

**Desert shield bug *Brachynema germarii* (Heteroptera: Pentatomidae) is found in the south of Eastern Siberia, Russia****Пустынный щитник *Brachynema germarii* (Heteroptera: Pentatomidae) обнаружен на юге Восточной Сибири, Россия**

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In the south of Eastern Siberia, the widespread desert bug *Brachynema germarii* (Kolenati, 1846) from the family Pentatomidae was found. The species was collected at light in the Transbaikalian Terr. in the Daurian State Nature Reserve not far from the border with Mongolia and in a building in the south of the Krasnoyarsk Territory, where it was probably brought from the Tyva Republic.

На юге Восточной Сибири обнаружен широко распространённый пустынный клоп *Brachynema germarii* (Коленати, 1846) из семейства клопов-щитников (Pentatomidae). Клоп был пойман на свет в Забайкальском крае в Даурском государственном заповеднике близ границы с Монголией, а также найден в помещении на юге Красноярского края, куда он, вероятно, был завезён из Тувы.

**Key words:** shield bugs, fauna, Eastern Siberia, Transbaikalia, Tyva, Heteroptera, Pentatomidae, *Brachynema germarii*, new record

**Ключевые слова:** клопы-щитники, фауна, Восточная Сибирь, Забайкалье, Тува, Heteroptera, Pentatomidae, *Brachynema germarii*, новая находка

**INTRODUCTION**

The paper reports the most northern (up to 52°N) findings of the desert shield bug *Brachynema germarii* (Kolenati, 1846) in the south of the Transbaikalian and Krasnoyarsk Territories. These records are quite interesting with respect to the zoogeography.

The specimen collected in Transbaikalian Territory is stored in the collection of the Siberian Zoological Museum of the Institute of Systematics and Ecology of Ani-

mals, the Siberian Branch of the Russian Academy of Sciences (Novosibirsk); the specimen from the Krasnoyarsk Territory is preserved in the collection of N.S. Babichev in V.N. Sukachev's Forest Institute, the Siberian Branch of the Russian Academy of Sciences (Krasnoyarsk). The additional material examined in this work is stored in depositories, for which the following abbreviations are used: ZISP – the Zoological Institute of the Russian Academy of Sciences (St Petersburg); IBPC – the Institute for Biological Problems of Cryolithozone, the Siberian Branch of the Russian Academy of Sciences (Yakutsk).

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**DISTRIBUTION**

Family **PENTATOMINAE** Leach, 1815

Subfamily **PENTATOMINAE** Leach, 1815

Tribe **CARPOCORINI** Mulsant et Rey, 1866

Genus ***Brachynema*** Mulsant et Rey, 1852

***Brachynema germarii*** (Kolenati, 1846)

(Figs 1, 2 as electronic supplementary material; see Addenda)

*Material examined.* **Russia:** *Transbaikal Terr.*, Daurian State Nature Reserve, isthmus between Torei Lakes, 6 km from Tely Mt. (50°06.4'N, 115°41.4'E), 4–5.VII.2011 (V.V. Dubatlov), 1 female; *Krasnoyarsk Terr.*, Ermakovskiy Distr., Verkhneusinskoe Vill. (52°14'N, 93°01'E), 24.VII.2017 (N.S. Babichev), 1 male. **Mongolian People's Republic,** *Uvs Prov.:* "Uvs-Nur" [Uvs] Lake, 50 km E Ulaangom, 6.VIII.1970 (V.F. Zaitsev), 1 female [ZISP]; *Govi-Altai Prov.:* 43 km S Bulgat, 2 km N Alag-Nur Lake, 1050 m amsl, 26–28.VIII.2017 (R.V. Yakovlev, V. Rudoj), 2 males, 2 females [IBPC]. **People's Republic of China,** *Xinjiang Uygur Autonomous Region,* Guerbantonggute Desert, 65 km N Urumchi (44°27'N, 87°52'E), 2.VIII.2010 (N. Vinokurov), 1 male [IBPC].

