ПОЛЕВОЙ ЖУРНАЛ БИОЛОГА. 2024. Том 6, № 4 (360–364)
FIELD BIOLOGIST JOURNAL. 2024. Volume 6, No. 4 (360–364)

УДК 595.76
DOI 10.52575/2712-9047-2024-6-4-360-364

New Records of Tiger Beetles (Coleoptera: Cicindelidae) in the North of the Lower Volga Region

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Received August 16, 2024; Revised October 14, 2024; Accepted October 16, 2024

Abstract. The paper presents new records of tiger beetles (Coleoptera: Cicindelidae) in the northern part of the Lower Volga Region (the Saratov Region). All the species (*Cicindela maritima kirgisica* Mandl, 1936, *Cephalota deserticola deserticola* Faldermann, 1836, and *Cylindera contorta contorta* (Fischer von Waldheim, 1828) were recorded in the Saratov Region for the first time. Two species, *C. d. deserticola* and *C. c. contorta*, previously known from the neighboring Volgograd Region, were recorded at the northern limit of their ranges.

Keywords: fauna, the Saratov Region, beetles, tiger beetles, distribution

Funding: the work of A.S. Sazhnev was carried out within the framework of state assignment No. 124032500016-4.

For citation: Sazhnev A.S., Gusev D.A. 2024. New Records of Tiger Beetles (Coleoptera: Cicindelidae) in the North of the Lower Volga Region. *Field Biologist Journal*, 6(4): 360–364. DOI: 10.52575/2712-9047-2024-6-4-360-364

Новые находки жуков-скакунов (Coleoptera: Cicindelidae) на севере Нижнего Поволжья

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Поступила в редакцию 16.08.2024; поступила после рецензирования 14.10.2024; принята к публикации 16.10.2024

Аннотация. Приводятся новые находки жуков-скакунов (Coleoptera: Cicindelidae) на севере Нижнего Поволжья (Саратовская область). Все виды (*Cicindela maritima kirgisica* Mandl, 1936, *Cephalota deserticola deserticola* Faldermann, 1836 и *Cylindera contorta contorta* (Fischer von Waldheim, 1828)) впервые приводятся для территории Саратовской области. Два вида отмечены на северной границе своих ареалов, это *C. d. deserticola* и *C. c. contorta*, находки которых ранее были известны южнее – из соседней Волгоградской области.

Ключевые слова: фауна, Саратовская область, жесткокрылые, жуки скакуны, распространение

Финансирование: работа А.С. Сажнева выполнена в рамках исследований по программе государственного задания № 124032500016-4.

Для цитирования: Sazhnev A.S., Gusev D.A. 2024. New Records of Tiger Beetles (Coleoptera: Cicindelidae) in the North of the Lower Volga Region. *Field Biologist Journal*, 6(4): 360–364. DOI: 10.52575/2712-9047-2024-6-4-360-364

Introduction

A preliminary species list of Cicindelidae (Coleoptera) family for the Saratov Region was published in 2010 and included information on nine species of tiger beetles [Sazhnev, Rodnev, 2010], some of which were marked as possible or ones requiring confirmation for the region. Later there were practically no additions to the species list, only one species *Calomera littoralis conjunctaepustulata* Dokhtouroff, 1887 from the Transvolga Region was listed as new for the Saratov Region [Sazhnev, Anikin, 2014].

New entomological studies have made it possible to extend the list of species of this group for the Saratov Region and to clarify the northern distribution limit of some species in the Lower Volga Region.

Material and methods

The entomological material for this report was collected by the authors in two districts of the Saratov Region (with the material from the Volgograd Region added) and is stored in their private collections (D.A. Gusev's collection in Volsk, and A.S. Sazhnev's collection in Saratov). Beetles were caught with the help of an entomological net. Photographs of mounted beetles and its habitats were taken by D.A. Gusev.

GPS coordinates were taken according to Google Maps.

The nomenclature was adopted from the latest edition of Word Checklist of tiger beetles [Wiesner, 2020].

Results

The following is a list of tiger beetle species with some comments on their distribution.

Cephalota (*Taenidia*) *deserticola deserticola* Faldermann, 1836 (Fig. 1).

