

NEW RECORDS OF THE GENUS *CARPELIMUS* LEACH, 1819 (COLEOPTERA: STAPHYLINIDAE: OXYTELINAE) FROM THE PALAEARCTIC REGION

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Sixteen species of the genus *Carpelimus* are presented for the first time from several countries of the Palearctic Region: *C. (s. str.) gusarovi* Gildenkov, 1997, *C. (s. str.) nigrita anthracinus* (Mulsant & Rey, 1861), *C. (s. str.) nitidus* (Baudi di Selve, 1848), *C. (s. str.) obesus* (Kiesenwetter, 1844), *C. (Paratrogophloeus) similis* (Smetana, 1967), *C. (Troginus) schneideri schneideri* (Ganglbauer, 1895), *C. (Trogophloeus) foveolatus foveolatus* (C. Sahlberg, 1832), and *C. (T.) transversicollis* (Scheerpeltz, 1947) from Portugal; *C. (s. str.) fuliginosus* (Gravenhorst, 1802) and *C. similis* (Smetana, 1967) from Iran; *C. (T.) gracilis* (Mannerheim, 1830) from Tajikistan; *C. (s.str.) elegantus* Gildenkov, 2012 from Afghanistan; *C. (Troginus) aceus* Gildenkov, 1997 and *C. (Trogophloeus) corticinus* (Gravenhorst, 1806) from Montenegro; *C. (s. str.) tener* (Bernhauer, 1902) from Tunisia; *C. (Trogophloeus) punctipennis* (Kiesenwetter, 1850) from the Canary Islands; *C. (Troginus) zealandicus* (Sharp, 1900) from Madeira; *C. transversicollis* (Scheerpeltz, 1947) from Cyprus. The following species are also indicated for the first time for Crete: *C. gusarovi* Gildenkov, 1997 and *C. (Troginus) exiguus* (Erichson, 1839); Rhodes: *C. exiguus* (Erichson, 1839) and *C. corticinus* (Gravenhorst, 1806); Mallorca: *C. (Troginus) boops rondaensis* (Fagel, 1957); Corsica: *C. transversicollis* (Scheerpeltz, 1947).

Key words: Coleoptera, Staphylinidae, Oxytelinae, *Carpelimus*, Palearctic, new records.

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INTRODUCTION

The genus *Carpelimus* Leach, 1819 is one of the largest genera in the subfamily Oxytelinae Fleming 1821; it includes about 500 species in the fauna of the world and is widely distributed in all zoogeographical areas.

The fauna of *Carpelimus* of the Palearctic Region has been studied quite fully (Gildenkov 2015). Recently only several species have been described (Gildenkov 2017, Lee & Ahn 2019, Gildenkov & Tronquet 2019). The large material studied by one of the authors made it possible at one time to analyze and most adequately reflect the distribution of *Carpelimus* not only for the

Palearctic Region, but also for the entire Old World (Gildenkov 2015). Later, some new data were obtained from the Palearctic Region (Gildenkov 2016, 2018, 2019a). Most widely, based on all published data, the distribution of *Carpelimus* in the Palearctic was reflected in the latest catalogue by Schülke & Smetana (2015). Unfortunately, the complex identification of many *Carpelimus* species does not preclude erroneous identifications. The data used in the article on the absence of indications of the distribution of *Carpelimus* in certain regions of the Palearctic Region correspond to the catalogue (Schülke & Smetana 2015).

MATERIAL AND METHODS

This paper is based on specimens which are deposited in the following collections: cAG = private collection of Andrey Gontarenko (Odessa, Ukraine); cMG = private collection of Mikhail Gildenkov (Smolensk, Russia); cMM = private collection of Marion Mantič (Hlučín-Bobrovniky, Czech Republic); cMSch = private collection of Michael Schülke (Berlin, Germany); cMT = private collection of Marc Tronquet (Molitg-les-Bains, France); HNHM = Hungarian Natural History Museum (Budapest, Hungary); MHNG – Museum d'Histoire Naturelle Geneva (Geneva, Switzerland); NKME = Naturkundemuseum Erfurt (Erfurt, Germany); NMPC = National Museum of Natural History (Prague, Czech Republic).

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.

