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New species of *Kalimantanossus* Yakovlev, 2011 (Lepidoptera, Cossidae: Cossinae) from Laos with the genus catalogue

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Abstract

The article describes *Kalimantanossus kongkeo*, sp. n. (Lepidoptera, Cossidae: Cossinae) distributed in the Central Laos (Xiangkhouang Province). The article has nine illustrations. The world catalog of the genus *Kalimantanossus* Yakovlev, 2011 is presented.

Key words: biodiversity, species richness, Cossioidea, Borneo, Indochina, taxonomy.

Introduction

The genus *Kalimantanossus* Yakovlev, 2011 was established for *Paracossus microgenitalis* Yakovlev, 2004 (by original designation) and until present, it has been considered a monotypic genus and an endemic of the Borneo Island. Examining the materials of the fourth author's collection, we found a male of the genus *Kalimantanossus* from Laos, which expectedly turned to be a species new to science. Its description is given below.

Material and methods

Male genitalia were mounted in Euparal on slides following Lafontaine and Mikkola (1987) and examined with an Olympus SZX16 microscope. The images were taken with the digital camera CMOS 20.7

megapixels and processed using Corel Photo-Paint 2017 software. The morphological terminology follows Kristensen (2003).

Taxonomical part

Description of new species

Kalimantanossus kongkeoi sp. n.

<https://zoobank.org/urn:lsid:zoobank.org:act:7F36A367-702B-4BEF-A803-AD8E77182394>

Figs 1, 6

Type material. Holotype, male, Laos, Xiangkhouang Province, 10 km E Phonsavan, 1130 m, 19.497844 N, 103.294464 E, 14.05–30.06.2019, leg. T. & A. Prozorovs (coll. Günter Müller, Freising; slide Prozorov 2022-0367).

Description. Male (Fig. 1). Length of fore wing 12 mm. Antenna about half of fore wing in length, bipectinate, setae 2.5–3 times longer than antenna stem diameter. Thorax and abdomen densely covered with brown scales. Fore wing light-creamy with poorly expressed brown pattern: poorly noticeable strokes along costal margin, round spot on wing basally, wide light-brown spot along anal margin of wing, poorly expressed wide oblique light-brown band postdiscally, series of tiny light-brown strokes submarginally, border very thin, brown, fringe mottled (brown at veins, creamy between veins). Hind wing light-brown without pattern, fringe mottled (brown at veins, creamy between veins).

Male genitalia (Fig. 6). Uncus tapered, wide, slightly narrowing to apex, apically semicircular; gnathos arms thick, short; gnathos robust, slightly narrowing in medium third, densely covered with tiny spikes; valve with well developed sacculus, two basal thirds of valve sclerotized, apical third of valve lanceolate, membranous; on costal edge of valve on border between medium and apical thirds – small sclerotized crest with uneven edge; transtilla process long, hook-like, poorly narrowing from basal end to apex, apex acute; juxta scaphoid with thin lamellar lateral processes; saccus well developed, wide, semicircular; phallus slightly shorter than valve, of medium thickness, slightly narrowing from basal end to apex, strongly curved in medium third, vesica aperture in dorso-apical position, about half of phallus in length, vesica without cornuti.

Female unknown.

Diagnosis. The new species clearly differs from *K. microgenitalis* in the series of characters:

- the poorly developed brown pattern on the fore wing (in *K. microgenitalis*, the brown portion on costal margin of the fore wing is significantly wider and more contrasting, there are round brown spots on the costal margin of the fore wing, the submarginal reticulated pattern is more pronounced);
- the uncus apically more extended, semicircular (in *K. microgenitalis*, the uncus is slightly more narrow, sharply narrowing to apex, apically acute);
- the phallus strongly curved in medium third (in *K. microgenitalis*, the phallus is almost straight).

Etymology. The species is named after Kongkeo Keomalavong (Phonsavan, Laos), great friend and our host in Laos.

Distribution. Central Laos.

Flight period. June.

