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Articles

New data on true bugs (Heteroptera) from the Tigirek Strict Reserve (Altai Krai, Russia)

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The paper contains data on 79 species of true bugs, collected by the third author at of the Tigirek Strict Reserve in 2013–2015, comprising 23 species new for the Asian part of Russia, Western Siberia, the Altai Krai and the reserve area. The species recorded for the first time include *Heterogaster artemisiae* Schilling, 1829 (Lygaeidae) for the Asian part of Russia, *Tingis* (*Tingis*) *crispata* (Herrich-Schaeffer, 1838) (Tingidae) for Siberia, and *Sacculifer picticeps* Kerzhner, 1959 (Miridae) for Western Siberia. Five new species were recorded for the Altai Krai: *Himacerus* (*Himacerus*) *apterus* (Fabricius, 1798) (Nabidae); *Charagochilus* (*Charagochilus*) *gyllenhalii* (Fallén, 1807) (Miridae); *Berytinus* (*Lizinus*) *crassipes* (Herrich-Schaeffer, 1835) (Berytidae); *Lamproplax membranea* Distant, 1883, *Trapezonotus* (*Gnopherus*) *anorus* (Flor, 1860) (Lygaeidae). For the fauna of the Tigirek Strict Reserve, the species recorded for the first time include *Nabis* (*Nabis*) *rugosus* (Linnaeus, 1758) (Nabidae); *Deraeocoris* (*Deraeocoris*) *ater* (Jakovlev, 1889), *Halticus apterus apterus* (Linnaeus, 1758), *Criocoris quadrimaculatus* (Fallén, 1807), *Europiella artemisiae* (Becker, 1864) (Miridae); *Acalypta marginata* (Wolff, 1804), *Dictyla humuli* (Fabricius, 1794) (Tingidae); *Camptotelus lineolatus lineolatus* (Schilling, 1829), *Drymus* (*Sylvadrymus*) *brunneus brunneus* (R.F. Sahlberg, 1848), *Trapezonotus* (*Trapezonotus*) *arenarius arenarius* (Linnaeus, 1758), *Megalonotus chiragra* (Fabricius, 1794) (Lygaeidae); *Stictopleurus viridicatus* (Uhler, 1872) (Rhopalidae); *Canthophorus impressus* (Horváth, 1880) (Cydnidae); *Eurygaster dilaticollis* Dorhn, 1860 (Scutelleridae); *Eurydema* (*Eurydema*) *gebleri gebleri* Kolenati, 1846 (Pentatomdiae). The material from the Tigirek Strict Reserve supports the distribution of *Stygnocoris rusticus* (Fallén, 1807) (Lygaeidae) in the Altai Krai. The updated list of true bugs from the Tigirek Strict Reserve includes 199 species from 20 families.

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Keywords

Insects, biodiversity, Heteroptera, Tigirek Strict Reserve, Altai Krai, Siberia, fauna, new records

Introduction

The fauna of true bugs of Altai draws attention of numerous researchers. An important milestone of its study is the publication of the Catalog of the Heteroptera from the Asian part of Russia (Vinokurov et al. 2010), which provides data on true bugs of the region from the first half of the 19th century to the beginning of the second millennium. After this publication, the list of true bugs of the region was repeatedly expanded (Kuzhuget 2012a, 2012b; Grandova 2013; Vinokurov and Golub 2016; Vinokurov 2019; Vinokurov and Rudoi 2020, 2022a, 2022b; Golub et al. 2021). At present, the fauna of the Altai Republic includes 383 species, of the Altai Krai – 353 species.

Still, the list of the true bugs of Altai fauna is far from being complete, and new studies are necessary. In this regard, true bugs were collected in the Tigirek Strict Reserve, North-Western Altai. The reserve was founded in 1999 to preserve the biodiversity of the typical Chernevaya taiga and other natural complexes of the middle mountains in the North-Western Altai. The reserve is located in the southwestern part of the Altai Krai (Fig. 1), on the left bank of the upper Charysh basin. The reserve covers 82,802 ha (Fig. 2A). The most part of the reserve occupies the northern part of the Tigirek range, covered by taiga and subalpine forests. The northern part of the reserve displays the low-mountain forest-steppe of the Krasnoshchekovsk limestone uplift (Davydov et al. 2011).