RESULTS

Carpelimus (s.str.) *elegantus* Gildenkov, 2012

Material: 1 female, 1 specimen “Saidabad-9 Kabul VI.67 AFGHANISTAN” “M. Daniel lgt.

/by a trap on a lorry/” (NMPC).

Remarks. The species is widely distributed in the Oriental Region (Gildenkov 2015, 2016, 2019b). In the Palearctic Region, it was known only from Western Pakistan (Gildenkov 2015). The species is indicated for the first time for Afghanistan.

Carpelimus (s. str.) *fuliginosus* (Gravenhorst, 1802)
(*pusillus* Stephens, 1834)

Material: 1 female “IRAN (Kohkilyen va Büyer Ahmadi), Zagros Mts., 4 km S Yasouj, 1850 m, around N 30°42'16"/E 51°35'13", car net 24.IV.2018 Wrase & Laser [17c]” “Museum für Naturkunde Berlin | Sammlung M. Schülke” (cMSch).

Remarks. The species is widespread in Europe (Gildenkov 2015; Schülke & Smetana 2015). For the Asian part of the Palearctic Region, it was reliably known only from Turkmenistan (Gildenkov 2015) and Turkey (Gildenkov 2015; Schülke & Smetana 2015). The species is indicated for the first time for Iran.

Carpelimus (s. str.) *gusarovi* Gildenkov, 1997

Material: 1 male “Portugal mer.reg.Faro Trafal /1/ 01.04.2017 Mantič lgt., sand dunes” “37°03'20"N 08°04'34"W to 10 m -salt marsh-under detritus” (cMM). 2 males, 1 female “Greece, Crete ins.cent Potamoi dam, 1,6 km W of Voleones 08.06.2018 Mantič lgt.” “35°16'03"N 24°34'13"E to 50 m, by water on mud” (cMM).

Remarks. It is quite widespread in Central and Southern Europe (Gildenkov 2015; Schülke & Smetana 2015) and in the Asian part of the Palearctic, including Turkey, Afghanistan, Iran, Iraq, Turkmenistan, Uzbekistan, and known from Morocco (Gildenkov 2015). The species is indicated for the first time for Portugal. It was known from mainland Greece (Gildenkov 2015).

The species was not recorded for Crete (Assing 2019), and it is indicated here for this island for the first time.

Carpelimus (s. str.) ***nigrita anthracinus*** (Mulsant & Rey, 1861)
(*cooperi* Cameron, 1951; *iraniensis* Herman, 1970)

Material: 1 male, 1 female “Portugal mer.reg. Faro Trafal /1/ 01.04.2017 Mantič lgt., sand dunes” “37°03’20”N 08°04’34”W to 10 m -salt marsh-under detritus” (cMM); 3 males, 2 females “Portugal mer.reg. Faro Quarteira /1/-prosev, 28.03.2017 Mantič lgt., lagoon by the sea” “37°03’34”N 08°04’58”W, detritus-sifting” (cMM).

Remarks. This subspecies is widely distributed in the Palaearctic Region (Gildenkov 2015; Schülke & Smetana, 2015), adhering to salt-water bodies. It is recorded from Portugal for the first time.

Carpelimus (s. str.) ***nitidus*** (Baudi di Selve, 1848)

Material: 2 males, 2 females “Portugal mer.reg.Faro Trafal /1/ 01.04.2017 Mantič lgt., sand dunes” “37°03’32”N 08°05’00”W to 10 m -salt marsh-under detritus” (cMM); 3 males “Portugal mer.reg.Faro Quarteira /1/-prosev, 14.11.2012, Mantič lgt., brakický močal-” “vyplaveni z bahna 37°04’00” N 08°05’53” W” (cMM).

Remarks. The species is quite widespread in the Palaearctic Region (Gildenkov 2015; Schülke & Smetana 2015). Enters into vicarious relations



Fig. 1. Crete, Potamoi dam
(Photo: Marion Mantič).

with *C. lindrothi lindrothi* (Palm, 1943), adhering to more southern territories. It is recorded from Portugal for the first time.

