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A check-list of the Aradidae (Insecta, Heteroptera) of Tyumen Oblast

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Abstract. The article provides a faunistic list of Aradidae species found in Tyumen Oblast (excluding autonomous okrugs) from 1876 to 2025. As a result of this inventory, 18 species of the Aradidae family have been identified in Tyumen Oblast, five of which are reported for the first time: *Aradus aterrimus* Fieber, 1864, *A. bimaculatus* Reuter, 1872, *A. brevicollis* Fallen, 1807, and *A. pictellus* Kerzhner, 1973. The article also highlights the first record of a species dangerous to young Scots pine (*Pinus sylvestris*), *A. cinnamomeus* Panzer, 1806. The species *A. bimaculatus* Reuter, 1872 is recorded for the first time from Western Siberia. The presence of *A. brevicollis* Fallen, 1807 in Western Siberia, which had been questioned, is also confirmed.

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Keywords: Aradidae, Aneurus, Aradus, Tyumen Oblast, Western Siberia, Russia

Список видов Aradidae (Insecta, Heteroptera) Тюменской области

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Аннотация. В статье приводится фаунистический список видов семейства Aradidae (Heteroptera), выявленных на территории Тюменской области (без автономных округов) с 1876 по 2025 гг. В результате инвентаризации на территории Тюменской области выявлено 18 видов клопов-подкорников, из них пять приводятся впервые, это: *Aradus aterrimus* Fieber, 1864, *A. bimaculatus* Reuter, 1872, *A. brevicollis* Fallen, 1807, *A. pictellus* Kerzhner, 1973, а также первое упоминание опасного вида — вредителя соснового молодняка *A. cinnamomeus* Panzer, 1806. Вид *A. bimaculatus* Reuter, 1872 впервые приводится для территории Западной Сибири. Также подтверждено обитание *A. brevicollis* Fallen, 1807 в Западной Сибири, которое нуждалось в подтверждении.

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Ключевые слова: Aradidae, Aneurus, Aradus, Тюменская область, Западная Сибирь, Россия

Introduction

Tyumen Oblast is a federal subject of the Russian Federation; along with its own territory, it administratively includes two autonomous okrugs: Khanty-Mansi Autonomous Okrug – Yugra and Yamalo-Nenets Autonomous Okrug. In this paper, the author examines the species composition of Aradidae in Tyumen Oblast excluding the autonomous okrugs.

Tyumen Oblast, located in the south of Western Siberia, extends across three natural zones: its northern part lies within the southern taiga, the central part occupies the subzone of small-leaved forests, and the southern territories fall within the forest-steppe. The southern taiga is characterized by dense coniferous spruce-fir forests. The small-leaved zone is dominated by birch-aspen forests in combination with Scots pine (*Pinus sylvestris* L.) and rare fragments of broad-leaved forests represented by small-leaved linden (*Tilia cordata* Mill.). The forest-steppe is characterized by the predominance of birch, which to the south becomes separated stands interspersed with grassland. The climate is continental, with long winters and relatively short summers.

The fauna of Aradidae in Tyumen Oblast remained poorly studied until the 21st century. In the 19th century, two species were recorded (Sahlberg 1878). In the 20th century, eight species were reported from the study area (Kirichenko 1913; Samko 1930; Kanyukova 1984; Vinokurov, Kanyukova 1995; Vinokurov et al. 2010). In the first quarter of the 21st century, eight additional species were identified. Data on three of these have already been published in part (Sergeeva, Ivanov 2019; Sergeeva et al. 2022), while data on five more species — *Aradus aterrimus* Fieber, 1864, *A. bimaculatus* Reuter, 1872, *A. brevicollis* Fallen, 1807, *A. cinnamomeus* Panzer, 1806, and *A. pictellus* Kerzhner, 1973 — are presented here for the first time.

Material and methods

This study employed conventional survey methods, including manual collection, light trapping (often using an ultraviolet lamp) and

barrier traps. The majority of the unpublished material presented in this work was collected by the author and is deposited in his private collection.

Depositories (excluding data from inaturalist.org): **KGD** — collection of D. Galich (Tyumen).

Abbreviations used in the text: **IBPC SB RAS** — Institute for Biological Problems of Cryolithozone, Siberian Branch of the Russian Academy of Sciences; **Siberian FES** — Siberian Forest Experiment Station, All-Russian Research Institute of Silviculture and Mechanization of Forestry; **UV lamp** — ultra-violet lamp; **Km** — kilometre; **Spm** — specimen.

