

First record of *Dicranocephalus marginatus* (Heteroptera: Stenocephalidae) for the fauna of Russia and Europe

Новая находка *Dicranocephalus marginatus* (Heteroptera: Stenocephalidae) для фауны России и Европы

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KEY WORDS: fauna, true bugs, Heteroptera, *Dicranocephalus marginatus*, Russia, Europe, Astrakhan Province, new record

КЛЮЧЕВЫЕ СЛОВА: фауна, клопы, Heteroptera, *Dicranocephalus marginatus*, Россия, Европа, Астраханская область, новая находка

ABSTRACT. A new to the Russian and European fauna species of true bugs, *Dicranocephalus marginatus* (Ferrari, 1874) (Heteroptera: Stenocephalidae), from the southwest of the Astrakhan Province is recorded. The possible distribution of this species in the south of the European part of Russia is discussed.

РЕЗЮМЕ. Впервые приводится для фауны России и Европы вид *Dicranocephalus marginatus* (Ferrari, 1874) (Heteroptera: Stenocephalidae) с юго-запада Астраханской области. В статье обсуждается возможное распространение вида на юге Европейской России.

Introduction

The Astrakhan Province is a region in the southeast of the European Russia, which borders the Republic of Kazakhstan and the Caspian Sea. Its territory is a part the Caspian Depression, an arid lowland area around the Caspian Sea, with a surface predominantly below sea level. The natural complexes of the depression are mostly dry steppes and deserts, with frequent salt marshes. Along the Caspian Sea between the deltas of the Kuma and Emba rivers, the Baer Knolls, which are low (10–20 m) hills, runs from east to west. The natural environment of the depression provides a kind of “corridor” for the spread of desert animal and plant species in the northern part of the Caspian Sea.

The fauna of heteropterans in the Astrakhan Province remain relatively poorly studied. The most complete review of the fauna of the region was published at the end of the 19th century in a series of articles by

V.E. Jakovlev, who lived and worked in Astrakhan for a long time. The last list of true bugs from the region was published by Pisarev et al. [1969]. All other data on the fauna of the group in the Astrakhan Province are sparse and represent either findings of separate species, or descriptions of new species, or data in taxonomic revisions of some genera. The collection material from the Astrakhan Province, which I collected for several years, made it possible to identify one species new not only for the region but also for Russia and Europe.

Materials and methods

The species was collected during an expedition through the territory of the Republic of Kalmykia and the Astrakhan Province. One specimen was collected by net sweeping. Geographical coordinates of the collection site were obtained using a Garmin eTrex H GPS navigator. The images were taken using a Zeiss Stemi 508 stereomicroscope with a digital camera. The specimen examined is kept in the private collection of the author.