Carpelimus (s. str.) ***obesus*** (Kiesenwetter, 1844)
(*tarsalis* Hochhuth, 1849)

Material: 1 male “Portugal mer.reg. Faro Trafal /1/ 01.04.2017 Mantič lgt., sand dunes” “37°03’20”N 08°04’34”W to 10 m -salt marsh-under detritus” (cMM); 1 female “Portugal, Algarve, 6 km NW Faro, 3 km W Gambelas, 30.05.2010, A. Shatrovsky” “Freshwater channel, in coastal debria” (cAG).

Remarks. The species is widely distributed in the European and Asian parts of the Palaearctic Region (Gildenkov 2015, 2019a, Schülke & Smetana 2015). The presence of the species from North Africa (Schülke & Smetana 2015) requires confirmation. It is recorded here from Portugal for the first time.

Carpelimus (s. str.) ***tener*** (Bernhauer, 1902)

Material: 1 female “TN/ Douze, 10-20km W Zafrane, 20m, 30.IX.2007 leg. B. Schacht” (cMSch).

Remarks. The species is quite widespread only in the Asian and African parts of the Palaearctic Region (Gildenkov 2015, 2016, 2019a; Schülke & Smetana, 2015), and penetrates into the Oriental Region - India and Taiwan (Gildenkov



Fig. 2. Portugal, Trafal-lagoon in dunas
(Photo: Marion Mantič).

2015). It is recorded here from Tunisia for the first time.

Carpelimus (Paratrogophloeus) similis (Smetana, 1967)
(*metuens* Mulsant & Rey, 1878)

Material: 1 male “Portugal mer.reg. Faro Alportel /2/ 25.03.2017 Mantič lgt., Querceto-Pinetum” “37°11’44”N 08°54’21”W, 350 m, in graveli about brook” (cMM). 2 males “IRAN: Zagros Mts., p. Chahar Mahall va Bachtari, Zord Koh Mts., pass 20 km W Samami, 2775m, 21.IV.2018, N 32°09’55”N 50°10’37”E, subalpine slopes leg. A. Weigel, #49” “Collection NATURKUNDEMUSEUM ERFURT” (NKME).

Remarks. The species is quite widespread in Europe (Gildenkov 2015; Schülke & Smetana, 2015). In the Asian part of the Palaearctic Region, it was reliably known only from Turkey and Turkmenistan (Gildenkov 2015). It is recorded here from Portugal and Iran for the first time.

Carpelimus (Troginus) aceus Gildenkov, 1997
(*plesius* Gildenkov, 2002)

Material: 1 female “Montenegro mer./1/ Dolni Štoj, 29.08.2013 Mantič lgt., Bojana river env.” “41°54’27”N 19°20’21”E, močál-na bahně” (cMM).



Fig. 3. Montenegro, Dolni Štoj-Bojana (Photo: Marion Mantič).

Remarks. The species is quite widespread in southern Europe (Gildenkov 2015; Schülke & Smetana, 2015). In the Asian part of the Palaearctic Region, it is reliably known from Turkey, Cyprus, and Uzbekistan (Gildenkov 2015). It is here recorded from Montenegro for the first time.

Carpelimus (Troginus) boops rondaensis (Fagel, 1957)

Material: Spain: 1 specimen “Mallorca, Canarymel. ... 20.9.53 Benick” “Coll. G. Benick” (MHNG); 3 specimens “Mallorca, Canarymel. ... See. 15.9.53 Benick” “Coll. G. Benick” (MHNG); 21 specimen “Canarymel, Mallorca 23.9.-7.X.56 | Dr. G.Benick leg.” (MHNG); 31 specimens “Canarymel 5.-22.9.1953, Mallorca | Dr. G.Benick leg.” “Coll. G. Benick” (MHNG); 6 specimens – cMG).

Remarks. The aedeagus structure is identical with the nominative subspecies *C. (Troginus) boops boops* (Fauvel, 1904) from Tropical Africa (Gildenkov 2007, 2015). It differs from it in distribution (Spain), a darker coloration of the body, a shiny triangular spot at the anterior margin of the pronotum, and a shiny roundish spot on the vertex. The subspecies was known only from Andalusia. It is here recorded from Mallorca for the first time.

