

Far Eastern Entomologist

Дальневосточный энтомолог

Journal published by Far East Branch
of the Russian Entomological Society
and Laboratory of Entomology, Federal
Scientific Center of the East Asia
Terrestrial Biodiversity, Vladivostok

Number 474: 1-6

ISSN 1026-051X (print edition)
ISSN 2713-2196 (online edition)

April 2023

<https://doi.org/10.25221/fee.474.1>

<https://elibrary.ru/eqqtud>

<https://zoobank.org/References/C63D74E2-E5E2-4FEF-8C9F-692BED5DD34D>

NEW SPECIES OF THE GENUS *CARPELIMUS* LEACH, 1819 (COLEOPTERA: STAPHILINIDAE: OXYTELINAE) FROM MOLUCCAS

M. Yu. Gildenkov

*Department of Ecology and Chemistry, Smolensk State University, Smolensk, 214000,
Russia. E-mail: mgildenkov@mail.ru*

Summary. *Carpelimus (Trogophloeus) nigerfrontis* sp. n. is described and illustrated from the Moluccas (Indonesia). By flattened body and light brown head with a black anterior frons the new species is similar to species of the closely related genus *Mendaxinus* Gildenkov, 2004 but according to the structure of the 3-segmented tarsus, aedeagus and spermatheca it undoubtedly belongs to the genus *Carpelimus* Laech, 1819. The new species differs from all known species of *Carpelimus* by the structure of aedeagus.

Key words: Coleoptera, Staphylinidae, *Carpelimus*, taxonomy, new species, Indonesia, Tanimbar Island, Halmahera Island.

М. Ю. Гильденков. Новый вид рода *Carpelimus* Leach, 1819 (Coleoptera: Staphylinidae: Oxytelinae) с Молуккских островов // Дальневосточный энтомолог. 2023. N 474. С. 1-6.

Резюме. С Молуккских островов в Индонезии описан и проиллюстрирован новый вид *Carpelimus (Trogophloeus) nigerfrontis* sp. n. По уплощенному телу и светло-коричневой голове с черной вершиной лба новый вид сходен с видами близкородственного рода *Mendaxinus* Gildenkov, 2004, но по строению

3-члениковой лапки, эдеагуса и сперматеки несомненно принадлежит к роду *Carpelimus* Leach, 1819. Новый вид отличается от всех известных видов *Carpelimus* строением эдеагуса.

INTRODUCTION

To date, only eight species of the genus *Carpelimus* Leach, 1819 have been known from the Moluccas (Gildenkov, 2015b, 2020a), namely *Carpelimus* (s. str.) *indicus* (Kraatz, 1859), *Carpelimus* (*Bucephalinus*) *foveicollis* (Kraatz, 1859), *Carpelimus* (*Troginus*) *atomus* (Saulcy, 1864), *Carpelimus* (s. str.) *planicollis* (Bernhauer, 1902), *Carpelimus* (*Trogophloeus*) *padangensis* (Cameron, 1928), *Carpelimus* (s. str.) *sadiyanus* (Cameron, 1945), *Carpelimus* (s. str.) *philippinensis* Gildenkov, 2013, and *Carpelimus* (*Trogophloeus*) *moluccanensis*, Gildenkov, 2020. The new species is not similar to the listed species; it is more similar in habitus and, especially, colouration with species of the closely related genus *Mendaxinus* Gildenkov, 2004, also inhabiting Indonesia (Gildenkov, 2004, 2015a, c, 2019c). The paper continues the author's series of works on the fauna of the genus *Carpelimus* Leach, 1819 of the Oriental Region and New Guinea (Gildenkov, 2015b, 2018a,b, 2019a,b,d, 2020 a-c, 2021a,b, 2022). The new species is described below.

MATERIAL AND METHODS

The dissections, measurements, and drawings were made using a MBS-10 microscope provided with an eyepiece-micrometer and a measuring grid. In the following description, the length to width ratio for the head, pronotum, and elytra is given using standard units: 7 standard units = 0.1 mm; thus 1 standard unit is about 0.0143 mm. The slides of the genitalia were treated with 10% KOH and fixed in euparal. Photographs were taken with a Canon EOS 5D Mark III camera and a Canon MP-E 65 mm objective using the extended focus technology.

