

# TO THE VALIDITY OF *CARPELIMUS RIVUS* GILDENKOV, 2011 (COLEOPTERA: STAPHYLINIDAE: OXYTELINAE)

Mikhail Yu. Gildenkov

Gildenkov M. Yu. 2016. To the validity of *Carpelimus rivus* Gildenkov, 2011 (Coleoptera: Staphylinidae: Oxytelinae). *Acta Biol. Univ. Daugavp.*, 16 (1): 119 – 121.

The study of *Carpelimus rivus* Gildenkov, 2011 and *C. exiguus* (Erichson, 1839) revealed differences in external and internal morphology: *C. rivus* is treated as a valid species and resurrected from the synonymy with *C. exiguus*.

Key words: Coleoptera, Oxytelinae, *Carpelimus*, *Carpelimus rivus* valid species.

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

## INTRODUCTION

Gusarov et al. (2015) in the new “revised and updated” edition of the Catalogue of Palaearctic Coleoptera provided a new synonymy: “*Carpelimus rivus* Gildenkov, 2011, syn. nov. of *Carpelimus exiguus* (Erichson, 1839). Based on the study of the type of *C. rivus* and topotypical material”. In the present study I consider that this synonymy is not well grounded.

## MATERIAL AND METHODS

This paper is based on the study of specimens which are deposited in the following collections:

cMG - private collection of M. Gildenkov, Smolensk, Russia

MNHUB - Museum für Naturkunde der Humboldt Universitaet, Berlin, Germany

NHMO - Departament of Zoology, Natural History Museum, University of Oslo, Oslo, Norway

In the present study standard methods were used for the taxonomic research of the insects; the preparations were made with the use of the binocular microscope MBS-10. The genital preparations were processed using 10% KOH and fixed in euparal later. A digital camera Canon 5D Mark III with objective Canon MP-E 65 mm was used for photographs.

## RESULTS

I restudied the description (Gildenkov, 2011: 41) and the holotype (male) of *Carpelimus rivus* Gildenkov, 2011 with labels: “France, Pyrenees Or., 10 km NNO Prades; riv. la Tete, rive gauche contre Marquixanes, 250 m, V. Gusarov, 24.5.1995”, “♂”, “Holotypus *Carpelimus rivus* Gildenkov, 2011” (NHMO).

I also studied (Gildenkov, 1998: 127) the lectotype (male) of *C. exiguus* (Erichson, 1839) with labels: “Histor. Coll. Erichson – Gravenhorst”, “No 6753”, “Ex 2”, “Europa”, “Lectotypus *Tr. exiguus* Er. | des. Gildenkov, 1996” (MNHUB).



Fig. 1–4. *Carpelimus* spp., males. 1, 2 – *C. rivus* (holotype, France): 1 – body, dorsal view; 2 – aedeagus; 3, 4 – *C. exiguus* (Bulgaria): 3 – aedeagus; 4 – body, dorsal view.

Besides that has also been studied an extensive serial material for *C. exiguus* (Erichson, 1839) from Austria, Bulgaria, France, Germany, Georgia, Italy, Kazakhstan, Kyrgyzstan, Moldova, Romania, Russia (Volgograd, Moscow, Rostov, Samara, Saratov, Smolensk, Tver, Yaroslavl and Irkutsk areas, Krasnodar and Krasnoyarsk territories, Maritime Province and Sakhalin), Spain, Tajikistan, Turkey and Ukraine (Gildenkov, 2015: 228).

An aedeagus of the holotype of *C. rivus* has everted internal sac. I studied a male of *C. exiguus* from Bulgaria with everted internal sac of the aedeagus. The study has shown that the species strongly differ not only by the body proportions (fig. 1, 2), but also by the structure of the aedeagus (fig. 3, 4). Due to that we consider the synonymy unreasonable: *Carpelimus rivus* Gildenkov, 2011 is treated as a valid species and resurrected from the synonymy with *Carpelimus exiguus* (Erichson, 1839).

It should be noted that I do not exclude *C. rivus* from *exiguus* species group, but it is not evident because the species of *siculus* group also have a similar structure of the aedeagus (Gildenkov, 2015: 386).

## ACKNOWLEDGEMENTS

I thank colleagues for the providing of material for study: Johannes Frisch and Manfred Uhlig (MNHUB, Berlin, Germany) and Vladimir Gusarov (NHMO, Oslo, Norway). Special thanks are extended to Kirill Makarov (Moscow State Pedagogical University, Moscow, Russia) for help with photographs.

The present study was done within the framework of the state assignment №114070770043, project 2877.

## REFERENCES

- Gildenkov M.Yu. 1998. *Carpelimus minimus* (Kraatz, 1859) as a proprius species, a key to the Oriental species of the subgenus *Troginus* (Coleoptera: Staphylinidae: *Carpelimus*). *Russian Entomological Journal* 7(3–4): 127–128.
- Gildenkov M.Yu. 2011. Novye vidy *Thinodromus* Kraatz, 1857 i *Carpelimus* Leach, 1819 (Coleoptera, Staphylinidae, Oxytelinae) iz Palearktiki [New species of the Staphylinid Genuses *Thinodromus* Kraatz, 1857 and *Carpelimus* Leach, 1819 (Coleoptera, Staphylinidae, Oxytelinae)

from Palearctic]. *Izvestiya Smolenskogo Gosudarstvennogo Universiteta* 2(14): 34–46. [in Russian, with Abstract in English]

Received: 04.05.2016.

Accepted: 12.05.2016.

Gildenkov M.Yu. 2015. Fauna *Carpelimus* Starogo Sveta (Coleoptera: Staphylinidae) [Fauna *Carpelimus* of the Old World (Coleoptera: Staphylinidae)] – Smolensk: SmolSU. 414 pp. [in Russian, with Abstract in English]

Gusarov V., Makranczy G. & Tronquet M. 2015. Staphylinidae: Oxytelinae. New synonym. p. 21. *In*: Löbl I. & Löbl D. (Eds), Catalogue of Palearctic Coleoptera. Volume 2. Hydrophiloidea – Staphylinoidea. Revised and updated edition. Leiden: Brill: xxvi + 1702 pp.