The relief of the reserve is characterised by middle mountains with domed peaks. ASL heights range within 495–2013 m, average ASL heights vary within 800–1000 m. The dominant peaks in the reserve are the highest points of the Tigirek range – Chernaya (2013 m) and Razrabotnaya (1962 m) mountains. The tributaries of the Charysh river form the hydrographic network of the reserve; the largest rivers of the reserve are Belaya and Inya rivers (Davydov et al. 2011).

The fauna of true bugs of the Tigirek Strict Reserve and the North-Western Altai as a whole remained almost unstudied until recently, and the first data on 65 species from 47 genera of 12 families were published by R.O. Kusnetzova (2005) only at the beginning of this century. A.A. Knyshov and A.A. Namyatova (2010) supplemented the list of fauna with 97 species from 71 genera of 18 families. These data were summarized in the annotated list of invertebrates recorded from the Tigirek Strict Reserve (Volynkin et al. 2011) and amounted to 147 species from 17 families.

We analyzed the material collected in recent years by the staff of the reserve to report new data on 79 species of true bugs from 14 families; 23 species from 9 families have been recorded for the first time. In addition, the paper provides an updated list of true bugs from the Tigirek Strict Reserve.

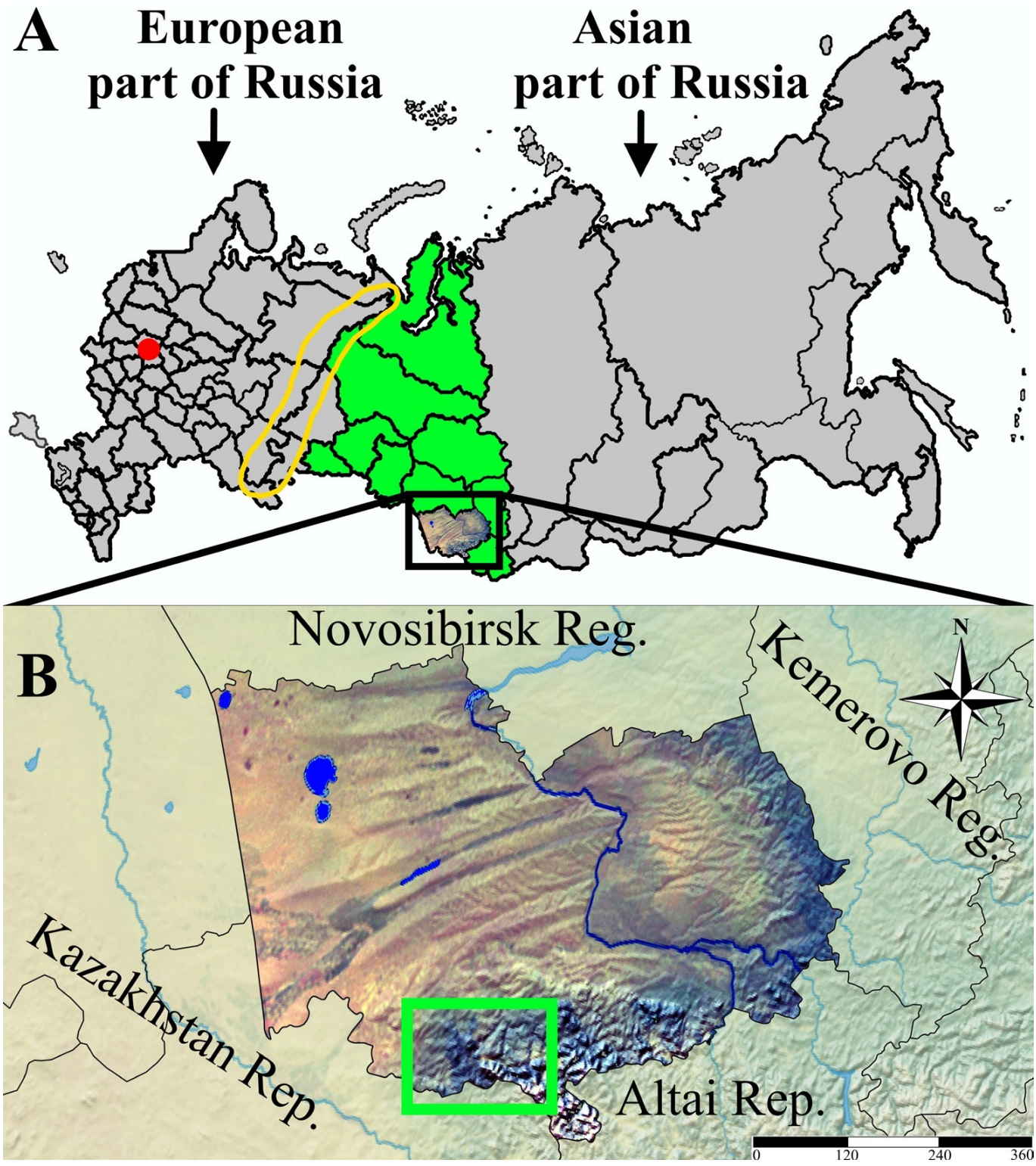

Figure 1. *Location of the Altai Krai and the Tigirek State Nature Reserve on the map of Russia. On the general map (**A**), the capital is circled red; the Urals are outlined by yellow line; Western Siberia regions are indicated by green line; the Altai Krai is marked with dark rectangle. On a larger scale (**B**), the Tigirek State Nature Reserve is highlighted with green rectangle.*

Materials and methods

The material was collected in 2013–2015 by the collector Tatiana M. Krugova, in some cases

together with volunteers of the reserve, using conventional methods (Golub et al. 2012). The insects were collected in the northern forest-steppe part of the reserve (near the village Tigirek, Krasnoshchekovsk district, the Altai Krai). True bugs were collected from six habitats. In five of these habitats, the material was collected by soil traps exposed at the beginning and end of summer of 2014 (10 traps at each habitat in May 18–28 and August 29–September 8). One more habitat, the petrophytic meadow steppe, censuses were performed by mowing herbaceous vegetation using an entomological net during May–September 2013–2015.