List of species

Aradidae Brulle, 1836

Genus Aneurus Curtis, 1825

Aneurus avenius (Dufour, 1833)

In Tyumen Oblast, the species was first recorded in 1930 near Tobolsk (Samko 1930; Bukhkalov et al. 2014), later discovered in Nizhnetavdinsky District (Ivanov 2015), and subsequently in Tyumen District and the vicinity of Tyumen. The most recent records are published here for the first time.

Material. **Tyumen Oblast, Tyumen district**, Irbitsky tract, 57°18'30"N 64°58'01"E, 22.07.2021 — 1 spm. (D. Galich) [KGD]; **Tyumen**, arboretum of the Siberian FES, 57°09'37" N, 65°27'26" E, 18.05.2022 — 1 spm. (D. Galich) [KGD], ibidem, 01.06. — 1 spm. (D. Galich) [KGD], ibidem, 05.07.2022 — 1 imago and 7 nymphs (D. Galich) [KGD].

Distribution. Transpalearctic.

Remarks. In Tyumen Oblast, this species is locally distributed. Records from 2015 and 2022–2023 were noted on tinder fungi on dried birch trees.

Genus Aradus Fabricius, 1803

Aradus annulicornis Fabricius, 1803

Known only from older collections (Kirichenko 1913 (*Aradus anisotomus*); Kanyukova 1984 (*A. anisotomus*); Vinokurov et al. 2010).

Distribution. Transeurasian.

Aradus aterrimus Fieber, 1864 (Fig. 1.1)

Material. **Tyumen Oblast, Tyumen**, arboretum of the Siberian FES, captured using a UV

lamp, 57°09'36" N, 65°27'24" E, 25.05.2022 — 1 spm. (D. Galich) [KGD].

Distribution. Transeurasian.

Remarks. The species is recorded from Tyumen Oblast for the first time.

Aradus betulae (Linnaeus, 1758)

A widespread species found throughout the study area. It was among the first species recorded in Tyumen Oblast (Sahlberg 1878; Samko 1930), has been mentioned in a more recent publication (Bukhkalov et al. 2014), and is also represented by abundant unpublished material.

Material. Tyumen Oblast, Tyumen District, Novotarmansky village, manual collection, 56°16'38" N, 65°14'07" E, 20.07.2021 — 1 spm. (D. Galich) [KGD]; 2.7 km. south-southwest of Taraskul health resort, barrier trap 1-1, 56°59'21" N, 65°28'04" E, 03.06.2022 — 2 spm. (D. Galich) [KGD]; barrier trap 1-2, 56°59'20" N, 65°28'01" E, 27.05.2022 — 1 spm. (D. Galich) [KGD]; barrier trap 1-3, 56°59'20" N, 65°27'59" E, 10.06.2022 — 1 spm. (D. Galich) [KGD]; barrier trap 2-1, 56°59'16" N, 65°27'53" E, 03.06.2022 — 1 spm. (D. Galich) [KGD], ibidem, 17.06.2022 — 1 spm. (D. Galich) [KGD]; barrier trap 2-2, 56°59'18" N, 65°27'49" E, 13.05.2022 — 1 spm. (D. Galich) [KGD]; barrier trap 2-3, 56°59'19" N, 65°27'47" E, 27.05.2022 — 1 spm. (D. Galich) [KGD], ibidem, 03.06.2022 — 1 spm. (D. Galich) [KGD]; Tyumen, arboretum of the Siberian FES, manual collection, 57°09'38" N, 65°27'24" E, 16.05.2023 — 1 spm. (D. Galich) [KGD], ibidem 05.07.2023 — 6 spm. (D. Galich) [KGD]; Kazansky District, northeast part of Siverga Lake, manual collection, 55°27'59" N, 68°48'31" E, 18.06.2024 — 1 spm. (D. Galich) [KGD].

Distribution. Transeurasian.

Aradus betulinus Fallén, 1807

Known only from older collections in Tyumen Oblast (Kirichenko 1913).

Distribution. Transeurasian forest.

Remarks. For a long time, this species was known from a single record (Kirichenko 1913) in Western Siberia, from Tyumen Oblast. In recent research in Western Siberia, it was recorded in neighboring Kurgan Oblast in 1998 (Balakhonova 2012).

Aradus bimaculatus Reuter, 1872 (Fig. 1.2)

Material. Tyumen Oblast, Tyumen, arboretum of the Siberian FES, captured using a UV lamp, 57°09'36" N, 65°27'24" E, 26.05.2022 — 1 spm. (D. Galich) [KGD]; 57°08'57" N, 65°35'10" E, 31.05.2024 — 1 spm. (A. Osipova); information available on inaturalist.org (Osipova 2024).

