

RESEARCH ARTICLE

A new species of the genus *Basiliogeus* Kuschel, 1994 (Insecta: Coleoptera: Nemonychidae) from Malaysia

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A new species, *Basiliogeus kurbatovi* Legalov, sp. n. (Rhinorhynchinae: Rhinorhynchini) from Malaysia (Sabah) is described. The new species differs from *B. dacrycarpi* Kuschel et Riedel, 2011 from New Guinea in the body lacking metallic lustre, shorter rostrum, wider antennal club, yellow-brown femora and wider elytra. A distribution map of the species from the genus *Basiliogeus* is given. It is the first record of the family Nemonychidae from the Sunda Islands and in the Oriental Region.

Keywords: Insecta; Coleoptera; Curculionoidea; Rhinorhynchinae; new species; Kalimantan

Introduction

Nemonychidae is a small relict family of Curculionoidea (Kuschel, 1983; Gratshev, Legalov, 2014; Legalov, 2018). Seventy-five described species of the family were known in the modern fauna (Kuschel, 1954, 1959, 1989, 1993, 1994, 2003; Kuschel, May, 1997; Legalov, 2009, 2017; Kuschel, Leschen, 2011). The diversity centre is located in the southern hemisphere where host plants grow (Kuschel, Leschen, 2011). The maximum diversity of the group was in the Late Jurassic and Early Cretaceous (Martynov, 1926; Arnoldi, 1977; Zherikhin, 1986, 1993; Gratshev, Zherichin, 1995, 1996, 2000; Ren, 1995; Gratshev et al., 1997; Zherichin, Gratshev, 2003, 2004; Liu et al., 2006; Legalov, 2010a, 2010b; 2012, 2015; Oberprieler, Oberprieler, 2012; Davis et al., 2013; Peris et al., 2014; Gratshev, Legalov, 2014; Legalov et al., 2017). The subfamily Rhinorhynchinae includes five tribes with 21 genera and 58 species (Kuschel, Leschen, 2011; Legalov, 2017, 2018). The earliest find was in the Barremian of China (Liu et al., 2006; Davis et al., 2013; Legalov, 2015). The genus *Basiliogeus* consist of six species distributed in Kalimantan, New Guinea and Australia (Figure 1). A new species of this genus from Kalimantan is described in this article.

Materials and Methods

The Holotype is deposited in the Zoological Institute of the Russian Academy of Science (Saint-Petersburg) - ZIN. Photographs were taken using the Leica and Zeiss Stemi 2000-C dissecting stereomicroscopes.

Results and Discussion

Family Nemonychidae

Subfamily Rhinorhynchinae

Tribe Rhinorhynchini

Genus *Basiliogeus* Kuschel, 1994

Basiliogeus kurbatovi Legalov, sp. n. Figures 2-6.

urn:lsid:zoobank.org:act:C08869E6-CE9C-4D21-9E8D-739EE278C436.

Etymology. In honor of the entomologist Sergey Alexandrovich Kurbatov (Moscow).

Description. Female. Body length (without rostrum) 2.2 mm. Rostrum length 0.6 mm. Body brown with sparse, light curved pale hairs, without metallic lustre; apex of rostrum, antennae and legs yellow-brown. Head weakly narrowed behind eye; labrum free, paucisetose, with three pairs of dorsal setae; mandible not exodontous; rostrum deeply saddled at base, long, curved, widened near apex, subequal to length of pronotum, 3.1 times as long as wide at apex and at base, 6.6 times as long as wide in middle, sparsely punctuate; eyes strongly convex and rounded; forehead flat and wide, 1.2 times as wide as rostrum at base, densely punctuate; temples short; vertex convex, punctuate; gular suture double; maxillary palpi quite long, 4-articled; 4th article considerably shorter than 1st antennomere; antennae long, inserted behind middle of rostrum, reaching middle of pronotum; 1st and 2nd antennomeres long-conical; 1st antennomere not reaching eye, 3.0 times as long as wide; 2nd antennomere subequal to 1st antennomere; 3rd-8th antennomeres conical; 3rd antennomere 2.1 times as long as wide, 0.6 times as long as and 0.9 times as narrow as 2nd antennomere; 4th antennomere 1.8 times as long as wide, 0.8 times as long as and subequal in wide to 3rd antennomere; 5th antennomere 1.8 times as long as wide, 1.2 times as long as and 1.2 times as wide as 4th antennomere; 6th antennomere 1.8 times as long as wide, 0.9 times as long as and subequal in wide to 5th antennomere; 7th antennomere 1.5 times as long as wide,

