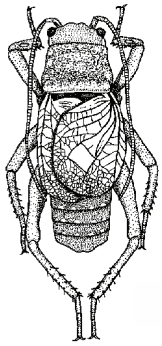

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TWO NEW SPECIES OF THE GENUS *CARPELIMUS* LEACH, 1819 (COLEOPTERA: STAPHILINIDAE: OXYTELINAE) FROM VIETNAM

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Summary. Two new species of the genus *Carpelimus* Leach, 1819 are described from Vietnam. *Carpelimus* (*Trogophloeus*) *danangensis* **sp. n.** is similar in its habitus to *Carpelimus* (*Trogophloeus*) *corticinus* (Gravenhorst, 1806), a widely distributed Palearctic species. *C.* (*T.*) *danangensis* is distinguished by a markedly larger and less distinct punctation on the body surface. It can readily be distinguished from all similar species by the structure of the aedeagus, which has strong sclerotized structures in the internal sac of a characteristic shape. *Carpelimus* (*Trogophloeus*) *novus* **sp. n.** belongs to the "*notumus*" group. This new species is most similar to *C.* (*T.*) *plenus* Gildenkov, 2019 from the Philippine Islands, from which it differs in the shape of the depressions on the pronotal disc, slightly more developed eyes and longer antennae. *C.* (*T.*) *novus* **sp. n.** can readily be distinguished from all species of the "*notumus*" group by the structure of the aedeagus.

Key words Coleoptera, Staphylinidae, taxonomy, new species, Vietnam.

М. Ю. Гильденков. Два новых вида рода *Carpelimus* Leach, 1819 (Coleoptera: Staphilinidae: Oxytelinae) из Вьетнама // Дальневосточный энтомолог. 2020. N 407. С. 1-7.

Резюме. Из Вьетнама описаны два новых вида рода *Carpelimus* Leach, 1819. *Carpelimus* (*Trogophloeus*) *danangensis* **sp. n.** внешне сходен с широко распространенным в Палеарктике *Carpelimus* (*Trogophloeus*) *corticinus* (Gravenhorst, 1806), но отличается заметно более крупной и менее четкой пунктировкой поверхности тела. От всех сходных видов надёжно отличается строением эдеагуса, с мощными склеротизованными структурами во внутреннем мешке характерной формы. *Carpelimus* (*Trogophloeus*) *novus* **sp. n.** относится к группе "*notumus*". От наиболее сходного *C*. (*T*.) *plenus* Gildenkov, 2019 с Филиппин новый вид отличается формой вдавлений на диске переднеспинки, немного более развитыми глазами, более длинными антеннами. От всех видов группы "*notumus*" новый вид хорошо отличается строением эдеагуса.

INTRODUCTION

The faunas of *Carpelimus* in the Palearctic region and tropical Africa have been sufficiently fully explored and our current knowledge of these faunas has been summarized in a taxonomic synopsis (Gildenkov, 2015). Only a few new species from these regions have been described recently (Gildenkov, 2017, 2019d; Lee, Ahn, 2019; Gildenkov & Tronquet, 2019). The fauna of *Carpelimus* in the Oriental biogeographical region has been only incompletely studied (Gildenkov, 2015). However, the research efforts that had been directed in recent years toward a better understanding of this region (Gildenkov, 2018a, 2018b, 2019a, 2019b, 2019c, 2019e, 2020) have significantly improved the situation. The description of two new species from Vietnam is the continuation of these studies.

This paper is based on the specimens deposited in the following collections: FMNH – Field Museum of Natural History (Chicago, USA); HNHM – Hungarian Natural History Museum (Budapest, Hungary).

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.

DESCRIPTION OF NEW SPECIES

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

http://zoobank.org/NomenclaturalActs/04618ADC-4FBF-44F9-AC4E-AB44D02F6831

Figs 1, 3, 4

TYPE MATERIAL. Holotype – ♂, **Vietnam**: South Central Coast, Da Nang, "VIETNAM: Huong son 26.V 1966 Exp. Gy. TOPAL" "Nr. 567 extracted from moss-crust" (HNHM).