Carpelimus (Troginus) exiguus (Erichson, 1839)
(*aberrans* Rosenhauer, 1856; *glabricollis*



Fig. 4. Portugal, Quarteira-lagoon (Photo: Marion Mantič).

Motschulsky, 1860; *luteicornis* Mulsant & Rey, 1878).

Material: 2 males, 2 females “Greece, Crete ins.cent Potamoi dam, 1,6 km W of Voleones 08.06.2018 Mantič lgt.” “35°16′03″N 24°34′13″E to 50 m, by water on mud” (cMM). 3 specimens “Greece, Rodos ins./1/ Epta Piges, 4,5km W of Kolympia, 22.05.2011 Mantič lgt.” “Loutani river-ve šterku a na bahně 36°15′23″N 28°06′53″E” (cMM).

Remarks. The species is widely distributed in the European part of the Palaearctic Region (Gildenkov 2015, 2019a; Schülke & Smetana, 2015). For the Asian part of the Palaearctic Region, it is reliably known from Eastern Siberia, the Far East, Turkey, Kazakhstan, Kyrgyzstan, and Tajikistan (Gildenkov 2015). The indications for the regions of China, Oriental Region, and Tropical Africa obviously refer (Gildenkov 2015) to *Carpelimus (Troginus) atomus* (Saulcy, 1864). It was known from mainland Greece (Gildenkov 2015). It was unknown from Crete (Assing 2019) and Rhodes (Assing, 2013), and indicated here for the first time from these islands of Greece.

Carpelimus (Troginus) schneideri schneideri (Ganglbauer, 1895)
(*hemerinus* Joy, 1913)

Material: 1 male, 1 female “Portugal mer.reg. Faro Quarteira /1/-prosev, 14.11.2012, Mantič lgt., brakický močál-” “vyplaveni z bahna 37°03′34″N 08°04′58″W” (cMM).

Remarks. A little-known subspecies distributed in Northern Europe (Gildenkov 2015, 2019a; Schülke, Smetana, 2015). The species is here recorded from Portugal for the first time.

Carpelimus (Troginus) zealandicus (Sharp, 1900)
(*incongruus* Steel, 1969)

Material: 2 females “Portugal, Madeira occ., Pombais-3 km SWW of Porto Moniz 24.05.2013 Mantič lgt.” “32°51′34″N 17°12′11″W 450 m

n.m., okraj teras-mech prosev” (cMM; 1 female – cMG).

Remarks. The species is quite well known from Europe (Gildenkov 2015; Schülke & Smetana, 2015). Considered as an immigrant species from the Australian Biogeographic Region. It is here recorded from Madeira for the first time.

Carpelimus (Trogophloeus) corticinus (Gravenhorst, 1806)
(*atratus* Stephens, 1834; *minimus* Runde, 1835; *dispersepunctatus* Scheerpeltz, 1947; *nanus* Wollaston, 1854)

Material: 1 female “Montenegro mer./1/ Dolni Štoj, 29.08.2013 Mantič lgt., Bojana river env.” “41°54′27″N 19°20′21″E, močál-na bahně” (cMM). 2 males, 1 female “Greece, Rodos ins./1/ Kolympia, 21.05.2011 Mantič lgt., Loutani river” “-pobřežni vegetace -smyky 36°15′08″N 28°10′05″E” (cMM); 1 female “Greece, Rodos ins./1/ Kolympia 21.05.2011 Mantič lgt., na světlo v obci” “36°15′08″N 28°10′05″E” (cMM); 1 male, 1 female “Greece, Rodos ins./1/ Epta Piges, 4,5km W of Kolympia, 22.05.2011 Mantič lgt.” “Loutani river-ve šterku a na bahně 36°15′23″N 28°06′53″E” (cMM).

Remarks. The species is very widespread throughout the Palaearctic Region (Gildenkov 2015, 2016; Schülke & Smetana, 2015), in the Oriental Region (Gildenkov 2015, 2016) it is reliably known from several provinces of China, and from Nepal and India. It is here recorded from Montenegro for the first time (the species was known from Serbia). It was known from the mainland of Greece, Crete, Lemnos and Kerkyra (Gildenkov 2015; Assing 2019); it was unknown from Rhodes (Assing 2013), and indicated here for this island for the first time.

