

A new species of the genus *Carpelimus* Leach, 1819
from the “*silvestris*” species group from Laos
(Coleoptera: Staphylinidae: Oxytelinae)

Новый вид из группы “*silvestris*” рода *Carpelimus* Leach, 1819
из Лаоса (Coleoptera: Staphylinidae: Oxytelinae)

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

ABSTRACT: *Carpelimus* (*Bucephalinus*) *volkeri*, **sp.n.**, a new species from Laos is described and illustrated. The new species belongs to the taxonomically complex “*sylvestris*” species group, which we previously included 8 species from the Oriental Biogeographic Region. Species of the “*sylvestris*” species group are often reliably differs only by the structure of the aedeagus or, sometimes, in the structure of the spermathecae. The new species is most closely related and most similar to *Carpelimus* (*Bucephalinus*) *snookus* Gildenkov, 2014, but differs in the details of the aedeagus structure and the shape of the spermatheca. The discovery of a previously unknown *Carpelimus* species from the “*sylvestris*” group in Laos is of particular interest.

РЕЗЮМЕ: Из Лаоса описан и проиллюстрирован новый вид *Carpelimus* (*Bucephalinus*) *volkeri*, **sp.n.** Новый вид относятся к сложной в таксономическом плане группе видов “*silvestris*”, к которой ранее мы относили 8 видов из Восточной биогеографической области. В пределах группы «*silvestris*» виды зачастую надежно различаются только строением эдеагуса, иногда различия имеются и в строении сперматек. Новый вид наиболее близок и наиболее сходен с *Carpelimus* (*Bucephalinus*) *snookus* Gildenkov, 2014, от которого отличается деталями строения эдеагуса и формой сперматеки. Нахождение в Лаосе неизвестного для науки вида из группы «*silvestris*» представляет определенный интерес.

Introduction

We included 8 species from the Oriental Biogeographic Region in the “*silvestris*” species group [Gildenkov, 2014a, b, 2015, 2019]: *Carpelimus silvestris* (Cameron, 1918) from Malaysia and Singapore; *C. formosae* (Cameron, 1940) from Taiwan, Hong Kong, and Hainan (China), from Thailand, and the Ryukyu Islands of Japan; *C. kathmanduensis* Herman, 2001 from Nepal and India; *C. haraldi* Gildenkov, 2014 from the islands of Indonesia; *C. postremus* Gildenkov, 2014 from the Philippines; *C. snookus* Gildenkov, 2014 from Thailand and Vietnam; *C. pseudosilvestris* Gildenkov, 2014 from Malaysia and *C. nothus* Gildenkov, 2019 from the Philippines. All species of this group have a flattened body, brown colouration, well-developed temples, characteristic depressions on the pronotal disc along the medial line (including a horseshoe-shaped depression at the base of the disc). Species of the “*silvestris*” species group are often reliably distinguished only by the structure of the aedeagus. Sometimes there are differences in the structure of the spermathecae. The paper continues the author's series of works on the fauna of the genus *Carpelimus* Leach, 1819 of the Oriental Biogeographic Region and New Guinea [Gildenkov, 2015, 2018a, b, 2019a–f, 2020a–c, 2021a, b, 2022, 2023a, b, 2024a–c].

This paper is based on the specimens deposited in the following collections: cMG — private collection of M. Gildenkov (Smolensk, Russia); NHMB — Naturhistorisches Museum Basel (Switzerland). This study used standard method for the taxonomic study of insects.

Preparations were made using the MBS-10 binocular microscope. The preparations of genitalia were processed in 10% KOH and then fixed in Euparal. In the description 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 using a Canon EOS 5D Mark III camera and a Canon MP-E 65mm lens with Extended Focus Technology.