True bugs were collected in the following biotopes:

1. Bushy idle field – left bank of the Bol’shoy Tigirek river, near Shlyapnaya and Kozyr’ Mts. (51°08'40"N, 83°00'20"E) – Fig. 2B, point 1. Soil traps were exposed in May 18–28 and August 29–September 8, 2014. Shrub layer from 30–40 to 150 cm in height: *Pentaphylloides fruticosa* (L.) Rydb. (Rosaceae), single *Lonicera tatarica* L. (Caprifoliaceae) and *Caragana arborescens* Lam. (Fabaceae). Grass stand includes *Festuca altissima* All., *F. rubra* L., *Elymus gmelinii* (Ledeb.) Tzvelev, *Phleum pratense* L., *Poa pratensis* L., *P. nemoralis* L., *Dactylis glomerata* L. (Poaceae), *Taraxacum officinale* F.H. Wigg., *Artemisia campestris* L., *Centaurea ruthenica* Lam., *Hieracium umbellatum* L., *Achillea millefolium* L. (Asteraceae), *Allium strictum* Schrad. (Alliaceae), *Bupleurum multinerve* DC. (Apiaceae), *Echium vulgare* L. (Boraginaceae), *Thymus marschallianus* Willd., *Scutellaria supina* L., *Origanum vulgare* L., *Phlomoides tuberosa* (L.) Moench, *Dracocephalum ruysvhianum* L., *D. nutans* L., *D. thymiflorum* L. (Lamiaceae), *Sanguisorba officinalis* L., *Potentilla chrysantha* Trevir., *Filipendula vulgaris* Moench, *Fragaria viridis* (Weston) (Rosaceae), *Galium verum* L. (Rubiaceae), *Gypsophila altissima* L. (Caryophyllaceae), *Polygala* sp. (Polygalaceae), *Thalictrum simplex* L. (Ranunculaceae), *Veronica porphyriana* Pavlov (Scrophulariaceae), *Vicia* sp. and *Trifolium pratense* L. (Fabaceae). Moss cover developed.

2. Petrophytic feather grasssteppe: *Cotoneaster* sp., *Spiraea trilobata* L. (Rosaceae), *Caragana pygmaea* (L.) DC (Fabaceae) and *Berberis sibirica* Pall. (Berberidaceae) on the southern slope of Mt. Kozyr’ (51°08'56.9"N, 83°00'46.2"E) – Fig. 2B, point 2. Soil traps were exposed in May 18–28 and August 29–September 8, 2014. Sparse grass stand dominated by *Stipa pennata* L. (Poaceae). Rocky outcrops attaining 20–90% of the soil surface.