Results and discussion

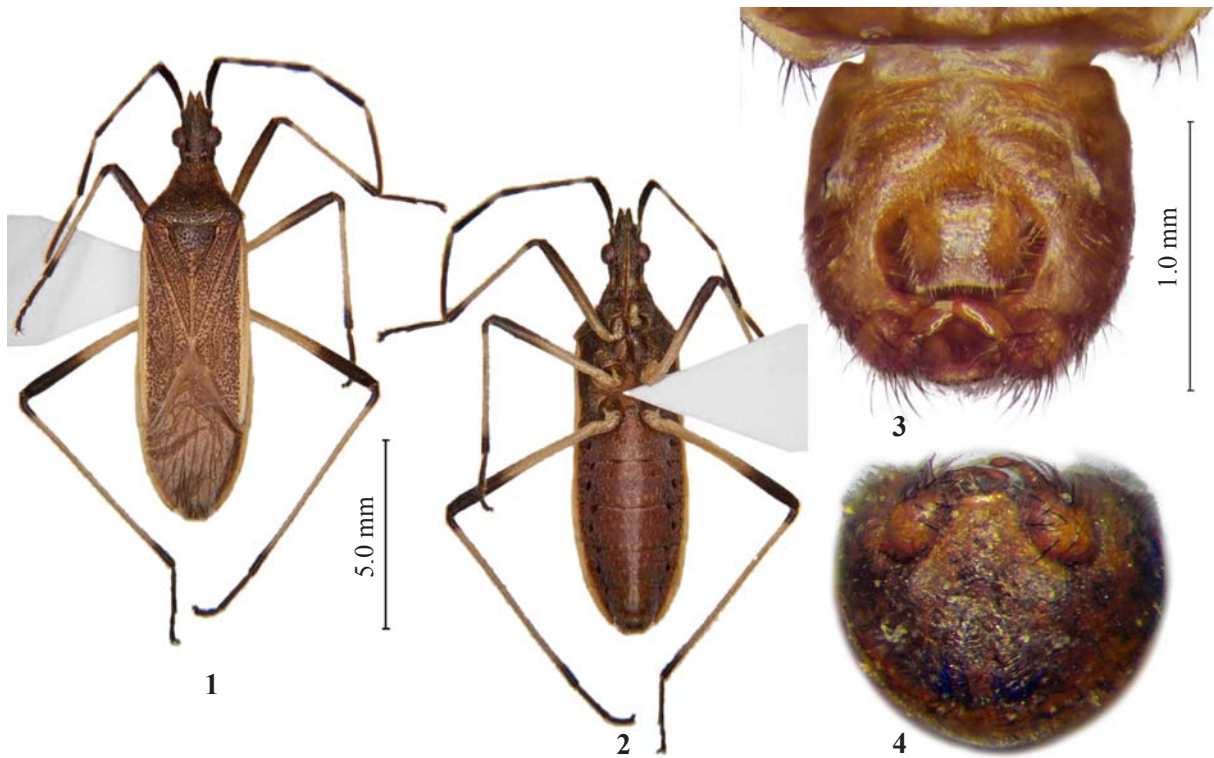
Family Stenocephalidae

Dicranocephalus marginatus (Ferrari, 1874)

Figs 1–6.

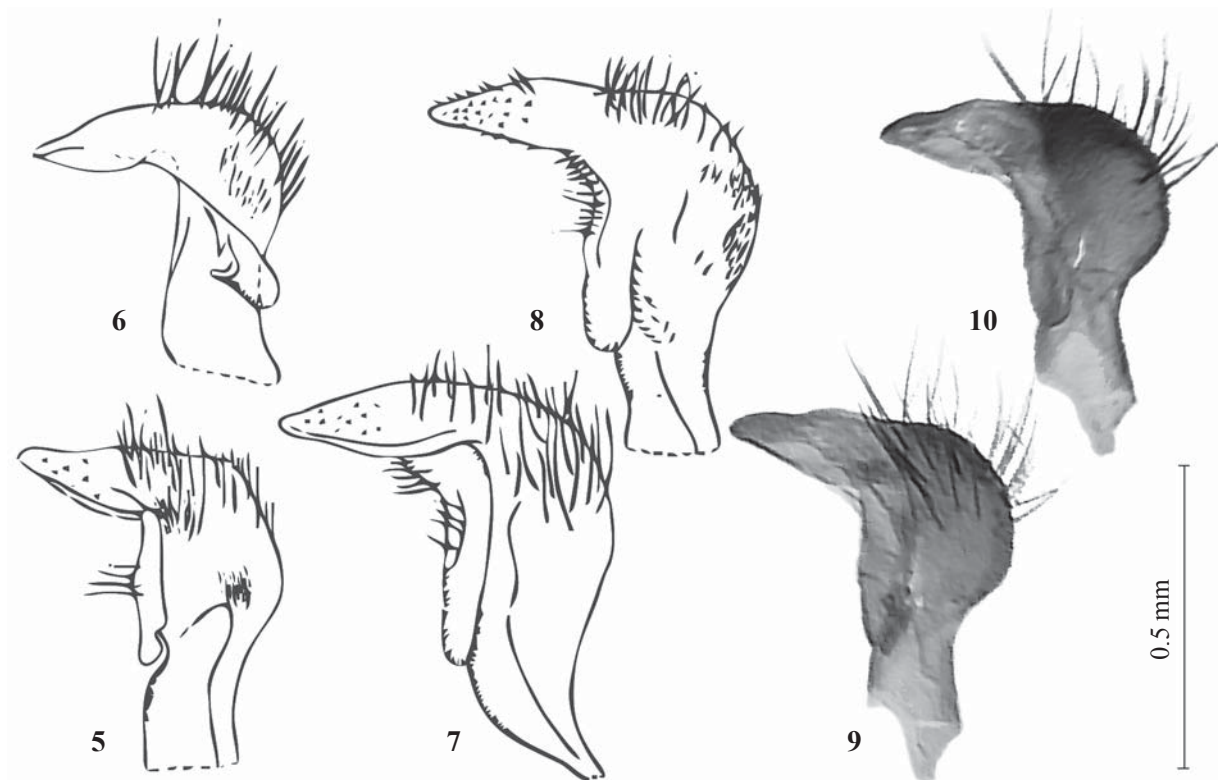
MATERIAL. 1 ♂, Russia, Astrakhan Prov., Narimanoskiy Distr., Davsna sands, 1.7 km SW of Barkhany Settlm., 46.672°E 46.292°N, 28.05.2016, K.A. Grebennikov leg.