Carpelimus (Bucephalinus) volkeri Gildenkov, **sp.n.**

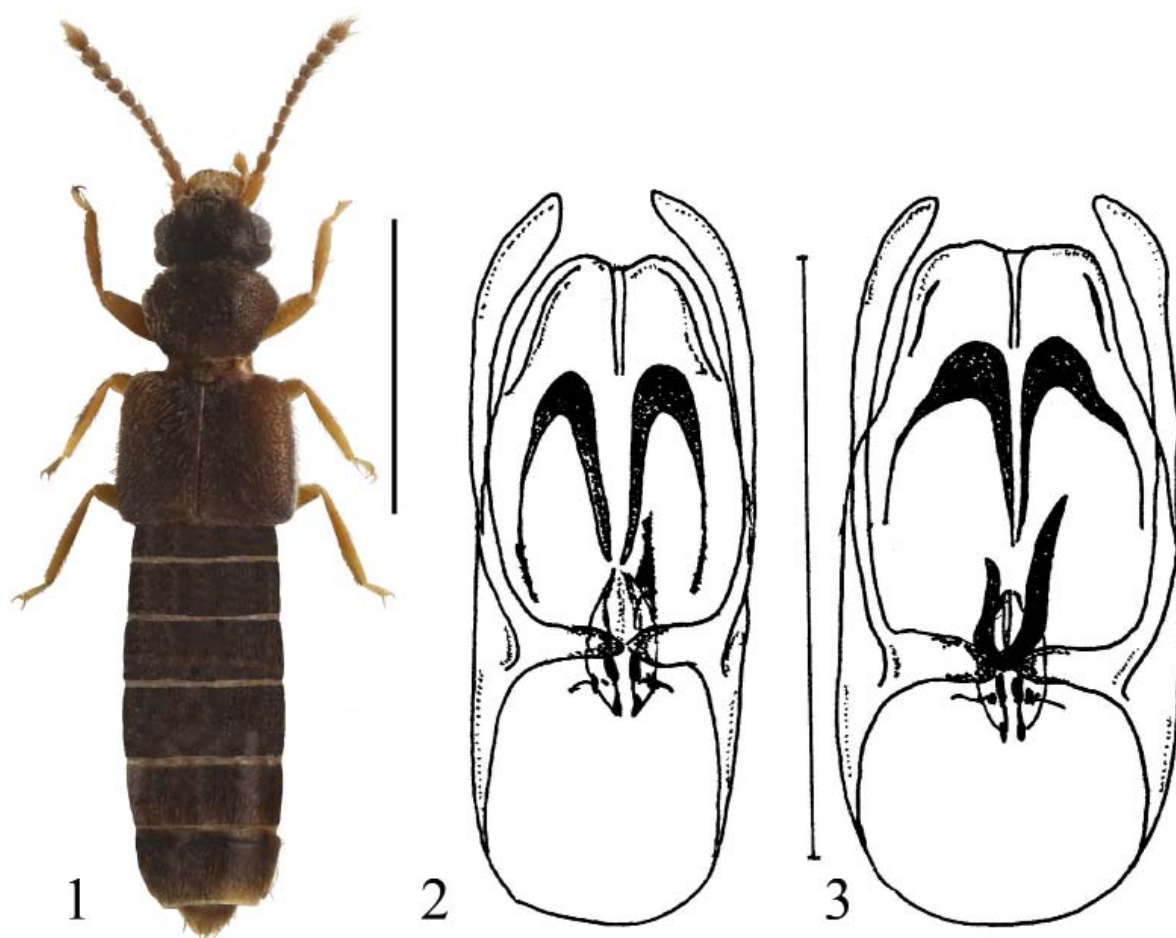
Figs 1, 2, 4, 6.

MATERIAL. Holotype, ♂ “LAOS — Bolikhamsay prov., Pakkading, ban Phone env., 18°19'N, 104°08'E, 200–300 m, 23–29.V.2011, Brancucci & al. (NHMB)” (NHMB). Paratypes: 1 ♂, 1 ♀ “LAOS — Bolikhamsay prov., Pakkading, ban Phone env., 18°19'N, 104°08'E, 200–300 m, 23–29.V.2011, Brancucci & al. (NHMB)” (NHMB; 1 ♂ — cMG).

DESCRIPTION (holotype). Length 2.4 mm. Completely brown, legs, antennae and mouthparts light brown. Integument slightly shining, body with short, light-coloured hairs.

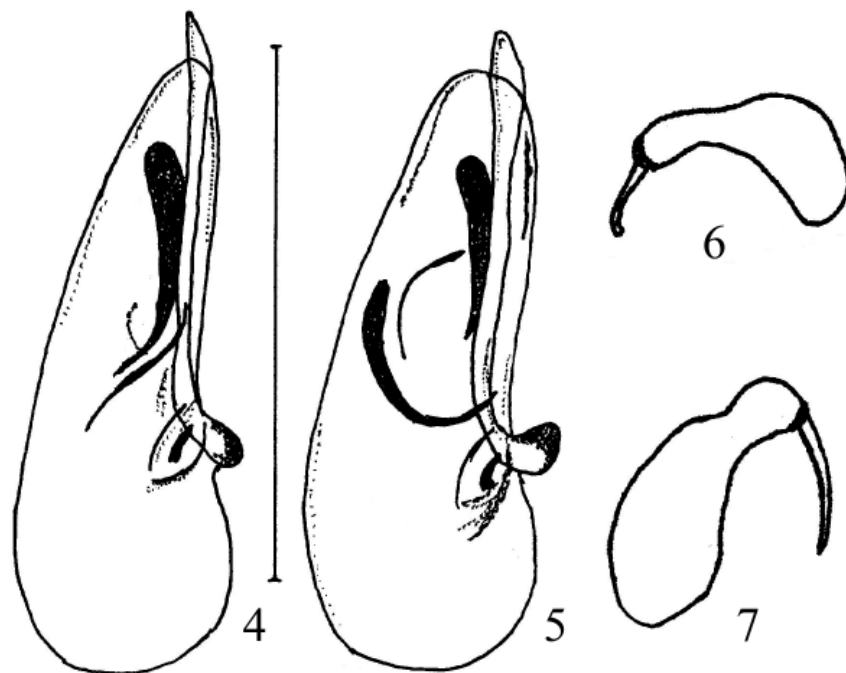
Head transverse, with wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 20:27. Neck constriction prominent. Eyes quite large and convex. Temples well developed, rounded. Eye diameter in dorsal view approximately equal to temple length. Head widest across temples (Fig. 1). Head surface with delicate, fine and dense puncturation. Diameter of punctures about 2.5 times as small as eye facet. Distances between punctures quite less than their diameter, interspaces smooth, slightly shiny. Antennae quite long. Antennal segment 1 elongate, cylindrical, more than 2 times longer than width; segment 2 elongate, noticeably conical, widening to apex, more than 2 times longer than width, significantly shorter and narrower than 1st; antennal segment 3 distinctly conical, noticeably shorter and narrower than 2nd, approximately 2 times longer than width; 4–7th segments slightly conical, noticeably longer than width; 8th antennal segment equal in length and width; 9–10th segments similar in shape to 8th, equal in length and width, but significantly more massive; 11th segment pointed at apex, approximately 1.5 times longer than width. Last three segments forming a loose club (Fig. 1).

