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# A new species of the genus *Carpelimus* Leach, 1819 (Coleoptera: Staphylinidae: Oxytelinae) from Cyprus

**Mikhail Yu. Gildenkov, Marc Tronquet**

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*Carpelimus* (*Trogophloeus*) *cyprensis* sp. n. of the *siculus* species group from Cyprus is described and illustrated. A comparison of the genitalia of the new species with other species of the *siculus* is given.

Key words: Coleoptera, Oxytelinae, *Carpelimus*, *siculus* species group, Cyprus, taxonomy, new species.

*Mikhail Yu. Gildenkov. Smolensk State University, department of Ecology and Chemistry, Przhevalsky str., 4, Smolensk 214000, Russia; e-mail: mgildenkov@ mail.ru*

*Marc Tronquet. Molitg-les-Bains, F-66500, France; e-mail: marctronquet@wanadoo.fr*

## INTRODUCTION

The species of *Carpelimus* (Oxytelinae) of the *siculus* group currently include five described species (Gildenkov, 2011, 2015), all of which are common for the Mediterranean Region: *C.* (*Trogophloeus*) *siculus* (Mulsant & Rey, 1878) (Italy: Sicily, Naples), *C.* (*T.*) *zellichi* (Bernhauer, 1903) (Croatia: Dalmatia: Ragusa), *C.* (*T.*) *peloponnensis* Gildenkov, 2004 (Greece: Peloponnese, Corfu), *C.* (*T.*) *euphratensis* Gildenkov, 2011 (Turkey: Birecik, Antalya), *C.* (*T.*) *hilfi* Gildenkov, 2011 (Turkey: Antalya; Greece: Muðla province, gulf of Makri and Rhodos). It may well be indeed that *C.* (*T.*) *rivus* Gildenkov, 2011 from France (Pyrenees Or., 6 km NEE Prades) belongs to the same group, but this is not yet established (Gildenkov, 2016).

This study presents the description of a new species of the *siculus* group, based on material collected by G. Miessen in Cyprus.

## MATERIAL AND METHODS

This paper is based on specimens which are deposited in the following collections: cMG = private collection of Mikhail Gildenkov (Smolensk, Russia); cMT = private collection of Marc Tronquet (Molitg-les-Bains, France). In the present study standard methods were used for the taxonomic research of the insects; the preparations were made (M. Gildenkov) with the use of the binocular microscope MBS-10., or (M Tronquet) with a stereomicroscope Discovery V20 (Zeiss, Germany) and a microscope Olympus BX41 with phototube usable in transmitted or reflected light The

genital preparations were fixed in euparal. In the descriptions the following standard units were used for the length-to-width ratio of the head, pronotum, and elytra: 7 standard units = 0.1 mm; thus, 1 standard unit is about 0.0143 mm. A digital camera Nikon D2x on the microscope was used for photographs, and all figures were processed using stacking software Helicon focus® and Adobe Photoshop® software.

**Biotope:** Course of the Kolokouri River (which is little more than a brooklet). The river borrows at this place a large fault with limestones walls oozing. The surrounding vegetation is a transitional zone between a "phrygana" maquis and a forest, the site being fairly shaded (Fig. 1).