Catalogue of the Genus

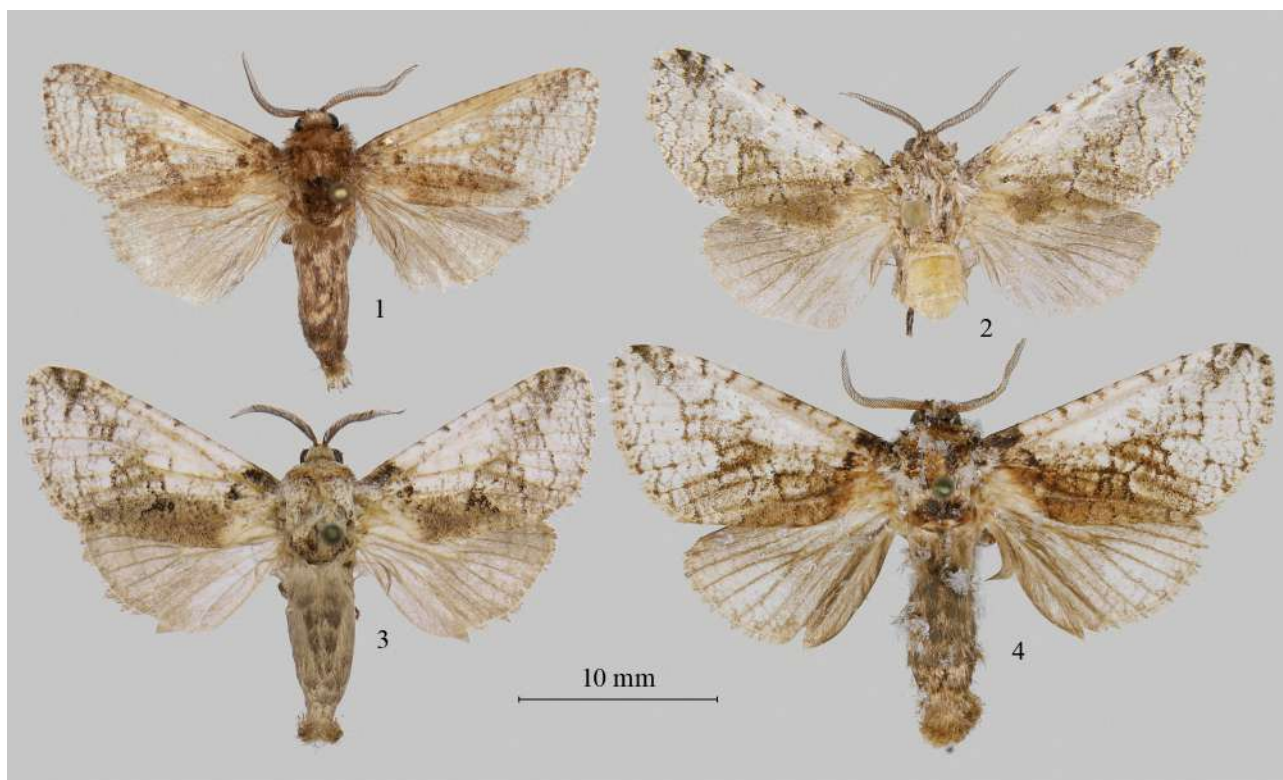
Genus *Kalimantanossus* Yakovlev, 2011

Neue Ent. Nachr. 66: 18.