Distribution. From Europe to Tuva and the mountains of Central Asia.

Remarks. The species is recorded from Tyumen Oblast for the first time, and this is the first record from Western Siberia.

Aradus brevicollis Fallen, 1807 (Fig. 1.3)

Material. Tyumen Oblast, Tyumen District, 2.7 km. south-southwest of Taraskul health resort, barrier trap 2-2, 56°59'18" N, 65°27'49" E, 10.06.2022 — 1 spm. (D. Galich) [KGD]; barrier trap 2-3, 56°59'19" N, 65°27'47" E, 27.05.2022 — 1 spm. (D. Galich) [KGD].

Distribution. Transeurasian forest species with a disjunct distribution in Western Siberia.

Remarks. This is the first record of the species in Tyumen Oblast. It confirms the species' presence in Western Siberia. Previously listed in the catalogue (Heiss 2001). According to Russian scientists the occurrence of this species required confirmation (Vinokurov et al. 2010: 171). In addition, there is another unpublished record of this species in Western Siberia, from Novosibirsk Oblast in 2025; information available on inaturalist.org (Romanov 2025).

Aradus cinnamomeus Panzer, 1806 (Fig. 1.4)

Material. Tyumen Oblast, Tyumen, arboretum of the Siberian FES, window trap with a UV lamp, 57°09'37" N, 65°27'19" E, 06.06.2025 — 1 spm. (D. Galich) [KGD].

Distribution. Euro-Yeniseian; Transcaucasia, Türkiye, Kazakhstan.

Remarks. The species is recorded from Tyumen Oblast for the first time.

Aradus conspicuus Herrich-Schaeffer, 1835

Known only from older collections from Tobolsk (Vinokurov, Kanyukova 1995; Vinokurov et al. 2010).

Distribution. Central and Southern Europe, in the East of Tyumen; also recorded from Türkiye, Syria, and Tunisia.

Aradus corticalis (Linnaeus, 1758)

Known only from older published records (Kirichenko 1913; Vinokurov et al. 2010; Bukhkalo et al. 2014) and from unpublished findings.

Material. Tyumen Oblast, *Tobolsk District*, 3.5 km southeast of Degtyareva village, 57°52'28" N 68°07'10" E, 18.08.2021 — 1 spm. (D. Galich) [KGD].

Distribution. Transeurasian forest.

Aradus crenaticollis R.F. Sahlberg, 1848

The species was discovered relatively recently in Tyumen Oblast, being found in Tobolsk, in 2015. This record was published by (Sergeeva, Ivanov 2019). Several additional specimens were also noted in our material.

Material. Tyumen Oblast, *Tobolsk District*, near Vinokurova village, 58°21'05" N, 68°20'25" E, 13.08.2008 — 1 spm. (D. Galich) [KGD]; Tyumen District, 2.7 km south-southwest of Taraskul health resort, barrier trap 1-1, 56°59'21" N, 65°28'04" E, 10.06.2022 — 1 spm. (D. Galich) [KGD]; *Tyumen*, arboretum of the Siberian FES, manual collection, 57°09'38" N, 65°27'24" E, 26.04.2023 — 1 spm. (D. Galich) [KGD].

Distribution. Transeurasian forest.

Aradus depressus (Fabricius, 1794)

In Tyumen Oblast, the species is known from older published collections (Sahlberg 1878; Kirichenko 1913) and is also present in our unpublished materials.

Material. Tyumen Oblast, *Tyumen*, 57°07'39"N 65°35'03"E, 02.06.2023 — 1 spm. (D. Galich) [KGD].

Distribution. Transeurasian forest.

Aradus hieroglyphicus J. Sahlberg, 1878

In Tyumen Oblast, the species is known from older collections (Samko 1930) and is also present in published material by the author (Bukhkalo et al. 2014).

Distribution. East Palearctic.

Aradus laeviusculus Reuter, 1875

A species recently discovered in Tyumen Oblast (Sergeeva, Ivanov 2019).

Distribution. Transeurasian forest.

Aradus lugubris Fallén, 1807

A widespread species found throughout Tyumen Oblast from the southern taiga to the forest-steppe. Along with *Aradus betulae*, it is one of

the most numerous Aradidae species in the study area. In Tyumen Oblast, the species is known from both older published records (Kirichenko 1913; Samko 1930) and more recent ones (Vinokurov et al. 2010; Bukhkalo et al. 2014). Abundant unpublished material is also available.