3. Petrophytic meadow steppe: *Cotoneaster* sp., *Spiraea trilobata* (Rosaceae), *Caragana pygmaea* (L.) DC (Fabaceae) and *Berberis sibirica* Pall. (Berberidaceae) was explored at southern and eastern slopes of Mt. Chaynaya (51°07'49.52"N, 83°01'43.98"E) – Fig. 2B, point 3. Grass mowing with an entomological net was performed in May–September, 2013–2015. Sparse grass stand dominated by *Stipa pennata* L. (Poaceae). Moss cover developed. Rare rocky outcrops.

4. Chernevaya taiga was explored at the right bank of the Malyy Tigirek river, northeastern slope of Mt. L’vinyy kamen’ (51°07'29.2"N, 83°02'12.5"E) – Fig. 2B, point 4. Soil traps were exposed in May 18–28 and August 29–September 8, 2014. Grass stand includes *Abies sibirica* Ledeb. (Pinaceae), *Populus tremula* L. (Salicaceae) and single *Betula pendula* Roth (Betulaceae), shrubs are represented by *Padus avium* Mill., *Sorbus sibirica* Hedl., *Spiraea chamaedryfolia* L. (Rosaceae) and *Ribes atropurpureum* C.A. Mey. (Grossulariaceae). Grass stand exhibits a well-developed tall grass layer – *Aconitum septentrionale* Koelle (Ranunculaceae), *Bupleurum longifolium* L., *Angelica sylvestris* L. (Apiaceae), *Urtica dioica* L. (Urticaceae), *Dryopteris* sp. (Dryopteridaceae), *Senecio nemorensis* L., *Crepis sibirica* L. (Asteraceae), *Stachys sylvatica* L. (Lamiaceae), *Lathyrus gmelinii* Fritsch (Fabaceae); the lower grass layer includes *Carex macroura* Meinsh (Cyperaceae), *Milium effusum* L. (Poaceae), *Asperula odorata* L. (Rubiaceae), *Oxalis acetosella* L. (Oxalidaceae) and *Viola uniflora* L. (Violaceae).

5. Shrubland was explored at the left bank of the Malyy Tigirek river, the lower part of the eastern slope of Mt. Chaynaya (51°08'07.3"N, 83°02'29.4"E) – Fig. 2B, point 5. Soil traps were exposed in May 18–28 and August 29–September 8, 2014. Shrub height attains up to 3 m.: *Caragana arborescens* Lam. (Fabaceae), *Lonicera tatarica* L. (Caprifoliaceae) and *Padus avium* Mill.

(Rosaceae). Sparse grass stand includes *Carex macroura* Meinsh. (Cyperaceae), *Dactylis glomerata* L. (Poaceae), *Arctium tomentosum* Mill., *Alfredia cernua* (L.) Cass. (Asteraceae), *Urtica* sp. (Urticaceae), *Paeonia* sp. (Paeoniaceae), *Ranunculus* sp., *Thalictrum petaloideum* L., *Clematis integrifolia* L., *Trollius asiaticus* L. (Ranunculaceae), *Bupleurum* sp. (Apiaceae), *Galium* sp. (Rubiaceae) and *Erythronium sibiricum* (Fisch. et C.A. Mey.) Krylov (Liliaceae).

6. Birch forest (Betula pendula Roth (Betulaceae)) was explored at the left bank of the Malyy Tigirek river (51°08'30.5"N, 83°02'43.4"E) – Fig. 2, B, point 6. Soil traps were exposed in May 18–28 and August 29–September 8, 2014. Sparse shrub layer includes *Padus avium* Mill. (Rosaceae), single *Viburnum opulus* L. (Viburnaceae) and *Salix* sp. (Salicaceae). Poorly developed grass stand dominated by Poaceae and *Carex macroura* Meinsh. (Cyperaceae).

The images of true bug adults and their genitalia were taken with a digital camera Olympus DP74 and Olympus SZX16 attached to the stereomicroscopes Olympus XC50 and Olympus BX51. The photographs were edited in Paint.net, a free (except for Microsoft Store) raster graphics editor for Windows NT based on NET Framework (getpaint.net). The map with sampled localities was produced using the online mapping software SimpleMappr (Shorthouse 2010). Plant species were verified based on the data provided in plantarium.ru (Plantarium 2007–2022). The families, genera, subgenera, species, and subspecies were listed in the order of the Catalog of the Palaearctic Heteroptera (1995–2006). The species definitions were provided by the first author under the guidance of the second author.