subequal in length and 1.2 times as wide as 6th antennomere; 8th antennomere 1.1 times as long as wide, 0.8 times as long as and 1.1 times as wide as 7th antennomere; club not compact, slightly shorter than funicle, formed from 9th to 11th antennomeres; 9th antennomere 1.1 times as long as wide, 1.9 times as long as and 1.8 times as wide as 8th antennomere; 10th antennomere subequal in length and width, 0.9 times as long as an equal in wide to 9th antennomere; 11th antennomere 1.7 times as long as wide, 1.5 times as long as and 0.9 times as narrow as 10th antennomere; pronotum somewhat bell-shaped, 1.3 times as long as

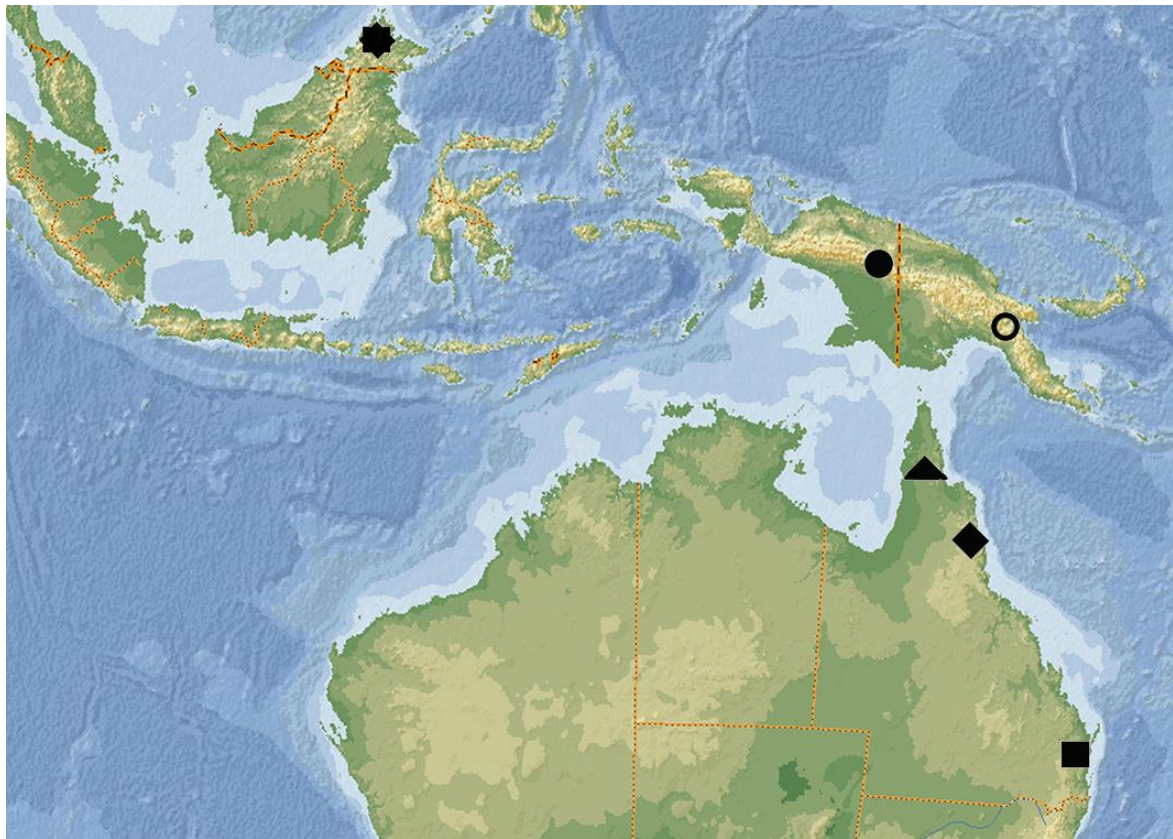


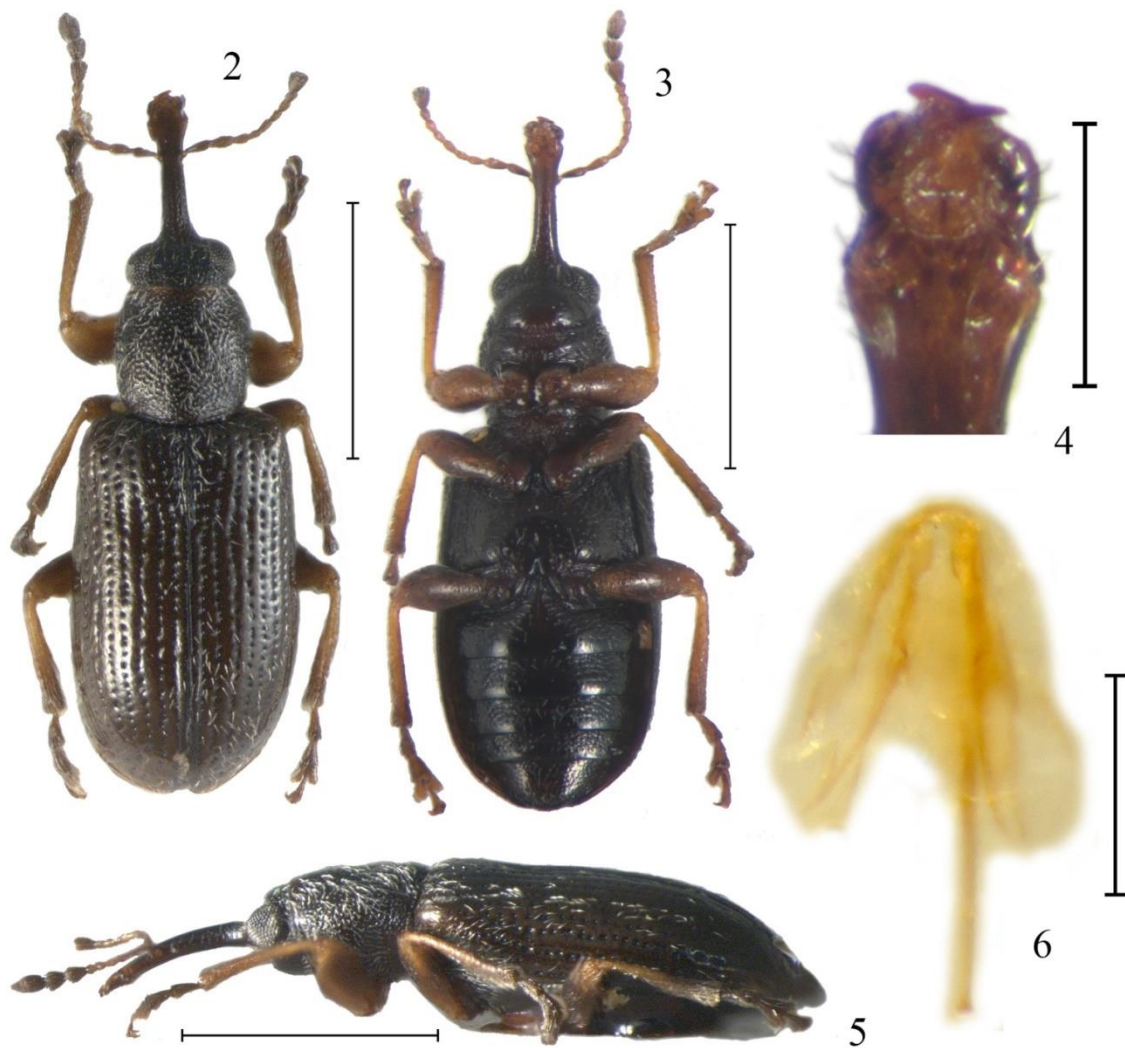
Figure 1. Distribution of the genus *Basiliogeus*. Octagon - *B. kurbatovi* sp. n.; circle - *B. dacrycarpi* Kuschel & Riedel, 2011; ring - *B. sp.*; triangle - *B. striatopunctatus* (Lea, 1926); rhombus - *B. inops* Kuschel, 2011; square - *B. prasinus* Kuschel, 1994.

