

New species of the genus *Carpelimus* Leach, 1819 from Myanmar (Coleoptera: Staphylinidae: Oxytelinae)

Новый вид рода *Carpelimus* Leach, 1819 из Мьянмы (Coleoptera: Staphylinidae: Oxytelinae)

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КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Staphylinidae, Oxytelinae, *Carpelimus*, новый вид, Восточная биогеографическая область, Мьянма.

ABSTRACT: A new species *Carpelimus* (*Bucephalinus*) *kimi*, **sp.n.** is described and illustrated from Myanmar. The new species is closely related to *C. (Bucephalinus) nepalicus* (Coiffait, 1982) and *C. (Bucephalinus) pseudonepalicus* Gildenkov, 2013, which are similar in size and microsculpture of head and pronotum surface, eyes structure, and shape of depression at the base of pronotal disc. It differs from these species in a much darker coloration and a much more distinct and large punctuation of elytra. Reliably differs only by the structure of aedeagus.

РЕЗЮМЕ: Из Мьянмы описан и проиллюстрирован новый вид *Carpelimus* (*Bucephalinus*) *kimi*, **sp.n.** Новый вид близок с *C. (Bucephalinus) nepalicus* (Coiffait, 1982) и *C. (Bucephalinus) pseudonepalicus* Gildenkov, 2013, с которыми сходен размерами и микроскульптурой поверхности головы и переднеспинки, строением глаз, формой вдавления в основании диска переднеспинки. Отличается от этих видов значительно более темной окраской тела и значительно более четкой и крупной пунктировкой поверхности надкрылий. Надёжно отличается только строением эдеагуса.

Introduction

The new species *Carpelimus* (*Bucephalinus*) *kimi* **sp.n.** belongs to a taxonomically complex species group, which currently consists of *C. (Bucephalinus) nepalicus* (Coiffait, 1982) and *C. (Bucephalinus) pseudonepalicus* Gildenkov, 2013. The new species is very similar to them not only in body size, but also in the microsculpture of head and pronotum surface, eyes structure, and the shape of depression at the base of pronotal disc. *C. kimi* **sp.n.** differs from these species in a much darker coloration and a much more distinct and large punctuation of elytra;

it reliably differs from these two species only by the structure of aedeagus; in addition, it differs from *C. pseudonepalicus* by the structure of spermatheca. *C. kimi* **sp.n.** has a noticeable similarity in the microsculpture of body surface and in the structure of parameres with *C. (Trogophloeus) excoquitus* Gildenkov, 2013, which, perhaps, should be further transferred to the subgenus *Bucephalinus*. The article continues the author's series of works on the fauna of the genus *Carpelimus* Leach, 1819 of the Oriental Region [Gildenkov, 2015, 2018a, b, 2019a, b, c, d, e, f, 2020a, b, 2021a, b, 2022, 2023].

This paper is based on the specimens deposited in the following collections: BNHM — Natural History Museum (London, Great Britain); cMG — private collection of M. Gildenkov (Smolensk, Russia); cMSch — private collection of Michael Schülke (Berlin, Germany); HNHM — Hungarian Natural History Museum (Budapest, Hungary); MHNG — Muséum d'Histoire Naturelle Geneva (Switzerland); NHMW — Naturhistorisches Museum Wien (Austria); NKME — Naturkundemuseum Erfurt (Germany); ZIN — Zoological Institute, Russian Academy of Science (St.-Petersburg, Russian); ZMUM — Zoological Museum, Moscow Lomonosov State University (Moscow, Russian). In the present study, standard methods were used for the taxonomic research of insects; the preparations were made on an MBS-10 binocular microscope. The genital preparations were processed using 10% KOH and then fixed in euparal. In the descriptions and diagnoses giving the length to width ratio for the head, pronotum, and elytra, the following standard units were used: 7 standard units = 0.1 mm; thus, 1 standard unit constitutes about 0.0143 mm. Photographs were taken with a Canon EOS 5D Mark III camera and a Canon MP-E 65 mm objective using the extended focus technology.

Carpelimus (Bucephalinus) kimi Gildenkov, **sp.n.**
Figs 1–5.