The holotype and paratypes of new species are deposited in the following collections: MHNG – Museum d'Histoire Naturelle Geneva (Switzerland); SMNS – Staatliches Museum für Naturkunde in Stuttgart (Germany), and cMG – private collection of M. Gildenkov (Smolensk, Russia).

DESCRIPTION OF NEW SPECIES

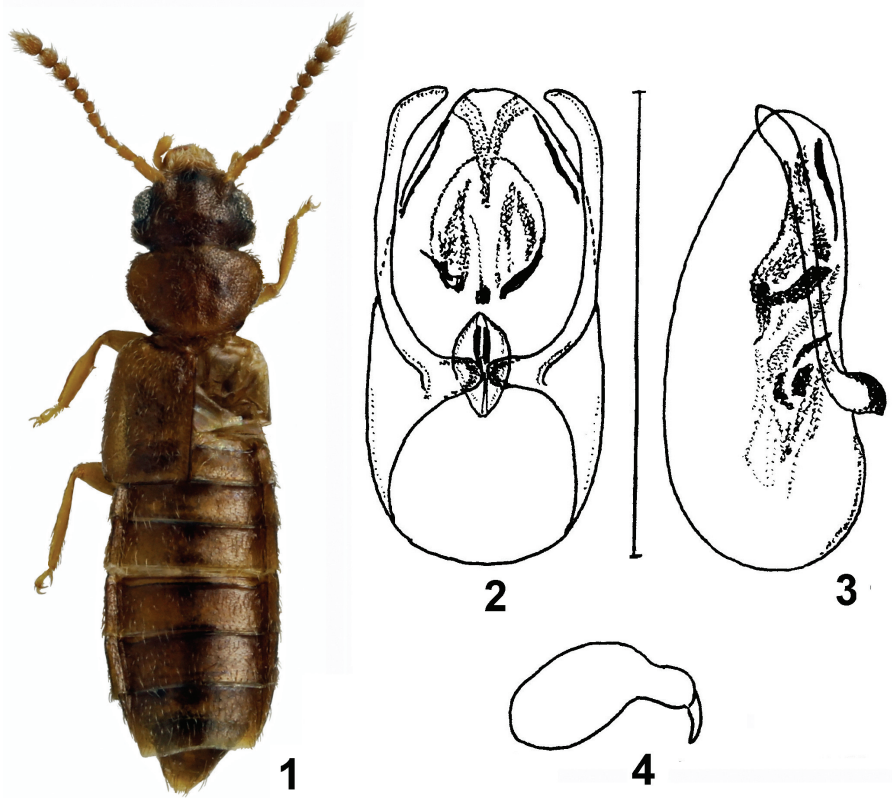
Carpelimus (*Trogophloeus*) *nigerfrontis* Gildenkov, sp. n.

<https://zoobank.org/NomenclaturalActs/BCE6A88C-0D36-4D09-8889-14BDBA52014A>

Figs 1–4

TYPE MATERIAL. Holotype – ♂, **Indonesia**: Moluccas, Tanimbar Island with label “INDO: Maluc F911131 Tanimbar Isl: Yamdena Krawain (12) Agosti. 16.9.91 leaflit” (MHNG). Paratypes: 1 ♀, Indonesia: “INDO: Maluc F911131 Tanimbar Isl:

Yamdena Krawain (12) Agosti. 16.9.91 leaflit" (MHNG); 2♀, Indonesia: Moluccas, Tanimbar Island "INDON: Maluc. F911146 Tanimbar Isl: Yamdena Domaki, NW of Saumlaki D. Agosti. 18.9.1991" (1♀ - MHNG; 1♀ - cMG); 1♀, Indonesia: Moluccas, Halmahera Island "MALUKU: Is. Halmahera Buli, Maba 6.XI.1999, ca. 20 m, leg. A. RIEDEL" (SMNS).