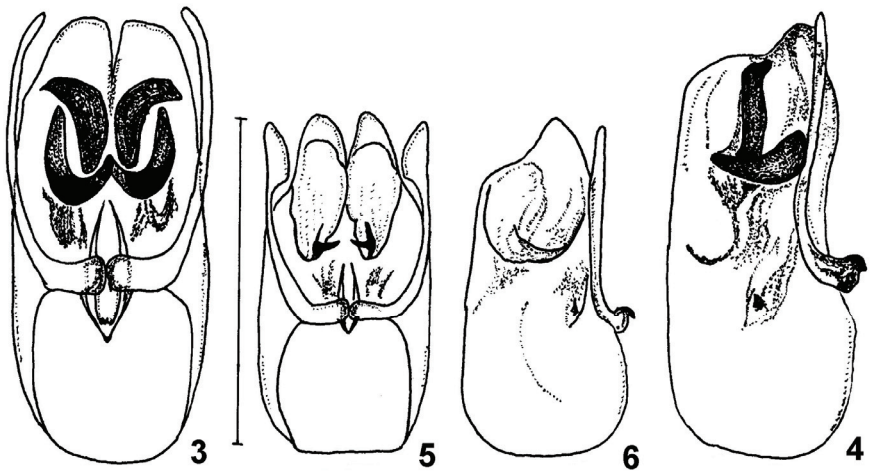
DESCRIPTION. MALE (holotype). Length 1.9 mm. Head, pronotum and abdomen black brown; elytra brown; legs and antennae yellow brown. Integument slightly shining, body with short, light-coloured hairs (Fig. 1).

Figs 1, 2. Body, dorsal view. 1 – *Carpelimus danangensis* **sp. n.** (holotype, male); 2 – *C. novus* **sp. n.** (holotype, male).

Head transverse, with a 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 small, slightly convex. Temples well-developed, round, eye diameter in dorsal view about equal to temple length. Head widest across temples (Fig. 1). Head surface with rather distinct, rather large and dense punctation. Puncture diameter about 1.2 times as large as eye facet. Distances between punctures significantly smaller than their diameter, interspaces smooth, slightly shining. Antennae rather short (Fig. 1), antennal segments 1–3 elongate; segments 4–6 about as long as wide; segments 7–10 slightly transverse; segment 11 elongate, conical. Last 3 segments more massive than others and form loose club.

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins smoothly rounded (Fig. 1). Ratio of pronotum length to its maximum width about 21:27. Surface of pronotum with rather distinct, rather large and dense punctation.

Puncture diameter about 1.2 times as large as eye facet. Distances between punctures significantly smaller than their diameter, interspaces smooth, slightly shining. Base of pronotal disc with very dense punctation, punctures coalescent and smaller. Pronotal disc with 2 pairs of rather shallow, symmetrical depressions separated by medial ridge and 1 unpaired, almost indistinct, oval depression along midline at apex. Base of pronotal disc with wide, crescent-shaped depressions; central part of disc with oval depressions (Fig. 1).



Figs 3–6. *Carpelimus* spp. 3, 4 – *C. danangensis* **sp. n.** (holotype); 5, 6 – *C. novus* **sp. n.** (holotype); 3, 5 – aedeagus, dorsal view; 4, 6 – aedeagus, lateral view. Scale bars: 0.25 mm.

Ratio of length of elytra to their combined width about 28:38. Scutellum with shallow round depressions (Fig. 1). Elytra with rather delicate, rather large and dense punctation. Puncture diameter about 1.5 times as large as eye facet. Distances between punctures significantly smaller than their diameter, interspaces smoothly shagreened, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 3, 4).

Female. Unknown.

DISTRIBUTION. Vietnam.

ETYMOLOGY. Named for its geographical distribution.

DIAGNOSIS. The new species in size, colouration and punctation patterns is quite similar to *Carpelimus* (*Trogophloeus*) *corticinus* (Gravenhorst, 1806), a widely distributed Palaearctic species. *C. (T.) danangensis* sp. n. also resembles the latter species in the presence of massive sclerotized structures in the apical part of the internal sac of the aedeagus, but differs in having shorter elytra and markedly larger, less distinct punctation on the head, pronotum and elytra. It can be readily distinguished from *C. corticinus* and other representatives of the "*corticinus*" group (Gildenkov, 2015) by the structure of the aedeagus and by the absence of arch-shaped sclerotized structures at the base of the internal sac (Figs 3, 4).