MATERIAL. Holotype, ♂ “MYANMAR: Spartcity Yangon, 16°47'09"N 96°08'34"E, 10.10.2021, on small wet green moss, leg. Kim A. Yu.” (ZMUM). Paratypes: 1 ♂, 2 ♀♀ “MYANMAR: S part city Yangon, 16°47'09"N 96°08'34"E, 4.09.2021, on small wet green moss, leg. Kim A. Yu.” (cMG); 4 ♂♂, 9 ex. “MYANMAR: S part city Yangon, 16°47'09"N 96°08'34"E, 10.10.2021, on small wet green moss, leg. Kim A. Yu.” (cMG; 2 ex. — ZMUM); 20 ex. “MYANMAR: S part city Yangon, 16°47'09"N 96°08'34"E, 25.05.2022, on small wet green moss, leg. Kim A. Yu.” (cMG; 1 ex. — BNHM; 1 ex. — cMSch; 2 ex. — HNHM; 2 ex. — MHNG; 2 ex. — NHMW; 1 ex. — NKME; 2 ex. — ZIN; 1 ex. — ZMUM).

DESCRIPTION (holotype). Length 1.3 mm. Body completely black; legs, antennae and mouthparts dark brown. Integument slightly shining, body with short, light-coloured setation.

Head transverse, with wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 13:19. Neck constriction well developed. Eyes rather large, convex. Temples well-developed, round, eye diameter in dorsal view about 1.3 times as long as temple length. Head widest across temples (Fig. 1). The surface of the head is evenly shagreened.

Antennae rather short, antennal segment 1 large, conical, about 3 times as long as wide; segment 2 large, conical, about 2 times as long as wide, equal in width to 1st; segment 3 conical, narrow, about 2 times as long as wide; segments 4–6 — about as wide as long; segments 7–10 transverse; segment 11 elongate, conical. Last 3 segments more massive than others and form loose club (Fig. 1).

Pronotum maximum broad after about 2/3 its length from base, then narrowed. Lateral margins smoothly rounded (Fig. 1). Ratio of pronotum length to its maximum width about 16:20. Surface of pronotum evenly shagreened, like head surface. Pronotal disc with well-developed crescent-shaped depression at the base (Fig. 1).



Figs 1–2. *Carpelimus* spp.: 1 — *Carpelimus (Bucephalinus) kimi* **sp.n.**, holotype, male, dorsal view; 2 — *Carpelimus (Bucephalinus) pseudonepalicus* Gildenkov, 2013, paratype, male, dorsal view.

Рис. 1–2. *Carpelimus* spp.: 1 — *Carpelimus (Bucephalinus) kimi* **sp.n.**, голотип, самец, сверху; 2 — *Carpelimus (Bucephalinus) pseudonepalicus* Gildenkov, 2013, паратип, самец, сверху.

Length of elytra related to their combined width approximately as 22:26. Elytra with rather distinct, large and dense punctation. Puncture diameter about 1.5 times as long as eye facet. Distances between punctures are much smaller than their diameter, interspaces weakly shagreened.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 3, 4)

Female. Sexual dimorphism absent, female morphologically similar to male. Spermatheca of characteristic structure (Fig. 5).