Fig. 1. *Cephalota deserticola deserticola* Faldermann, 1836 and its habitat – solonchak near Sarepta (Volgograd)
Рис. 1. *Cephalota* (*Taenidia*) *deserticola deserticola* Faldermann, 1836 и его местообитание – солончак близ станции Сарепты (г. Волгоград)

The material examined: the Saratov Region, Aleksandrovo-Gaysky District, environs of Vetyolki vill., 49.9636N / 48.2538E, semi-desert, solonchak, May 28, 2016 (1 specimen), A.S. Sazhnev leg.; the Volgograd Region, Volgograd, environs of Sarepta railway station, solonchak, July 3–4, 2024 (1 specimen) D.A. Gusev leg.

Note. This species has been recorded in the Saratov Region for the first time. The record of this halophile species in the Saratov Region is among the northernmost in the European part of its range. In the Volgograd Region, it is also known from the shores of salty Elton Lake [Kalyuzhnaya et al., 2000; Makarov et al., 2009].

Cicindela (*Cicindela*) *maritima kirgisica* Mandl, 1936 (Fig. 2).

The material examined: the Saratov Region, Volsky District, Volsk, the Volga River bank, sandy beach, 52.0418N / 47.4107E, June 20–25, 2024 (1 specimen), D.A. Gusev leg.

Note. This species has been recorded in the Saratov Region for the first time, while earlier it was considered as possible for the region [Sazhnev, Rodnev, 2010]. In Volsk it was found together with the species of tiger beetle described below The transition zone between the nominotypical subspecies and *C. m. kirgisica* in the Volga Region extends north of the Lower Volga Region and includes the territory of Middle Volga: Penza, Ulyanovsk and Samara Regions [Matalin, 2002].