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

http://zoobank.org/NomenclaturalActs/542340FA-66A7-4075-A9AF-F44B1B154D63

Figs 2, 5, 6

TYPE MATERIAL. Holotype – ♂, **Vietnam**: Annam "Annam Phuc-Son Nov. Dez. H. Fruhstorfer" "*novus* Brh Type." "Chicago NHMus M. Bernhauer Collection" (FMNH). Paratype: 1 ♂ (teneral), Vietnam, Annam "Annam Phuc-Son Nov. Dez. H. Fruhstorfer" "Chicago NHMus M. Bernhauer Collection" (FMNH).

DESCRIPTION. MALE (holotype). Length 2.1 mm. Colouration entirely brown, legs and antennal bases light brown. Integument slightly shining, body with short, light-coloured hairs (Fig. 2).

Head transverse, with a wide base, ratio of its length (from posterior margin of head to anterior margin of clypeus) to maximum width about 19:28. Neck constriction prominent. Eyes large, convex. Temples well-developed, round, eye diameter in dorsal view about 1.5 times as long as temple length. Head about as wide across eyes as across temples (Fig. 2). Head surface with delicate, fine and dense punctation. Puncture diameter about 2.5 times as small as eye facet. Distances between punctures about equal to their diameter, interspaces smooth, slightly shining. Antennae rather long (Fig. 2), antennal segments 1–6 elongate; segment 7 slightly elongate; segments 8–10 about as long as wide; segment 11 elongate, conical. Last 3 segments more massive and form loose club.

Pronotum widest about 2/3 its length from base, then narrowed. Lateral margins smoothly rounded (Fig. 2). Ratio of pronotum length to its maximum width about 25:31. Surface of pronotum with delicate, fine and dense punctation, punctation similar to that on head. Pronotal disc with 2 pairs of prominent, symmetrical depressions separated by medial ridge and 1 unpaired oval depression along midline near apex. Base of pronotal disc with narrow, crescent-shaped depressions, central part of disc with rather deep, oval depressions (Fig. 2).

Ratio of length of elytra to their combined width about 39:41. Scutellum with shallow, round depressions (Fig. 2). Elytra with rather delicate, fine and dense punctation. Diameter of punctures about equal to that of eye facets. Distances between punctures markedly smaller than their diameter, interspaces smooth, slightly shining.

Abdomen delicately shagreened.

Aedeagus of characteristic structure (Figs 5, 6).

Female. Unknown.

DISTRIBUTION. Vietnam.

ETYMOLOGY. From Latin "*novus*" (new). I have retained the name that was initially given to this species by Max Bernhauer (see labels).

DIAGNOSIS. The new species belongs to the "*notumus*" group: *Carpelimus* (*Trogophloeus*) *notumus* Gildenkov, 2019; *C.* (*T.*) *vilisus* Gildenkov, 2019; *C.* (*T.*) *plenus* Gildenkov, 2019; *C.* (*T.*) *ibelensis* Gildenkov, 2020 and *C.* (*T.*) *irianensis* Gildenkov, 2020. *Carpelimus (T.) novus* sp. n. is most similar in size, colouration and punctation patterns to *C. plenus* from the Philippine Islands, but differs from *C. plenus* in the oval depressions in the central part of the disc being separated by the

medial ridge; it also differs in having slightly more prominent eyes and longer antennae. *Carpelimus (T.) novus* can readily be distinguished by the structure of the aedeagus and by more developed, sclerotized tooth-like structures in the central part of its internal sac (Figs 5, 6). The new species differs from all species of the group in its geographical distribution and is clearly distinguished by the structure of the aedeagus (Figs 5, 6 vs Gildenkov, 2019a: figs. 5, 6, 8–11; Gildenkov, 2020: figs. 10–13).

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