Figs 1-4. *Carpelimus (Trogophloeus) nigerfrontis* sp. n. (1-3 - male, holotype; 4 - female, paratype). 1 - body, dorsal view; 2 - aedeagus, dorsal view; 3 - the same, lateral view; 4 - spermatheca. Scale bars: 0.25 mm.

DESCRIPTION. MALE (holotype). Body fairly flat, length 1.8 mm. Body completely light brown, legs and antennae yellow-brown; anterior frons black. 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 19 : 25. Neck constriction prominent. Eyes large, convex. Temples well-developed, round, eye diameter in dorsal view barely exceeds temple length. Head widest across temples

(Fig. 1). Head surface with very delicate, very fine and dense punctation. Diameter of punctures about 3.5 times as small as eye facet. Distances between punctures approximately equal to their diameter, interspaces smooth, slightly shining. Antennae rather long, antennal segments 1–5 elongate; segments 6–10 about as long as wide; 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 margin with small notch at base, then smoothly rounded (Fig. 1). Ratio of pronotum length to its maximum width about 19:26. Pronotum with very delicate, very fine and dense punctation, like head surface. Pronotal disc with two pairs of symmetrical oval depressions in the central part, which merge into two bean-shaped longitudinal depressions separated by medial crest. There is also one unpaired oval depression along the medial line at the apex of pronotum and wide oval depressions at the lateral margins (Fig. 1).

Length of elytra related to their combined width approximately as 29 : 33. Scutellum with shallow, round depressions (Fig. 1). Elytra with delicate, fine and dense punctation. Diameter of punctures about 1.5 times as small as eye facet. Distances between punctures approximately equal to their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 2, 3).

Female. Sexual dimorphism absent, female morphologically similar to male. Spermatheca of characteristic structure (Fig. 4).

DISTRIBUTION. Indonesia: Moluccas.

DIAGNOSIS. By flattened body with a broad head and, especially, coloration - completely light brown with a black anterior frons, *Carpelimus (Trogophloeus) nigerfrontis* sp. n. similar to majority species of the closely related genus *Mendaxinus* Gildenkov, 2004. According to the structure of the 3-segmented tarsus, aedeagus, and spermatheca, it undoubtedly belongs to the genus *Carpelimus*. The new species is not similar to other *Carpelimus* known from Moluccas and reliably differs from them and other species by the structure of aedeagus (Figs 2–4).

ETYMOLOGY. From Latin “frontis” (forehead) and “niger” (black); the name refers to the color of the head.

ACKNOWLEDGEMENTS

I thank Giulio Cuccodoro (MHNG) and Wolfgang Schawaller (SMNS) for providing specimens for study and Kirill Makarov (Moscow Pedagogical State University, Russia) for help with preparing photos.

REFERENCES

- Gildenkov, M.Yu. 2004. *Mendaxinus* – new subgenus of the genus *Thinodromus* Kraatz, 1858 from Tropical Africa (Coleoptera, Staphylinidae). *Izvestiya Harkovskogo Entomologicheskogo obshchestva*, 11(1–2): 9–12. [In Russian with English summary]