*Distribution.* *Brachynema germarii* is widely distributed from the Canary Islands and the entire Mediterranean through Transcaucasia, the deserts of the Near and Middle East, Central and Southern Kazakhstan, Central Asia to Mongolia and Northern China (Rider, 2006). In Ukraine, it is known from Zmievskiy District of Kharkov Province (Isakov, 2002). In the south of the European part of Russia, the species was recorded from the south of Voronezh Province (Kalach), from Rostov (Taganrog), Volgograd (Sarepta), Astrakhan' and Orenburg Provinces (Isakov, 2002; Rider, 2006), Central and Eastern Ciscaucasia: Stavropol Province and Dagestan (Kukharuk, 2008; Kiritshenko, 1951; Kerzhner, 1964). In Kazakhstan, the species is distributed south of the line Kalmykovo – mouth of the Temir River (a tributary of the Emba River) – Chelkar – Irgiz – Karaganda –

Zaisan Lake (Isakov, 2002). In Mongolia, it occurs in Khovd, Govi-Altai, Bayankhongor, Övörkhangai, Dundgovi, Ömnögovii and Dornogovi Aimags; the species was not found in the northern and eastern Aimags (Kiritshenko & Kerzhner, 1972). In China, it is widespread in the Xinjiang Uygur, Xizang and Nei Mongol Autonomous Regions, including Ordos City and Hebei Province (Ma et al., 1991; Nonnaizab et al., 1999; Rider et al., 2002; Liu & Bu, 2009).

In Siberia, there were no known findings of this species until now. We have studied two specimens from the south of Eastern Siberia, the female collected in the Transbaikal Territory (Fig. 1 in Addenda) and the male from the south of the Krasnoyarsk Territory (Fig. 2 in Addenda). The comparison with specimens from Xinjiang (China) and Western Mongolia from the IBPC collection confirmed the belonging of the Siberian specimens to *B. germarii*.

In Transbaikalia, *B. germarii* flew to the light of a UV-luminescent lamp (DRV type, 160 W, 220 V) putted up for catching night moths in the Daurian State Reserve in the dry steppe on the isthmus between the Torei Lakes (the Tely Cordon located 6 km to the north of the eponymous mountain) not far from the Mongolia-Russia border (Fig. 3 in Addenda). The nearest point in which the species was found in Mongolia is located 600 km to the west at 48°N in the dry steppe zone within Bayan-Önjüül Sum of Töv Aimag (Ulykpan, 1977). At the same time, it has not yet been recorded in Mongolian Dornod and Sükhbaatar Aimags adjacent to Transbaikalia (Kiritshenko & Kerzhner, 1972). According to the Chinese heteropterologist Xiaoshuan Bai (pers. comm.), the extreme eastern point of the species distribution in the Gobi Desert in China is the city of Eren-Hoto (112°E), and the species does not occur in the northeast of Inner Mongolia.

The second finding of *B. germarii* in Siberia was made in the south of the Krasnoyarsk Territory (the Western Sayan) by N.S. Babichev, the researcher of V.N. Su-

kachev's Forest Institute, the Siberian Branch of the Russian Academy of Sciences. The bug was found in the airport building in Verkhneusinskiy Vill. of Ermakovskiy District, to which it was accidentally brought from neighboring Tyva by someone from the personnel of the forest aviation detachment based there, as the collector suggested (Babichev, pers. comm.). According to the literary data (Kiritshenko & Kerzhner, 1972), *B. germarii* is known in Western Mongolian Khovd and Govi-Altai Aimags. In October 2017, the first author studied one specimen (female) of *B. germarii* from in the ZISP collection, found by V.F. Zaitsev 50 km to the south of Uvs Lake (the first record for Uvs Prov. of Mongolia). Taking this finding into account, it is possible to assume the distribution of *B. germarii* in the southern and central parts of Tyva, where semi-desert areas with nanophytions (*Nanophyton erinaceum* Bge.) reach Kyzyl. The finding of the desert Mediterranean-Gobic species of *B. germarii* in the south of Transbaikalia is interesting because it allows us to assume the distribution of the species also in Dornod Aimag of Mongolia.

In conclusion, it should be noted that during entomological studies in recent years, the desert species *Holcocranum diminutum diminutum* Horváth, 1898 (Gapon & Kuzhuget, 2011) and *Asaroticus solskyi* (Jakovlev, 1873) (Kuzhuget, 2012), new for the fauna of Siberia, were found in Tyva. Thus the distribution of *B. germarii* in the south of Eastern Siberia is quite expected.

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- ADDENDA**
- Electronic supplementary material.* Image files: Figs 1–3. File format: TIFF. Available from: <http://www.zin.ru/journals/zsr/content.asp?year=2018>
- Explanation note for electronic material.* **Figs. 1, 2.** *Brachynema germarii*. **1**, specimen from Transbaikal Terr., Daurian State Nature Reserve (photo by V.V. Dubatolov), female; **2**, specimen from Krasnoyarsk Terr., Verkhneusinskoe Vill., Western Sayan, male (photo by N.S. Babichev). **Fig. 3.** Daurian State Nature Reserve, cordon Tely (photo by V.V. Dubatolov). **Fig. 4.** Landscape of Western Sayan near Verkhneusinskoe Vill. (photo by N.S. Babichev).
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