## RESULTS

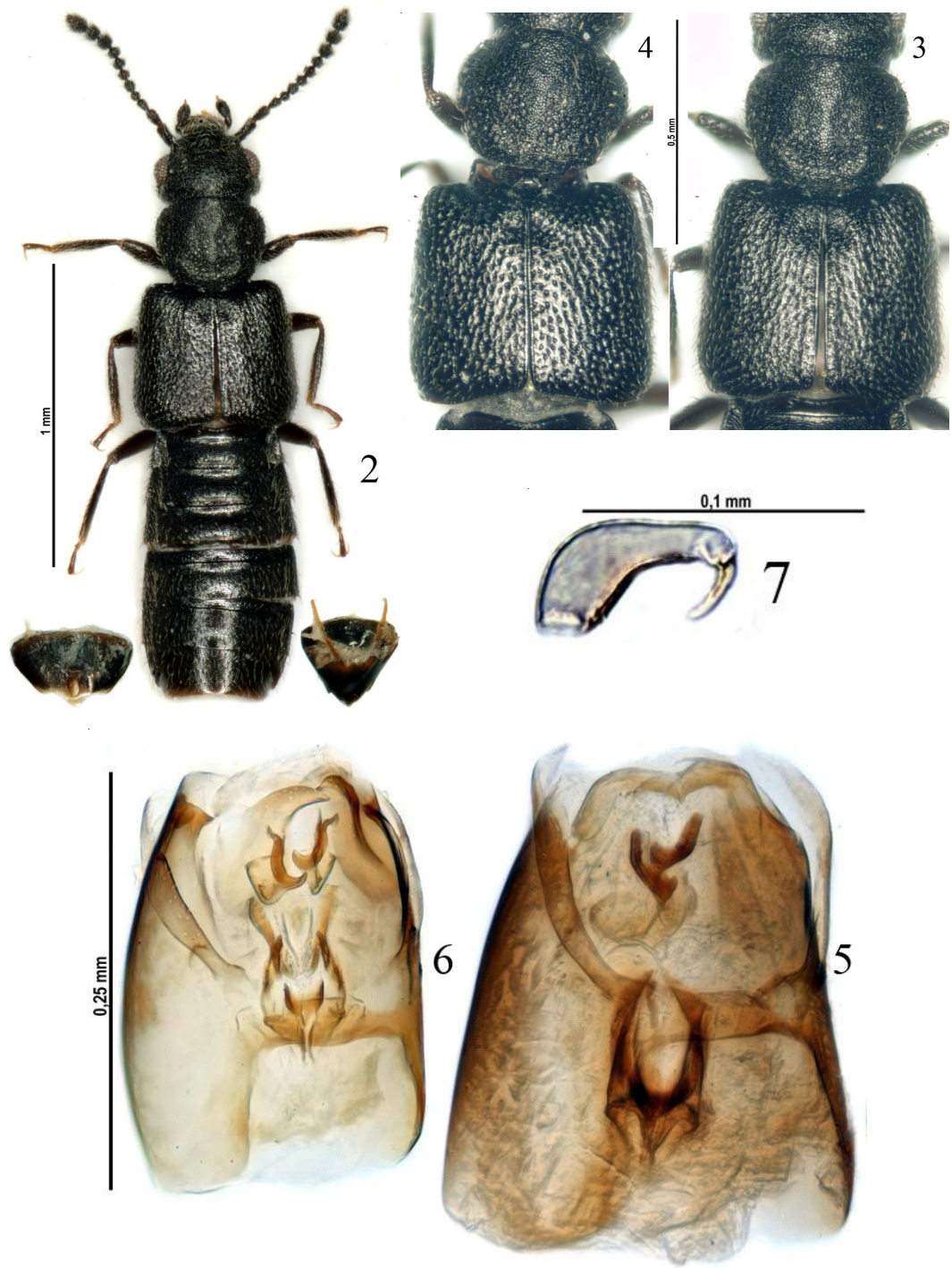
***Carpelimus (Trogophloeus) cyprensis* sp. n.**

**Type material.** Holotypus, male: "CHYPRE (Paphos district) Miliou | G. MIESSEN leg. 8-VI-2016" "Holotypus *Carpelimus* (*Trogophloeus*) *cyprensis* | det. M. Gildenkov, 2018" (cMT). Paratypus: 3 females "CHYPRE (Paphos district) Miliou | G. MIESSEN leg. 8-VI-2016" "Paratypus *Carpelimus* (*Trogophloeus*) *cyprensis* | det. M. Gildenkov, 2018" (cMT; 1 female - cMG).