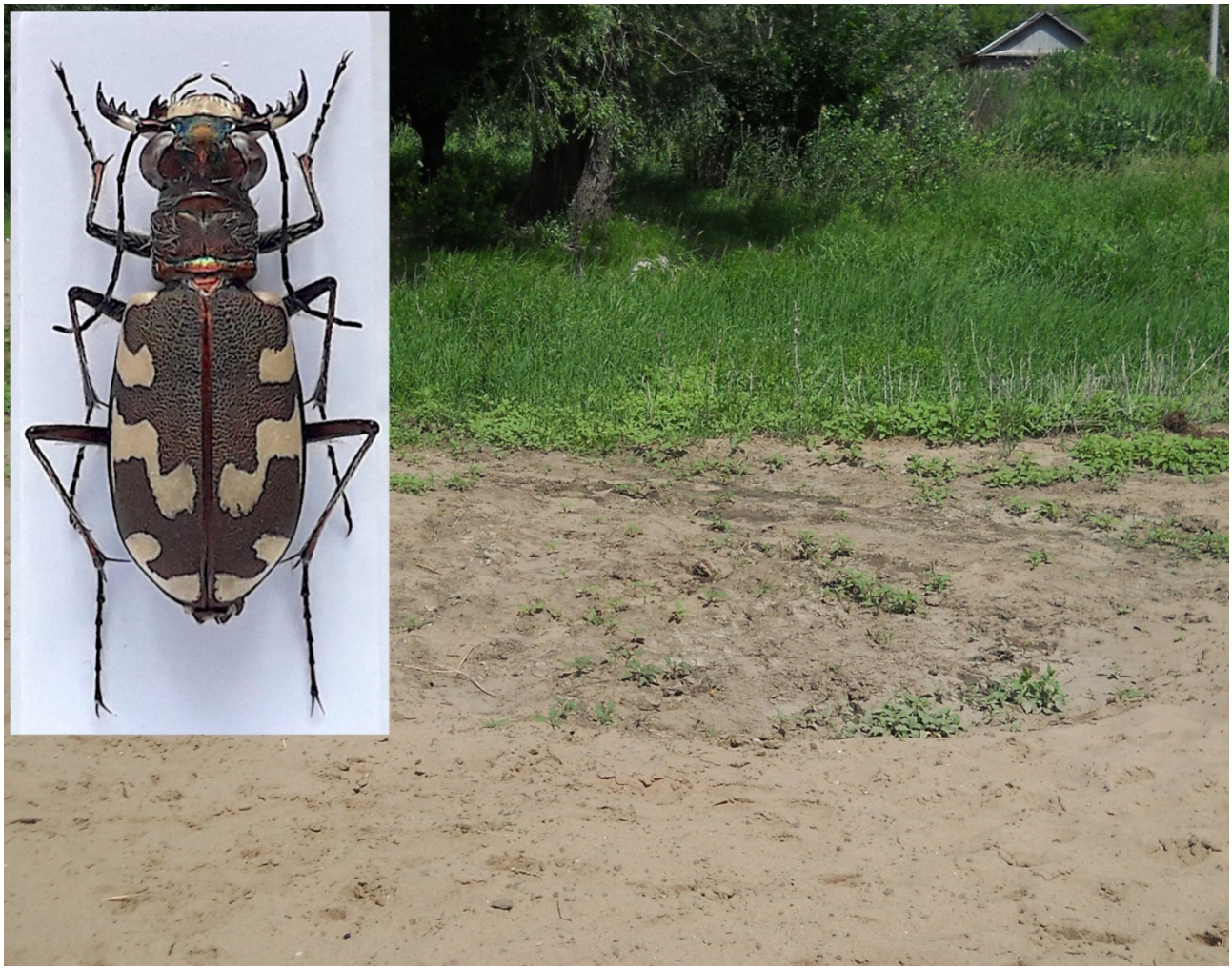

Fig. 2. *Cicindela maritima kirgisica* Mandl, 1936 and its habitat –
the Volga River bank, sandy beach (Volsk, Volsky District, Saratov Region)
Рис. 2. *Cicindela maritima kirgisica* Mandl, 1936 и его местообитание –
берег реки Волги, песчаный пляж (г. Вольск, Вольский район, Саратовская область)

Cylindera (*Eugrapha*) *contorta contorta* (Fischer von Waldheim, 1828) (Fig. 3).

The material examined: the Saratov Region, Volsky District, Volsk, the Volga River bank, sandy beach, 52.0418N / 47.4107E, June 20–25, 2024 (12 specimen), D.A. Gusev leg.

Note. This species has been recorded in the Saratov Region for the first time. From the regions closest to the Saratov Region, *C. contorta* is known in Volga-Akhtubinsk floodplain of Sarpinsky Island, the Volgograd Region [Kalyuzhnaya et al., 2000], and in the environs of Elton Lake [Makarov et al., 2009]. The new record shifts the northern limit of *C. contorta* distribution about 400 km to the north. The newly found population of *C. contorta* lives on the sandy bank of the Volga River and occupies a 20–30-meter zone of the shoreline in a low relief at a distance of 10 meters from the water edge. The relative density of larval burrows (3–4 mm in diameter) three to four ones per square meter along the perimeter of a highly humid depression well corresponds with previous data [Putchkov et al., 2019].

Fig. 3. *Cylindera contorta contorta* (Fischer von Waldheim, 1828) and section of the Volga River bank, where a population of this species was found (Volsk, Volsky District, Saratov Region)
Рис. 3. *Cylindera contorta contorta* (Fischer von Waldheim, 1828) и участок берега реки Волги, где была найдена популяция этого вида (г. Вольск, Вольский район, Саратовская область)

Conclusion

Now the regional fauna of tiger beetle includes 12 species: *Calomera littoralis conjunctaepustulata*, *Cephalota atrata* (Pallas, 1776), *C. chiloleuca* (Fischer von Waldheim, 1820), *C. deserticola deserticola*, *C. elegans elegans* (Fischer von Waldheim, 1823), *Cicindela campestris pontica* (Fischer von Waldheim, 1828), *C. maritima kirgisica*, *C. sahlbergii sahlbergii* Fischer von Waldheim, 1824, *C. soluta soluta* Dejean, 1822, *C. sylvatica sylvatica* Linnaeus, 1758, *Cylindera*

contorta contorta, and *C. germanica germanica* (Linnaeus, 1758). One more species, *Cicindela hybrida* Linnaeus, 1758, known from the northwestern part of the Saratov Region [Sazhnev, Rodnev, 2010] requires confirmation.

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Conflict of interest: no potential conflict of interest related to this article was reported.
Конфликт интересов: о потенциальном конфликте интересов не сообщалось.

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