Material. Tyumen Oblast, *Tobolsk District*, Abramova village, manual collection, 58°24'24" N, 68°25'40" E, 06.05.2023 — 1 spm. (D. Galich) [KGD], ibidem 23.06.2024 — 2 spm. (D. Galich) [KGD]; *Tyumen District*, 2 km northwestern of Znamenka village (uninhabited), 56°59'58" N, 65°53'13" E, 27.04.2022 — 1 spm. (D. Galich) [KGD]; 2.7 km south-southwest of Taraskul health resort, barrier trap 1-1, 56°59'21" N, 65°28'04" E, 01.07.2022 — 1 spm., nymph (D. Galich) [KGD]; barrier trap 2-2, 56°59'18" N, 65°27'49" E, 29.04.2022 — 1 spm. (D. Galich) [KGD]; *Tyumen*, 57°07'39" N, 65°35'03" E, 22.07.2023 — 1 spm. (D. Galich) [KGD], ibidem 18.09.2023 — 1 spm. (D. Galich) [KGD]; *Tyumen*, arboretum of the Siberian FES, manual collection, 57°09'35" N, 65°27'29" E, 06.06.2025 — 1 spm. (D. Galich) [KGD]; arboretum of the Siberian FES, light trapping, 57°09'37" N, 65°27'19" E, 30.05.2023 — 1 spm. (D. Galich) [KGD], ibidem 08.09.2023 — 1 spm. (D. Galich) [KGD], ibidem 25.09.2023 — 1 spm. (D. Galich) [KGD], ibidem 11.06.2024 — 1 spm. (D. Galich) [KGD]; *Ishim*, 56°07'11" N, 69°28'15" E, 25.04.2023 — 1 spm. (S. Kvashnin); information available on inaturalist.org (Kvashnin 2023).

Distribution. Holarctic.

Aradus pictellus Kerzhner, 1973 (Fig. 1.5)

= *A. obtectus* (Heiss, Scudder 2019)

Material. Tyumen Oblast, *Tyumen District*, 2.7 km south-southwest of Taraskul health resort, barrier trap 1-1, 56°59'21" N, 65°28'04" E, 27.05.2022 — 1 spm. (D. Galich) [KGD], ibidem 03.06.2022 — 1 spm. (D. Galich) [KGD]; barrier trap 2-2, 56°59'18" N, 65°27'49" E, 27.05.2022 — 4 spm. (D. Galich) [KGD], ibidem 03.06.2022 — 1 spm. (D. Galich) [KGD]; barrier trap 2-3, 56°59'19" N, 65°27'47" E, 27.05.2022 — 1 spm. (D. Galich) [KGD]; Nizhnetavdinsky District, 2 km northeast of Tyunevo village, manual collection, 57°23'59"N 65°44'34"E, 09.06.2024 — 1 spm. (D. Galich) [KGD].

