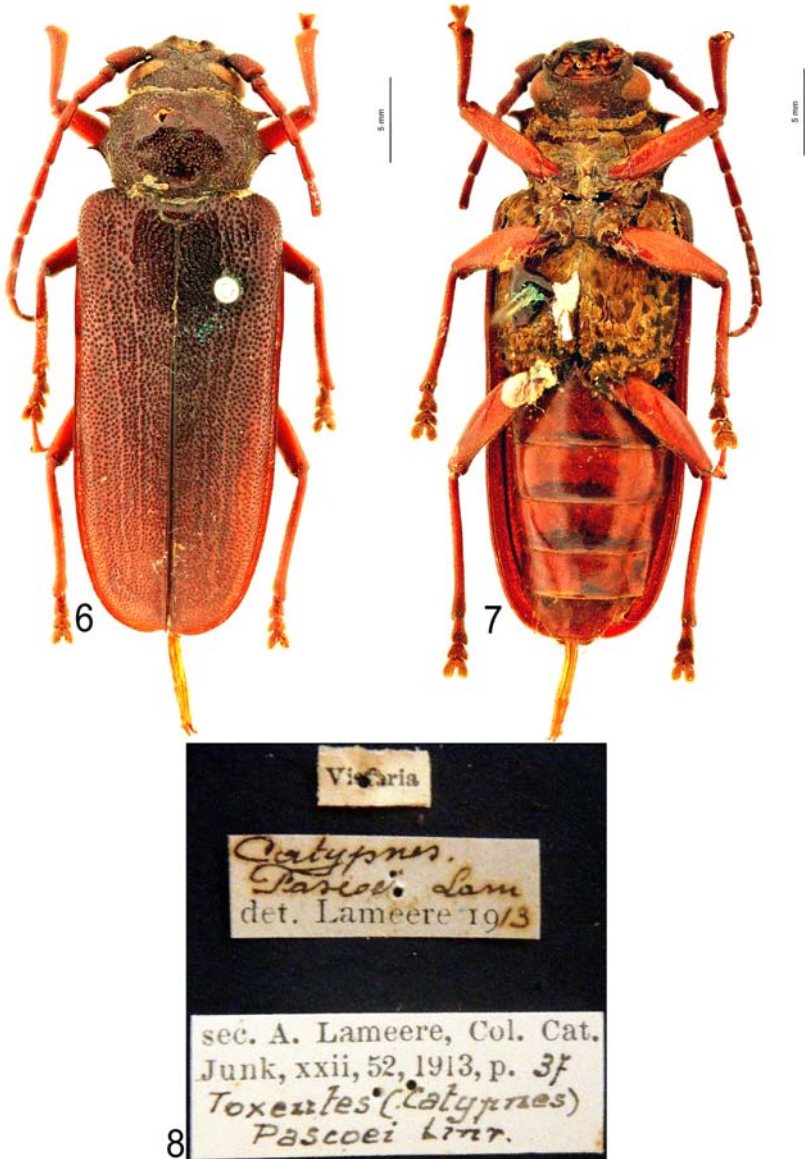
- Delahaye N., Drumont A., Komiya Z., 2016. Description d'une nouvelle espèce de *Toxeutes* de Nouvelle-Calédonie (Coleoptera, Cerambycidae, Prioninae, Aegosomatini). - Les Cahiers Magellanes (NS). 23: 129-138, 6 figs.
- Fabricius J.C. 1787. Mantissa insectorum, sistens eorum species nuper detectas adiectis characteribus genericis, differentiis specificis, emendationibus, observationibus. Tomus I. Hafniae: C. G. Proft, xx + 348 pp.
- Lameere A. 1904. Révision des prionides. Neuvième mémoire. Callipogonines. - Annales de la Société Entomologique de Belgique. 48: 7-78.
- Newman E. 1840. Nonnullorum Cerambyciturum novorum, Novam Hollandiam et Insulam Van Diemen habitantium characteres. - The Annals and Magazine of Natural History, London. (1) 5: 14-21.
- Pascoe F.P. 1864. Descriptions of some new Australian longicornia. - Journal of Entomology. 2 (10) [1863-1866]: 223-245.
- Prioninae of the world. - URL: www.prioninae.eu/taxonomy.
- Species 2000 & ITIS Catalogue of Life, 22nd March 2017. - URL: www.catalogueoflife.org/col.



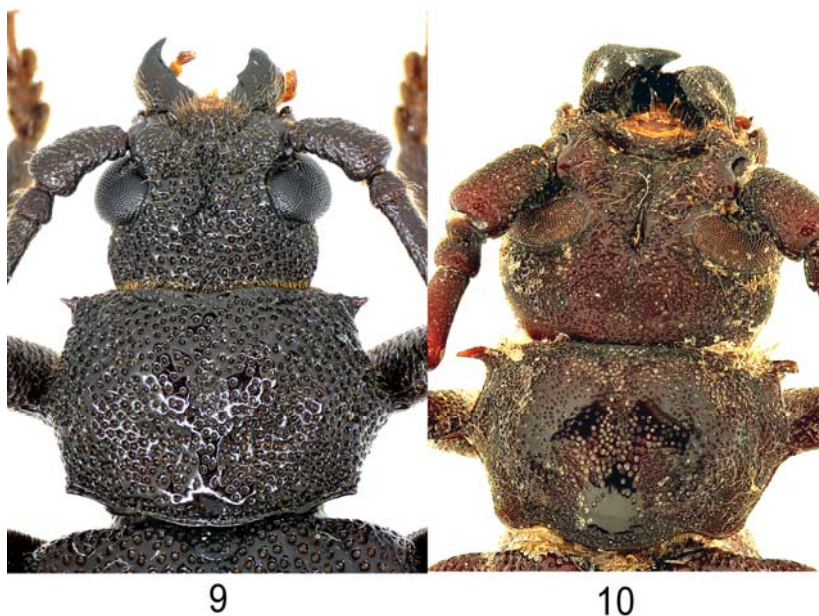
Figs. 1-2. *Toxeutes (Methylethelius, subgen. n.) kozlovantoni, sp. n.*:
1 - Holotype, male, 2 - Paratype, female.



Figs. 3-5. *Toxeutes (Catypnes) pascoei* (Lameere, 1904), holotype, male: 3 - dorsal view, 4 - ventral view, 5 - original labels.



Figs. 6-8. *Toxeutes (Catypnes) pascoei* (Lameere, 1904), female: 6 - dorsal view, 7 - ventral view, 8 - original labels.



Figs. 9-10. *Toxeutes* head and pronotum:

9 - *Toxeutes* (*Methylethelius*, **subgen. n.**) *kozlovantoni*, **sp. n.**, holotype, male;

10 - *Toxeutes* (*Catypnes*) *pascoei* (Lameere, 1904), holotype, male.

Received: 03.12.2019

Accepted: 10.12.2019