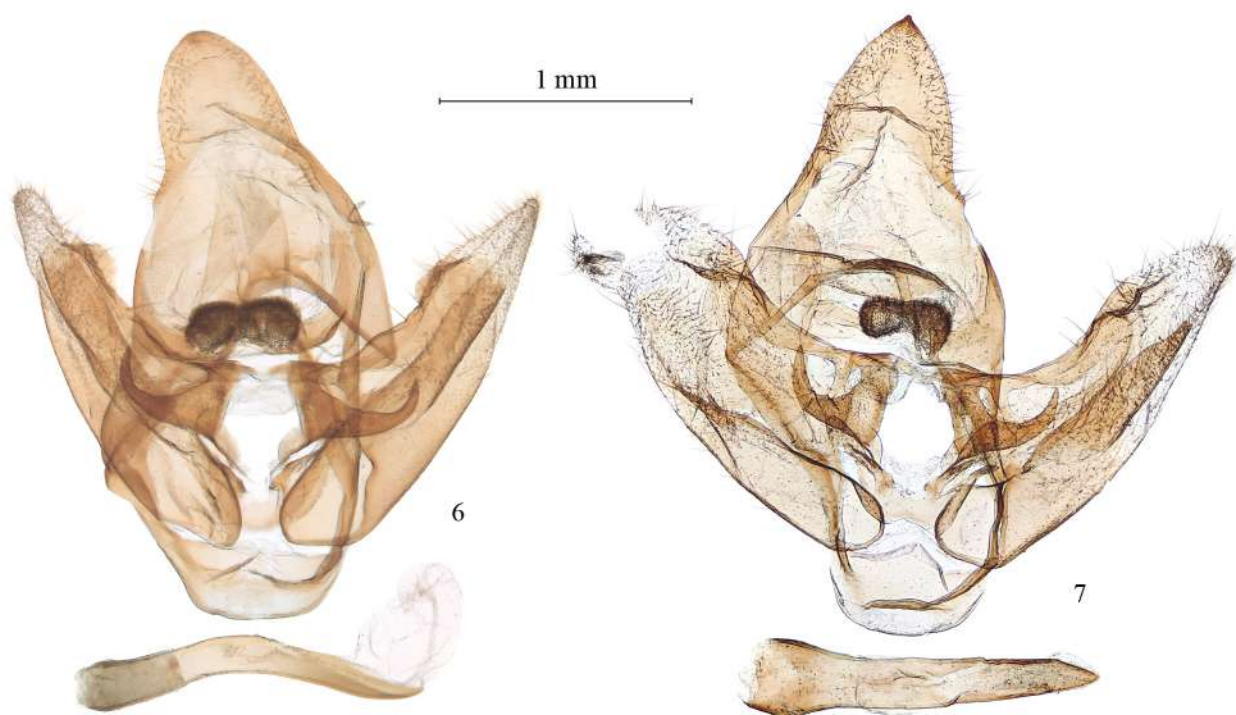
Type species (by original designation) *Paracossus microgenitalis* Yakovlev, 2004

Composition: two species.

Distribution: Southeastern Asia (Borneo Island and Laos).



Figures 1–5. *Kalimantanossus*, adult males: 1. *K. kongkeoi*, holotype (coll. G. Müller, Freising); 2. *K. microgenitalis*, holotype (MWM); 3. *K. microgenitalis*, Borneo, Trus-Madi (MWM); 4. *K. microgenitalis*, Borneo, Trus-Madi (MWM); 5. *K. microgenitalis* in nature, Trus Madi Entomology Camp, Nuluhon Trusmadi Forest Reserve, Keningau District, Sabah, Borneo. Lower montane dipterocarp forest, 1050 m, 5.442964 N / 116.451075 E (photo by Alexey Yakovlev).



Figures 6–7. Male genitalia of *Kalimantanossus*: 6. *K. kongkeo*, holotype (slide Prozorov 2022-0367); 6. *K. microgenitalis*, Borneo, Trus-Madi (MWM; slide Genitalpräparat Heterocera MWM # 33.267). Scale bar = 1 mm.

***Kalimantanossus kongkeo* sp. n.**

Type locality: Laos, Xiangkhouang Province, Phonsavan.

Type material (Holotype, male) in coll. Günter Müller, Freising.

Distribution: Central Laos.

***Kalimantanossus microgenitalis* (Yakovlev, 2004)**

Figs 2–5, 7

Paracossus microgenitalis Yakovlev, 2004, Atalanta 35 (3/4): 374, pl. XIX: 7, text fig. 8–9.

Type locality: Borneo S., Sabah prov., Trus Madi bei, Apin Apin [5°26' N / 116°27' E].

Type material (Holotype, male) in Museum Witt, Munich, Germany, examined.