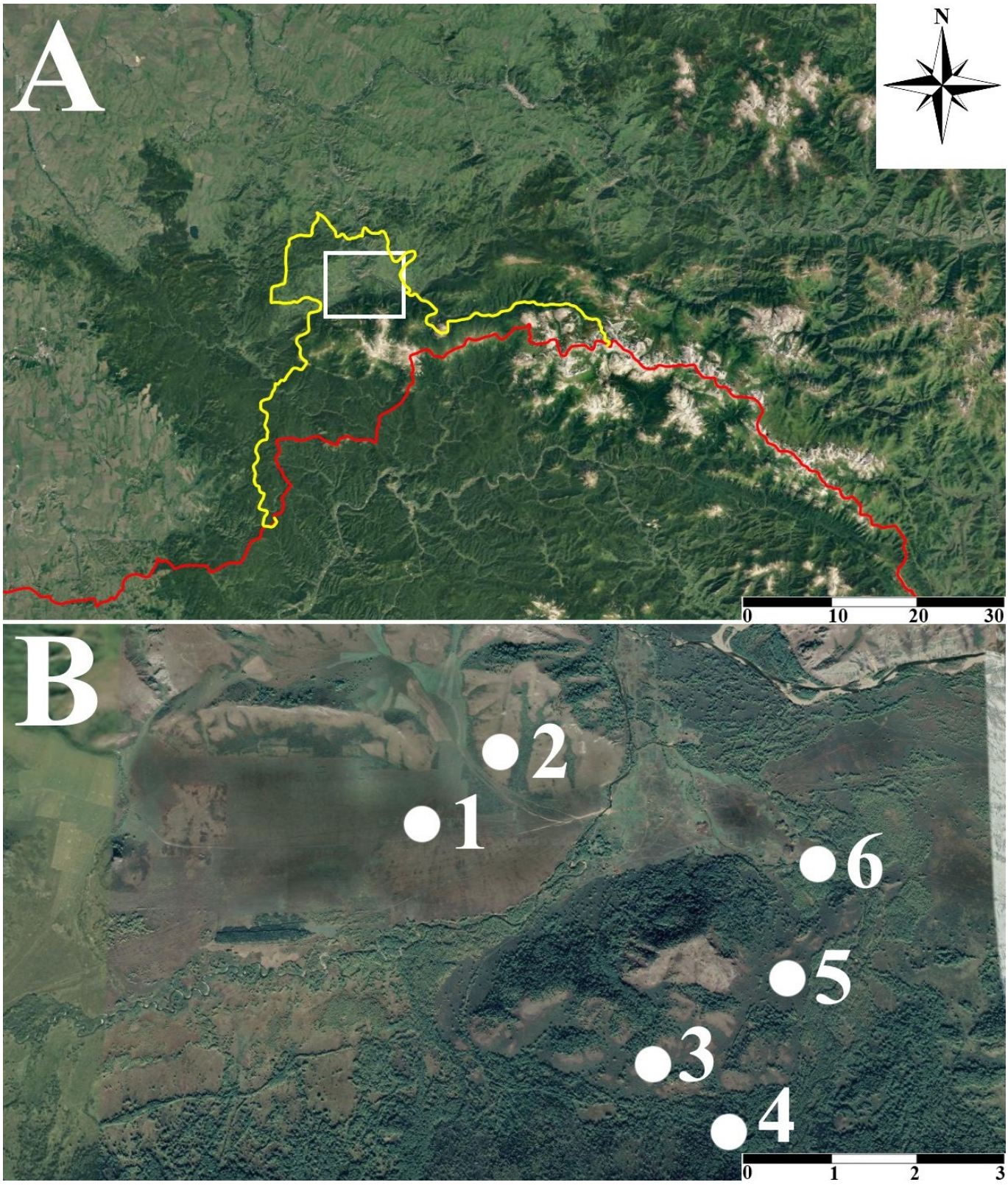

Figure 2. *Sampling plots for true bugs (Heteroptera) in the Tigirek State Nature Reserve. The border of the Tigirek State Nature Reserve is highlighted on the general map (**A**). Yellow line indicates the border of the Tigirek State Nature Reserve in the Altai Krai; red line indicates the border of the Russian Federation and the Republic of Kazakhstan; white rectangle marks the study area. A larger scale (**B**) shows selected plots: **1** – left bank of the Bol'shoy Tigirek river, near Mts. Shlyapnaya and Kozyr'; **2** – S slope of Mt. Kozyr'; **3** – Mt. Chaynaya; **4** – right bank of the Malyy Tigirek river, NE lower slope of Mt. L'vinyy kamen'; **5** – left bank of the Malyy Tigirek river, lower E slope of Mt. Chaynaya; **6** – left bank of the Malyy Tigirek river.*