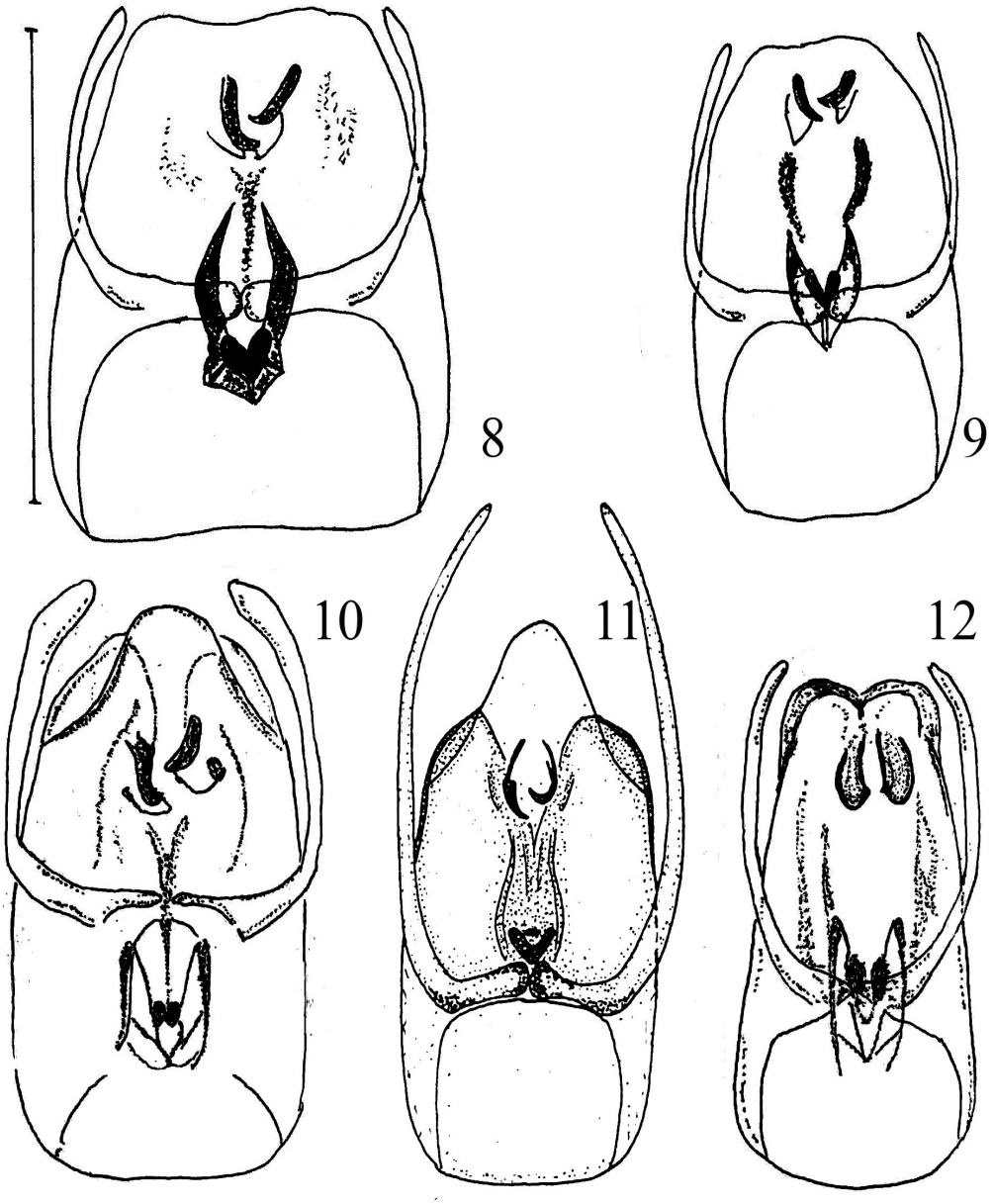
**Description** (holotype). Body length 2.0 mm. Coloration black, legs black-brown. Body slightly glossy, with short, light-colored setation.