wide at apex, subequal to wide in middle and 1.2 times as long as wide at base, without lateral carina; sides slightly rounded from apex to base; disk weakly convex, densely punctate; intervals between points approximately equal to or slightly larger than diameter of points; scutellum almost triangular, 0.9 times as long as wide; elytra 1.9 times as long as wide at base, 1.6 times as long as wide in middle, 2.4 times as long as wide at apical fourth, 2.7 times as long as pronotum, with slightly flattened humeri; scutellar striole distinct; elytral striae distinct with quite small points; elytral intervals flattened, 1.0-2.0 times as wide as striae, with row of small points; epipleura distinct; apex of elytra rounded when together; precoxal portion of prosternum slightly elongated, 0.8 times as long as procoxal cavities, 2.3 times as long as postcoxal portion; postcoxal portion 0.3 times as long as procoxal cavities; procoxal cavities contiguous; metanepisternum densely punctate, approximately 5.4 times as long as wide in middle; mesocoxal cavities narrowly separated, closed; metaventrite weakly convex, quite coarsely punctate, 2.2 times as long as length of mesocoxal cavity; mesonotum punctate, with one stridulatory file; abdomen weakly convex; ventrites free; 1st ventrite slightly longer than length of metacoxal cavity; 2nd ventrite 0.9 times as long as length of 1st ventrite; 3rd ventrite 0.8 times as long as length of 2nd ventrite; 4th ventrite 0.8 times as long as length of 3rd ventrite; 5th ventrite 1.5 times as long as length of 4th ventrite; procoxae large, subconical; metacoxae transverse; trochanters small, not separating femora from coxae; femora thickened, lacking teeth. Profemora 3.1 times as long as wide; mesofemora 3.8 times as long as wide; metafemora 4.3 times as long as wide; tibiae almost straight, with two apical spurs, without mucro; protibiae 6.7 times as long as wide in at apex; mesotibiae 6.9 times as long as wide at apex; metatibiae 6.7 times as long as wide at apex; tarsi long, quite narrow. 1st tarsomere long-conical; 2nd tarsomere conical, slightly truncate-emarginate; 3rd tarsomere bilobed; 4th tarsomere small, longer than wide; 5th tarsomere elongated; claws free, strongly divergent, appendiculate; protarsi: 1st tarsomere 3.3 times as long as wide at base; 2nd tarsomere 1.3 times as long as wide at base, 0.7 times as long as and 1.7 times as wide as 1st tarsomere; 3rd tarsomere 0.7 times as long as wide, 0.8 times as long as and 1.5 times as wide as 2nd tarsomere; 5th tarsomere 2.1 times as long as wide at base, 1.2 times as long as and 0.4 times as narrow as 3rd tarsomere; metatarsi: 1st tarsomere 2.4 times as long as wide at base; 2nd tarsomere 1.2 times as long as wide at base, 0.7 times as long as and 1.4 times as wide as 1st tarsomere; 3rd tarsomere 0.6 times as long as wide, 0.8 times as long as and 1.6 times as wide as 2nd tarsomere; 5th tarsomere 3.3 times as long as wide at base, 1.9 times as long as and 0.4 times as narrow as 3rd tarsomere.

Material examined. Holotype, adult female, ZIN, "E Malaysia, Sabah, rd Kota - Kinabalu - Tambutan, km 52, 1600-1800 m, 2-5.VII.2002, Kurbatov & Zimina".

Comparison. The new species is similar to *Basiliogeus dacrycarpi* Kuschel et Riedel, 2011 from New Guinea but differs in the body lacking metallic lustre, shorter rostrum, wider antennal club, yellow-brown femora and wider elytra.

Distribution. Malaysia (Sabah).



Figures 2-6. *Basiliogeus kurbatovi* sp. n. 2 - body, dorsal; 3 - body, ventral; 4 - apex of rostrum, dorsal; 5 - body, lateral; 6 - genitalia. Scale bar 1.0 mm for 1, 2, 5; 0.2 mm for 4, 6.

Discussion and Conclusion

The trophic links between the families Araucariaceae and Podocarpaceae and Nemonychidae are known. The larvae of *Basiliogeus* feed in *Araucaria*, *Agathis*, and *Dacrycarpus* (Kuschel, Leschen, 2011). *Araucaria* is absent on Kalimantan. Five species of *Agathis* and four species of *Dacrycarpus* grow on the island. I suggest the new species can be associated with one of the species of *Agathis* or *Dacrycarpus*. One can expect other new species of the genus *Basiliogeus* to be found on the plants in the region. This is the first record of the family Nemonychidae from the Sunda Islands and in the Oriental Region.

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