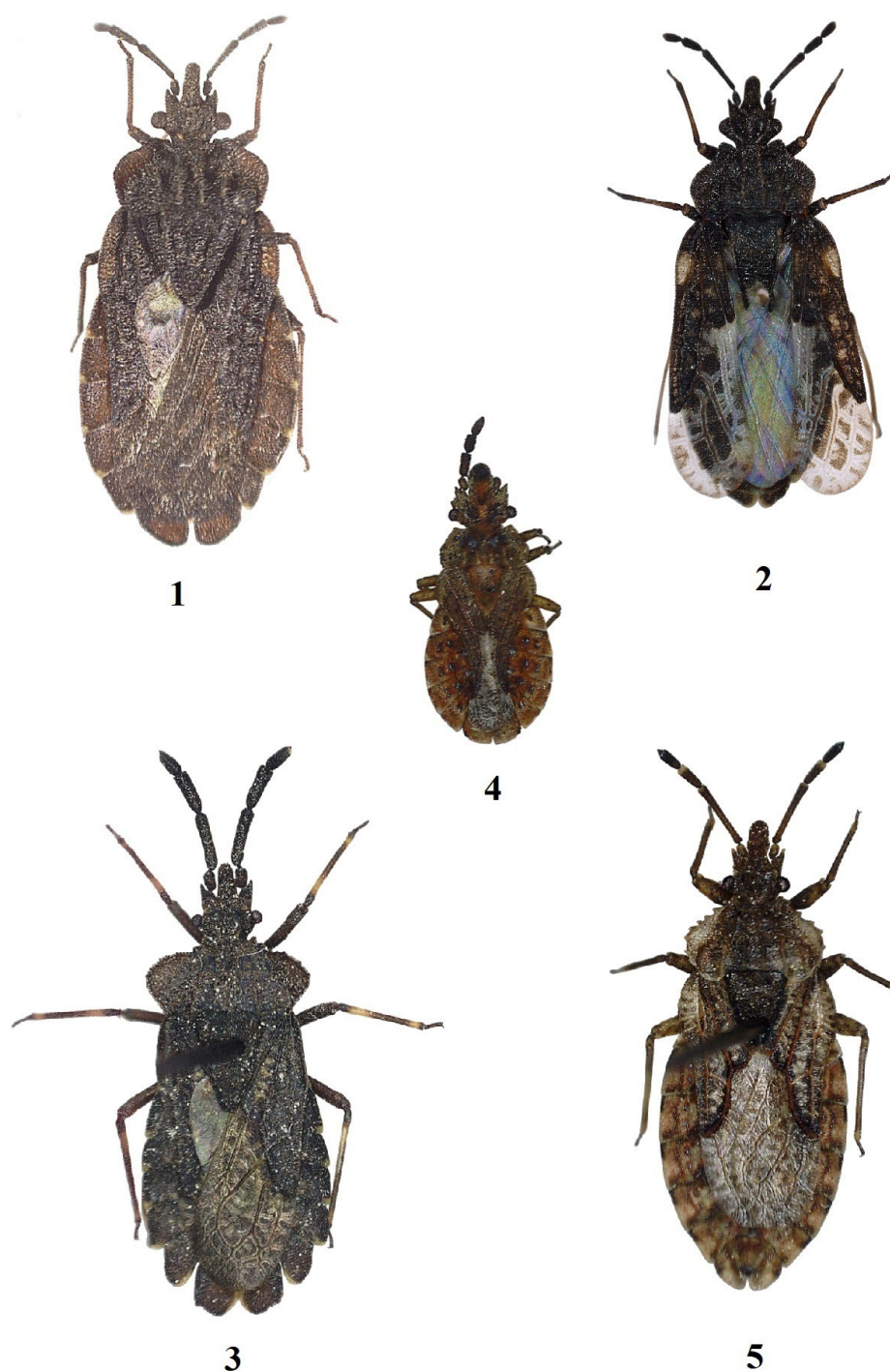


Fig. 1. New records of *Aradus* species in Tyumen Oblast

1.1. *Aradus aterrimus* Fieber, 1864; **1.2.** *A. bimaculatus* Reuter, 1872;
1.3. *A. brevicollis* Fallen, 1807; **1.4.** *A. cinnamomeus* Panzer, 1806;
1.5. *A. pictellus* Kerzhner, 1973

Рис. 1. Новые находки видов из рода *Aradus* на территории Тюменской области.

1.1. *Aradus aterrimus* Fieber, 1864; **1.2.** *A. bimaculatus* Reuter, 1872;
1.3. *A. brevicollis* Fallen, 1807; **1.4.** *A. cinnamomeus* Panzer, 1806;
1.5. *A. pictellus* Kerzhner, 1973

Distribution. Transeurasian forest.

Remarks. The species is recorded from Tyumen Oblast for the first time.

Aradus ribauti Wagner, 1956

For Tyumen Oblast, the species is known from published records (Kanyukova 1984; Vinokurov, Kanyukova 1995; Vinokurov et al 2010). This species is not yet represented in our material.

Distribution. Euro-Obsky.

Aradus signaticornis R.F. Sahlberg, 1848

In Tyumen Oblast, the species was recently discovered (Sergeeva et al. 2022). This species is not yet represented in our material.

Distribution. Holarctic boreal.

cies from the genus *Aneurus* and 17 species from the genus *Aradus*.

Five species are reported here for the first time: *Aradus aterrimus* Fieber, 1864 *A. bimaculatus* Reuter, 1872, *A. brevicollis* Fallen, 1807, *A. cinnamomeus* Panzer, 1806, and *A. pictellus* Kerzhner, 1973. The species *A. bimaculatus* Reuter, 1872 is recorded for the first time from Western Siberia. The presence of *A. brevicollis* Fallen, 1807 in Western Siberia, which had been questioned, is also confirmed.

It is quite possible that one or two additional species of the genus *Aradus* will be found in the study area.

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Conclusion

Currently, 18 species of Aradidae have been recorded for Tyumen Oblast: one spe-

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