- Gildenkov, M.Yu. 2015a. Six new species of the genus *Mendaxinus* Gildenkov, 2004 from Oriental Region (Coleoptera: Staphylinidae: Oxytelinae). *Izvestiya Smolenskogo Gosudarstvennogo Universiteta*, 4(28): 219–232. [In Russian with English summary]
- Gildenkov, M.Yu. 2015b. *Fauna Carpelimus of the Old World (Coleoptera: Staphylinidae)*. SmolSU, Smolensk, 414 pp. [In Russian with English summary]
- Gildenkov, M.Yu. 2015c. Preliminary review of structure of genus *Mendaxinus* Gildenkov, 2004 (Coleoptera: Staphylinidae: Oxytelinae). *Izvestiya Smolenskogo Gosudarstvennogo Universiteta*, 4(28): 18–26. [In Russian with English summary]
- Gildenkov, M.Yu. 2018a. Five new species of the genus *Carpelimus* Leach, 1819 from the Oriental region (Coleoptera: Staphylinidae: Oxytelinae). *Russian Entomological Journal*, 27(2): 135–142. DOI: 10.15298/rusentj.27.2.03
- Gildenkov, M.Yu. 2018b. A new species of the subgenus *Troginus* Mulsant et Rey 1878 (Coleoptera: Staphylinidae: Oxytelinae: *Carpelimus*) from Borneo. *Zootaxa*, 4444(3): 347–350. DOI: 10.11646/zootaxa.4444.3.10
- Gildenkov, M.Yu. 2019a. Five new species of the genus *Carpelimus* Leach, 1819 from Thailand and the Philippines (Coleoptera: Staphylinidae: Oxytelinae). *Russian Entomological Journal*, 28(1): 30–35. DOI: 10.15298/rusentj.28.1.05
- Gildenkov, M.Yu. 2019b. Three new species of the Genus *Carpelimus* Leach, 1819 (Coleoptera: Staphylinidae: Oxytelinae), similar to *Carpelimus* (s. str.) *planicollis* (Bernhauer, 1902). *Amurian Zoological Journal*, 11(1): 21–27. DOI: 10.33910/1999-4079-2019-11-1-21-27
- Gildenkov, M.Yu. 2019c. Four new species of the genus *Mendaxinus* Gildenkov, 2004 (Coleoptera, Staphylinidae, Oxytelinae) from Afrotropical and Oriental regions. *Euroasian Entomological Journal*, 18(3): 217–221. DOI: 10.15298/euroasentj.18.3.13
- Gildenkov, M.Yu. 2019d. Seven new species of the genus *Carpelimus* Leach, 1819 from the “*taprobanae*” group (Coleoptera: Staphylinidae: Oxytelinae). *Russian Entomological Journal*, 28(2): 138–145. DOI: 10.15298/rusentj.28.2.04
- Gildenkov, M.Yu. 2019e. Two new species of the genus *Carpelimus* Leach, 1819 from Malaysia (Coleoptera: Staphylinidae: Oxytelinae). *Russian Entomological Journal*, 28(4): 370–372. DOI: 10.15298/rusentj.28.4.04
- Gildenkov, M.Yu. 2020a. Eight new species of the genus *Carpelimus* Leach, 1819 from Indonesia (Coleoptera: Staphylinidae: Oxytelinae). *Russian Entomological Journal*, 29(1): 53–60. DOI: 10.15298/rusentj.29.1.07
- Gildenkov, M.Yu. 2020b. Two new species of the genus *Carpelimus* Leach, 1819 (Coleoptera: Staphylinidae: Oxytelinae) from Vietnam. *Far Eastern Entomologist*, 407: 1–7. DOI: 10.25221/fee.407.1
- Gildenkov, M.Yu. 2020c. New data on the New Guinea fauna of *Carpelimus* Leach, 1819 (Coleoptera: Staphylinidae: Oxytelinae). *Amurian Zoological Journal*, 12(3): 369–377. DOI: 10.33910/2686-9519-2020-12-3-369-377
- Gildenkov, M.Yu. 2021a. A new species of the *simplex* group of the genus *Carpelimus* Leach, 1819 (Coleoptera: Staphylinidae: Oxytelinae) from Thailand. *Zootaxa*, 4926(4): 573–576. DOI: 10.11646/zootaxa.4926.4.7
- Gildenkov, M.Yu. 2021b. New data (for 2020) on the distribution of species from the genus *Carpelimus* Leach, 1819 (Coleoptera: Staphylinidae: Oxytelinae) in the Oriental Region. *Samara Journal of Science*, 10(1): 51–56. DOI: 10.17816/snv2021101107

Gildenkov, M.Yu. 2022. A new species of the subgenus *Troginus* Mulsant et Rey 1878 (Coleoptera: Staphylinidae: Oxytelinae: *Carpelimus*) from China. *Zootaxa*, 5169(5): 481–484. DOI: 10.11646/zootaxa.5169.5.6