Head transverse, with wide basal portion, ratio of its length (from posterior margin of head to

Fig. 1. Biotope of *Carpelimus cyprensis*. Photo by G. Miessen.




Figs. 2-7. *Carpelimus* spp.: 2, 3, 5 - *C.* (*Trogophloeus*) *cyprensis*, **sp.n.**, holotype, male; 4, 6 - *C.* (*T.*) *siculus* (Mulsant & Rey, 1878), male, Sicily; 7 - *C.* (*T.*) *cyprensis*, **sp.n.**, paratype, female. 2 - habitus; 3, 4 - habitus, partially, dorsal view; 5, 6 - aedeagus, ventral view; 7 - spermatheca. Photo by M. Tronquet.




Figs. 8-12. *Carpelimus* spp., aedeagus, ventral view: 8 - *C.* (*Trogophloeus*) *cyprensis*, **sp.n.**, holotype; 9 - *C.* (*T.*) *siculus* (Mulsant & Rey, 1878), Sicily; 10 - *C.* (*T.*) *hilfi* Gildenkov, 2011, holotype;; 11 - *C.* (*T.*) *peloponnensis* Gildenkov, 2004, holotype; 12 - *C.* (*T.*) *euphratensis* Gildenkov, 2011, holotype. Scale bar: 0.25 mm. Drawings by M.Yu. Gildenkov.

anterior margin of clypeus) to maximum width about 19:25. Neck constriction prominent.

Eyes large, convex. Temples well-developed, round, diameter of eye in dorsal view about twice as long as temple. The largest wide of the head approximately equal to the level of the eyes or temples (Fig. 2). Surface of head densely shagreened. Antennae rather short, antennomeres 1 - 3 elongate; antennomeres 4 -

5 about as wide as long; antennomeres 6 - 10 transverse; antennomere 11 elongate, conical. Three apical antennomeres more massive than previous forming a loose club (Fig. 2).

Pronotum widest about 2/3 of its length from base, markedly narrowed basally. Lateral margins straight from base, broadly rounded in middle (Figs. 2, 3). Ratio length of pronotum to its maximum width about 21:26. Surface of pronotum densely shagreened. Disc of pronotum with two pairs of rather prominent, symmetrical depressions. Base of disc of pronotum with wide, crescent-shaped depressions slightly separated by median ridge. Central part of disc with longitudinal, oval depressions (Figs. 2, 3).

Ratio of length of *elytra* to their combined width about 35:39. Elytra with delicate, rather fine and dense punctation, with well-developed distinctly elevated ground sculpture between punctures (Figs. 2, 3).

*Abdomen* delicately shagreened.

*Aedeagus* very wide, with characteristic internal structures (Figs. 5, 8).

*Female*. Sexual dimorphism absent: female morphologically similar to male. Spermatheca as in Fig. 7.

**Comparative remarks**. The species belongs to the *siculus* species group (Gildenkov, 2011; 2015). It can be distinguished from *C. siculus* and *C. peloponnensis* by less deep and large, and more dense punctation of the surface of the elytra, with more developed ground sculpture between punctures (Figs. 3, 4). *Carpelimus cyprensis* differs from *C. zellichi* (the male of this species is unknown) by the distinctly dense, less deep and smaller punctation of the elytra (Bernhauer, 1903), and from *C. euphratensis* by more developed sculpture between punctures on the elytra. Based on the similar ground sculpture of elytra, it is more related with *C. hilfi*, but differs by the shape of the aedeagus and its internal structure. The new species can be distinguished from all species of the *siculus* group by the external and internal structure of the aedeagus - Figs. 5 - 6, 8 - 12.

**Distribution.** Western Cyprus, along the banks of small rivers.

**Etymology**. The specific name derived from the island the specimens were collected from.

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