Pronotum heart-shaped, with narrow base, evenly widens, widest about 2/3 its length from base, then narrowed. The lateral edge from the base goes straight, after the great-



Figs 1–3. *Carpelimus* spp.: 1 — *Carpelimus (Bucephalinus) volkeri*, **sp.n.**, holotype, male, dorsal view; 2 — *C. volkeri*, **sp.n.**, aedeagus, ventral view (holotype); 3 — *C. snookus* Gildenkov, 2014, aedeagus, ventral view (paratype). Scale bar: 1 — 1 mm; 2, 3 — 0.25 mm.

Рис. 1–3. *Carpelimus* spp.: 1 — *Carpelimus (Bucephalinus) volkeri*, **sp.n.**, голотип, самец, сверху; 2 — *C. volkeri*, **sp.n.**, эдеагус, снизу (голотип); 3 — *C. snookus* Gildenkov, 2014, эдеагус, снизу (паратип). Масштаб: 1 — 1 мм; 2, 3 — 0,25 мм.



Figs 4–7. *Carpelimus* spp.: 4 — *C. volkeri*, **sp.n.**, aedeagus, lateral view (holotype); 5 — *C. snookus* Gildenkov, 2014, aedeagus, lateral view (paratype); 6 — *C. volkeri*, **sp.n.**, spermatheca (paratype); 7 — *C. snookus* Gildenkov, 2014, spermatheca (paratype). Scale bar: 0.25 mm.

Рис. 4–7. *Carpelimus* spp.: 4 — *C. volkeri*, **sp.n.**, эдеагус, сбоку (голотип); 5 — *C. snookus* Gildenkov, 2014, эдеагус, сбоку (паратип); 6 — *C. volkeri*, **sp.n.**, сперматека (паратип); 7 — *C. snookus* Gildenkov, 2014, сперматека (паратип). Масштаб: 0,25 мм.

est expansion it smoothly rounds towards the front corners. Ratio of pronotum length to its maximum width about 22:31. Surface of pronotum delicately, finely and densely punctured. Diameter of punctures about 2,5 times as small as eye facet. Distances between punctures noticeably smaller than their diameter, interspaces smooth, shining. Pronotal disc with 3 well developed depressions along the medial line: at the base, a horseshoe-shaped depression; in the middle part — butterfly wings form depression; at apex of disc — small rounded depression (Fig. 1).

Ratio of length of elytra to their combined width approximately as 35:41. Surface of elytra with delicate, fine and dense punctation. Diameter of punctures slightly smaller than eye facet. Distances between punctures slightly smaller than their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened

Aedeagus of characteristic structure (Figs 2, 4).

Female. Sexual dimorphism absent, female morphologically similar to male. Spermatheca of characteristic structure (Fig. 6).

DISTRIBUTION. Laos.

COMPARATIVE REMARKS. The new species belongs to the “*silvestris*” species group [Gildenkov, 2014a, b; 2015; 2019] which also includes: *C. silvestris* (Cameron, 1918), *C. formosae* (Cameron, 1940), *C. kathmanduensis* Herman, 2001, *C. haraldi* Gildenkov, 2014, *C. postremus* Gildenkov, 2014, *C. snookus* Gildenkov, 2014, *C. pseudosilvestris* Gildenkov, 2014 and *C. nothus* Gildenkov, 2019). *Carpelimus* (*Bucephalinus*) *volkeri*, **sp.n.** closely related and most similar to *C. snookus* from Thailand and Vietnam. Reliably differs from it only in the details of the aedeagus structure (Figs 2–5) and spermatheca, with a noticeably shorter apical part (Figs 6–7).

ETYMOLOGY. Patronymic, the species is named to honour my friend and colleague, an outstanding specialist in Staphylinidae, who passed away prematurely, Volker Assing.

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