NOTE. One specimen was collected by net sweeping in a dry sandy steppe from *Euphorbia seguieriana* Neck., 1770.



Figs 1–4. *Dicranocephalus marginatus*, male: 1–2 — habitus; 3–4 — pygophore; 1, 3 — dorsal view; 2 — ventral view; 4 — caudal view.

Рис. 1–4. *Dicranocephalus marginatus*, самец: 1–2 — внешний вид; 3–4 — пигофор; 1, 3 — сверху; 2 — снизу; 4 — сзади.



Figs 5–10. *Dicranocephalus* spp., male paramere: 5–6 — *D. marginatus*; 7–8 — *D. putoni*; 9–10 — *D. marginatus*; 5, 7, 9 — outer view; 6, 8, 10 — inner view; 5–8 — after Lansbury [1965].

Рис. 5–10. *Dicranocephalus* spp., самцы, параметры: 5–6 — *D. marginatus*; 7–8 — *D. putoni*; 9–10 — *D. marginatus*; 5, 7, 9 — снаружи; 6, 8, 10 — изнутри; 5–8 — по Lansbury [1965].

The biology of the species is very poorly studied. Based on the available records [Moulet, 1995; Carapezza et al., 2017; Bolu, 2020], it can be concluded that the species occurs on plants of the genus *Euphorbia* in various desert and steppe habitats.

The specimen examined undoubtedly belongs to *D. marginatus*, and not to the closely related *D. putoni* (Horváth, 1897) reinstated from the synonymy of the latter by Tshernova [1996], since the specimen has three dark rings on the second antennal segment, the light lateral stripe at corium, covering base of its outer vein, and rather sparse setae on the tibiae and antennae. The structure of the parameres of the specimen is also more similar to *D. marginatus*, but not to *D. putoni* (Figs 5–10), in the comparison with drawings by Lansbury [1965].

Most likely, *D. marginatus* is one of the elements of the Central Asian desert complex, entering to the south of the Lower Volga region from Kazakhstan along the Baer Knolls (the northwestern edge of which is the Davsna sands). Therefore, it is also almost certainly present in the south of the Republic of Kalmykia. Apparently, this region is also the northern border of the range of this species.

DISTRIBUTION. Russia (Astrakhan Province), **new record**; Asia: Kazakhstan (Asian part), Kirgizia, Uzbekistan, Tadjikistan, Turkmenistan, Turkey, Syria, Lebanon, Israel, Jordan, Saudi Arabia, Kuwait, United Arab Emirates, Oman, Iraq, Iran, Afghanistan, and India [Moulet, 1995; Dolling, 2006; Carapezza et al., 2017; Bolu, 2020].

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