Result

New data on true bugs of the Tigirek Strict Reserve

Family Nabidae A. Costa, 1853

Himacerus (*Himacerus*) *apterus* (Fabricius, 1798)

Fig 3–1

Material. 1♀, Chernevaya taiga, northeastern slope of Mt. L’vinyy kamen’, 605 m, 29.08–8.09.2014.

Distribution. Trans-Palaearctic. In West Siberia recorded from the Altai Republic and Kemerovo region (Kerzhner 1981). First record from the Altai Krai.

Nabis (*Nabis*) *rugosus* (Linnaeus, 1758)

Material. 2♂, 4♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 18.09.2013; 19.08.2014; 28.05, 19.06, 12–31.08.2015.

Distribution. From West Europe east to the Yenisei river and the Altai Mts. In West Siberia recorded from the Altai Krai (Kerzhner 1981; Vinokurov and Rudoi 2022a, 2022b). First record from the Tigirek Strict Reserve.

Family Miridae Hahn, 1833

Deraeocoris (*Deraeocoris*) *ater* (Jakovlev, 1889)

Material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2015.

Distribution. East Palaearctic. In West Siberia recorded from the Altai Krai (Vinokurov and Golub 2007). First record from the Tigirek Strict Reserve.

Charagochilus (*Charagochilus*) *gyllenhalii* (Fallén, 1807)

Figs 3–2; 5–1, 2

Material. 1♂, birch forest, left bank of the Malyy Tigirek river, 500 m, 29.08– 8.09.2014.

Distribution. West-Central Palaearctic. In West Siberia recorded from Tyumen region (Samko 1930) and the Altai Republic (Vinokurov and Golub 2007). First record from the Altai Krai.

Halticus apterus apterus (Linnaeus, 1758)

Material. 1♂, 3♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07, 31.08.2015; 2♂, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 29.08–8.09.2014.

Distribution. Holarctic. In West Siberia recorded from the Altai Krai (Vinokurov and Golub 2007). First record from the Tigirek Strict Reserve.

Criocoris quadrimaculatus (Fallén, 1807)

Material. 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.06.2015.

Distribution. Euro-Siberian. In West Siberia recorded from the Altai Krai (Vinokurov and Golub 2007). First record from the Tigirek Strict Reserve.

Europiella artemisiae **(Becker, 1864)**

Material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 31.08.2015.

Distribution. Holarctic. In West Siberia recorded from the Altai Krai (Vinokurov and Golub 2007). First record from the Tigirek Strict Reserve.

Sacculifer picticeps **Kerzhner, 1959**

Fig 5–3, 4

Material. 1♂, 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2013.

Distribution. Eurasian steppe. In East Siberia recorded from Irkutsk region (Kerzhner 1959) and Yakutia (Kerzhner 1959; Vinokurov 1979; Vinokurov et al. 2003; Vinokurov 2020); known from east and southeast of Kazakhstan (Esenbekova 2013). First record from West Siberia.

Family Tingidae Laporte, 1832

Acalypta marginata **(Wolff, 1804)**

Material. 5♂, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 18– 28.05.2014.

Distribution. Trans-Palaearctic. In West Siberia recorded from the Altai Krai (Golub 1982; Vinokurov and Kanyukova 1995a, 1995b). First record from the Tigirek Strict Reserve.

Dictyla humuli **(Fabricius, 1794)**

Material. 1♂, 2♀, shrubland, the lower part of the eastern slope of Mt. Chaynaya, 500 m, 29.08–8.09.2014.

Distribution. Euro-Siberian. In West Siberia recorded from the Altai Krai (Petrova 1978). First record from the Tigirek Strict Reserve.

Tingis **(*Tingis*) *crispata*** **(Herrich-Schaeffer, 1838)**

Fig. 3–3

Material. 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.06.2015.

Distribution. Trans-Palaearctic. In Asian part of Russia recorded from the Far East (Golub 1988), known from the east and southeast of Kazakhstan (Esenbekova 2013). First record from Siberia.