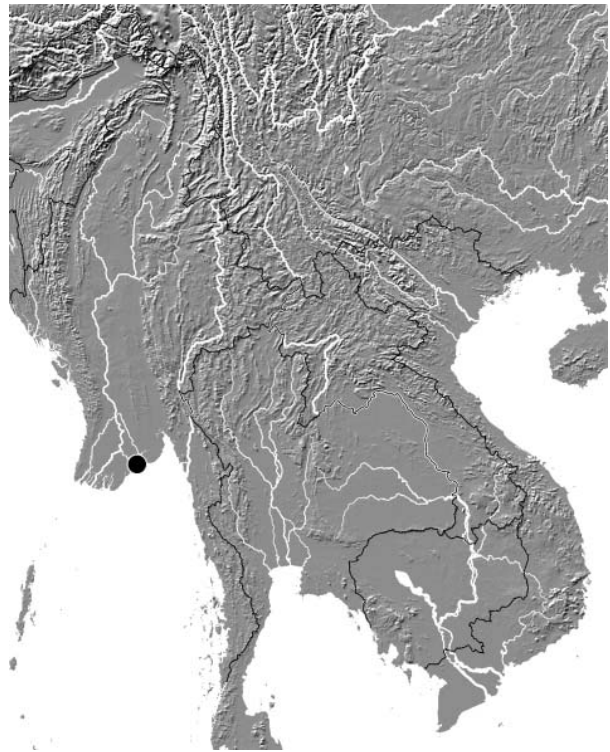
COMPARATIVE REMARKS. The new species is closely related to *C. (Bucephalinus) nepalicus* (Coiffait, 1982) and *C. (Bucephalinus) pseudonepalicus* Gildenkov, 2013 (Fig. 2), which are similar in size and microsculpture of head and pronotum surface, eyes structure and shape of depression at the base of pronotal disc. The new species is also similar to *C. nepalicus* in the structure of the spermatheca. It differs from these two species by the much darker colouration and a much more distinct and large punctation of elytra. Reliably differs only by the structure of aedeagus (Figs 3, 4). The new species also differs from *C. pseudonepalicus* by the structure of spermatheca (Figs 5, 6).

ECOLOGY. Found in spring and autumn on small, damp green moss growing on the base of a building (Fig. 7).

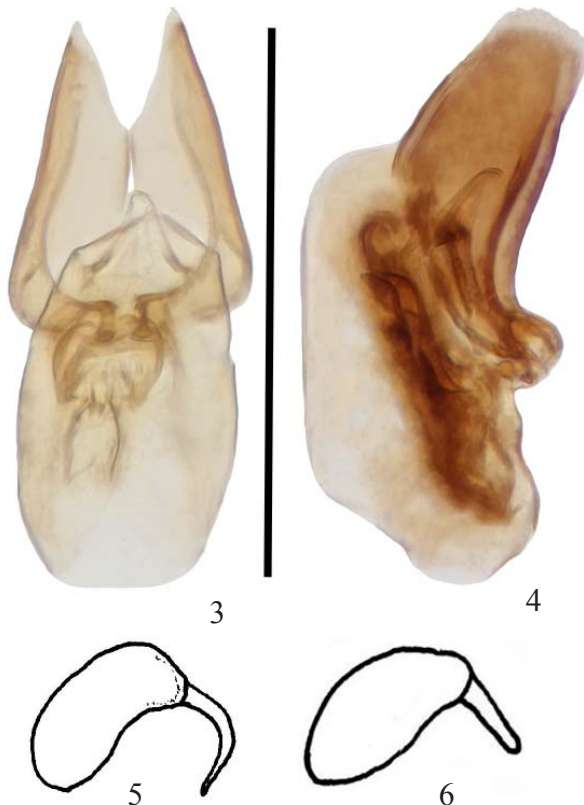
DISTRIBUTION. Myanmar (Fig. 8).



Fig. 7. Habitat of *C. kimi*, sp.n.
Рис. 7. Место обитания *C. kimi*, sp.n.



Figs 8. Distribution map *C. kimi* sp.n.
Рис. 8. Карта распространения *C. kimi* sp.n.



Figs 3–6. Genitalia of *Carpelimus*: 3–5 — *C. kimi*, sp.n.; 6 — *C. pseudonepalicus*; 3 — aedeagus, ventral view (holotype); 4 — aedeagus, lateral view (holotype); 5, 6 — spermatheca (paratypes). Scale bar: 0.25 mm.

Рис. 3–6. Гениталии *Carpelimus*: 3–5 — *C. kimi*, sp.n.; 6 — *C. pseudonepalicus*; 3 — аedeagus, ventral view (holotype); 4 — аedeagus, lateral view (holotype); 5, 6 — spermatheca (paratypes). Масштаб: 0,25 мм.

ETYMOLOGY. The new species is named after Alexander Yurievich Kim, an entomologist studying taxonomic group Anthophila, who collected all the material on this species.

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