Carpelimus (Trogophloeus) foveolatus foveolatus (C.Sahlberg, 1832)
(*gradensis* Bernhauer, 1914)

Material: 3 specimens “Portugal mer.reg. Faro Trafal /1/ 02.03.2004 Mantič lgt., louka-smyky” (cMM; 1 specimen – cMG); 1 male, 1 female,

2 specimens “Portugal mer.reg. Faro Trafal /1/ 05.03.2007 Mantič lgt., mokřad-prosev” “37°03'33"N 08°04'40"W” (cMM).

Remarks. The species is quite widespread in Europe; it enters North Africa (Gildenkov 2015; Schülke & Smetana, 2015), adhering to bodies of salt water. It is here recorded from Portugal for the first time.

Carpelimus (Trogophloeus) gracilis (Mannerheim, 1830)

(*tenellus* Erichson, 1839; *littoralis* Mulsant & Rey, 1878; *graciliformis* Konzelman & Lohse, 1981)

Material: 1 male “TAJIKISTAN, Khatlon, Vakhsh river, Tigrovaya Balka Reserve, 327 m” “19.V.2017, N37°19.092, E68°30.922, leg. Balázs Benedek & Sándor Ilniczky” (HNHM).

Remarks. The species is widely distributed throughout the Palaearctic Region (Gildenkov 2015, 2016; Schülke & Smetana, 2015). The species is indicated here from Tajikistan for the first time.

Carpelimus (Trogophloeus) punctipennis (Kiesenwetter, 1850)

Material: 2 males, 3 females, 9 specimens, Canary Islands “Spain, Fuerteventura, Barranco de la Torre 5 km S of Caleta de Fuste, 18.12.2018” “28°21'26"N 13°52'46"W Mantič lgt. to 10 m -dry river bed sifting under *Tamarix* sp.” (cMM); 1 male, 1 female, 2 specimens – cMG).



Fig. 5. Spain, Fuerteventura, Barranco de la Torre (Photo: Marion Mantič).

Remarks. A little-known species. It was described from France (Kiesenwetter, 1850). Known to us (Gildenkov 2015) only from Spain, Morocco and Tunisia. It is here recorded for the Canary Islands for the first time. The indications for the countries of Central Europe, Ukraine, Turkey, and Uzbekistan (Schülke & Smetana, 2015) are obviously erroneous due to the complex identification of the species. We studied the specimens from Spain, Morocco, and Tunisia which had monochromatic, red-brown, and rather long elytra. Specimens from the Canary Islands have shortened elytra with light front margins, which is more consistent with the original description (Kiesenwetter, 1850). The species can be reliably identified only by the structure of the aedeagus (Gildenkov 2015: fig. 23: 6).

Carpelimus (Trogophloeus) transversicollis (Scheerpeltz, 1947)

Material: 1 male “Portugal mer.reg.Faro Trafal /1/ 19.03.2017 Mantič lgt., salt marshes-sweeping” “37°03'20"N 08°04'34"W to 10 m” (cMM); 2 males, 1 female “Portugal mer.reg.Faro Quarteira /1/-prosev, 14.11.2012, Mantič lgt., brakický močal-” “vyplaveni z bahna 37°03'34"N 08°04'58"W” (cMM). 2 females, 1 specimen “Cyprus mer. /1/ Akrotiri 18.05.2012 Mantič lgt., slaniště-na bahně” “34°36'13"N 32°57'19"E” (cMM). 1 specimen, France, Corsica “Corse” “60” “*Carpelimus exiguus?*” (cMT).

Remarks. A Little-known species. It is quite widespread in southern Europe and North Africa (Gildenkov 2015; Schülke & Smetana, 2015).



Fig. 6. Cyprus, Akrotiri (Photo: Marion Mantič).

For the Asian part of the Palaearctic Region, it is reliably known (Gildenkov 2015) from Israel, Turkey, Tajikistan, Turkmenistan, and Uzbekistan. It is here recorded from Portugal and Cyprus for the first time. It was known from the south of France (Gildenkov 2015), where it was identified as *C. punctipennis* (matching labels in the collection of G.A. Lohse – MHNG); the species is recorded here for Corsica for the first time.

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