Distribution: Borneo Island, Sabah Province.

Discussion

Thus, the genus *Kalimantanossus* is distributed much wider than it was previously supposed (Yakovlev 2011, 2015). The type species of the genus (*K. microgenitalis*) is reported only from the northern part of the Borneo Island (Sabah Province, Malaysia). According to the classification of WWF, this territory belongs to the Borneo montane rain forests ecoregion (Olson & Dinerstein 1998). The new species (*K. kongkeo* sp. n.) is indicated for the northern Thailand–Laos moist deciduous forests ecoregion. Additionally, these species are widely spread in various biodiversity hotspots (Myers 1988; Myers et al. 2000): *K. microgenitalis* in the “Sundaland, Indonesia and Nicobar islands of India biodiversity hotspot”; *K. kongkeo* in the “Indo-Burma, Bangladesh, India and Myanmar biodiversity hotspot”.



Figure 8. Habitat of *K. kongkeo*, photo by T. Prozorova.

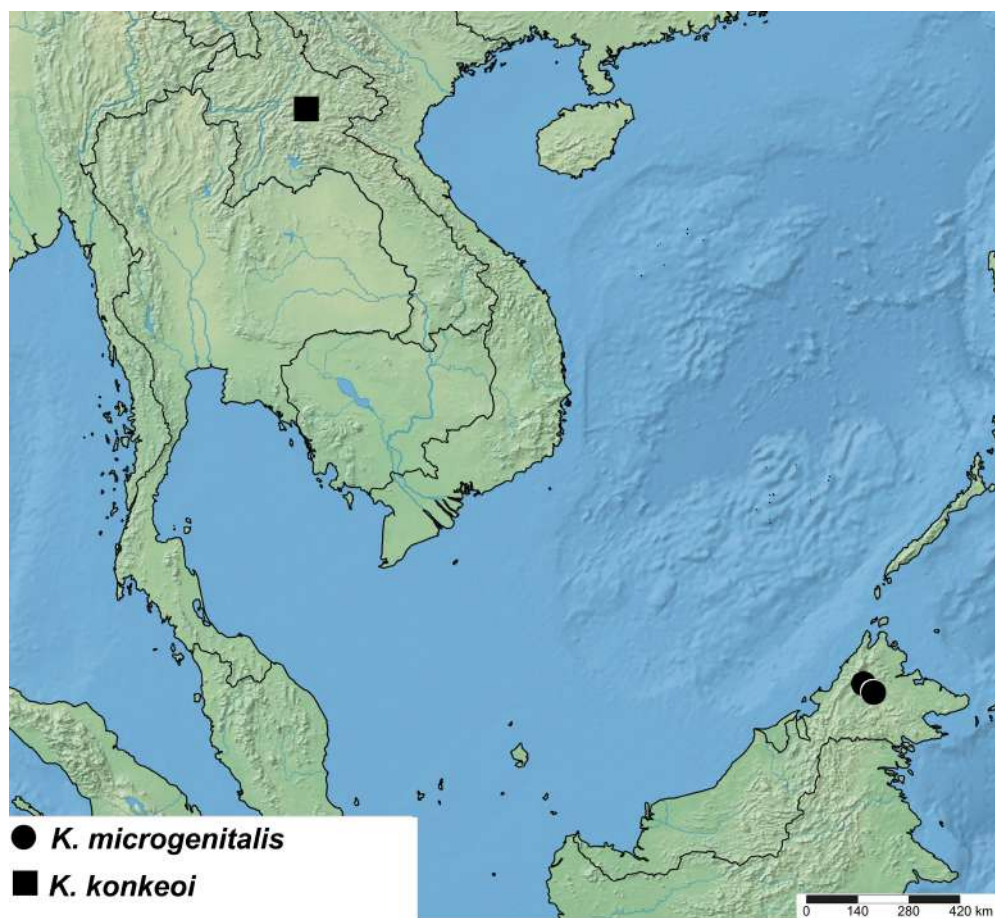


Figure 9. Distributional map of *Kalimantanossus*.

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