Family Berytidae Feiber, 1851

Berytinus **(*Lizinus*) *crassipes*** **(Herrich-Schaeffer, 1835)**

Figs 3–4; 5–10

Material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 01.05.2013; 1♀, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 18–28.05.2014.

Distribution. West-Central Palaearctic. In West Siberia recorded from the Altai Republic (Kanyukova and Vinokurov 2009). First record from the Altai Krai.

Family Lygaeidae Schilling, 1829

Heterogaster artemisiae Schilling, 1829

Figs 4–1; 5–5

Material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 7.07.2014.

Distribution. West-Central Palaearctic. In Russia recorded from Central and Southern European part (Pericart 2001), ubiquitous in the territory of the Republic of Kazakhstan, except the western and southeastern parts (Esenbekova 2013). First record from Asian part of Russia.

Camptotelus lineolatus lineolatus (Schilling, 1829)

Material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06.2014.

Distribution. Eurasian. In West Siberia recorded from the Altai Krai (Vinokurov 2007). First record from the Tigirek Strict Reserve.

Drymus (*Sylvadrymus*) *brunneus brunneus* (R.F. Sahlberg, 1848)

Material. 2♂, Chernevaya taiga, northeastern slope of Mt. L'vinyy kamen', 605 m, 29.08–8.09.2014.

Distribution. Eurasian. In West Siberia recorded from the Altai Krai (Vinokurov and Rudoi 2022a). First record from the Tigirek Strict Reserve.

Lamproplax membranea Distant, 1883

Fig. 4–2

Material. 1♀, birch forest, left bank of the Malyy Tigirek river, 500 m, 29.08–8.09.2014.

Distribution. East Palaearctic. In West Siberia recorded from the Altai Republic (Vinokurov and Golub 2016; Golub et al. 2021). First record from the Altai Krai.

Trapezonotus (Gnopherus) anorus (Flor, 1860)

Figs 4–3; 5–6, 7

Material. 1♂, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 18–28.05.2014.

Distribution. Trans-Palaearctic. In West Siberia recorded from Tyumen (Sahlberg 1878; Sannikova 1975; Vinokurov 1990), Novosibirsk (Vinokurov 2007) and Tomsk regions (Kiritshenko 1910), and Altai Republic (Kiritshenko 1910; Vinokurov 1990). First record from the Altai Krai.

Trapezonotus **(*Trapezonotus*) *arenarius arenarius* (Linnaeus, 1758)**

Material. 1♀, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 18– 28.05.2014.

Distribution. Trans-Palaearctic. In West Siberia recorded from the Altai Krai (Kiritshenko 1910; Vinokurov 2007; Vinokurov and Rudoi 2022b). First record from the Tigirek Strict Reserve.

Megalonotus chiragra **(Fabricius, 1794)**

Material. 2♀, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 18– 28.05.2014.

Distribution. West-Central Palaearctic. In West Siberia recorded from the Altai Krai (Vinokurov 2007). First record from the Tigirek Strict Reserve.

Stygnocoris rusticus **(Fallén, 1807)**

Figs 4–4; 5–8, 9

Material. 1♂, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 29.08– 8.09.2014.

Distribution. Holarctic. The species record for the Altai Krai (Labina 2003) was disputable (Vinokurov et al. 2010), our finding confirmed its distribution in the Altai Krai.

Family Rhopalidae Amyot et Serville, 1843

Stictopleurus viridicatus **(Uhler, 1872)**

Material. 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06.2014.

Distribution. Holarctic. In West Siberia recorded from the Altai Krai (Putshkov 1986). First record from the Tigirek Strict Reserve.

Family Cydnidae Billberg, 1820

Canthophorus impressus impressus **(Horváth, 1880)**

Material. 2♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06.2014; 12.07.2015.

Distribution. Euro-Baikalian. In West Siberia recorded from the Altai Krai (Asanova 1964; Petrova 1975; Vinokurov and Rudoi 2022a, 2022b). First record from the Tigirek Strict Reserve.

Family Scutelleridae Leach, 1815

Eurygaster dilaticollis **Dorhn, 1860**

Material. 2♂, 4♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06, 19.08.2014; 19.06, 12.07.2015.

Distribution. Eurasian. In West Siberia recorded from the Altai Krai (Petrova 1975; Vinokurov and Rudoi 2022a, 2022b). First record from the Tigirek Strict Reserve.

Family Pentatomidae Leach, 1815

Eurydema **(*Eurydema*) *gebleri gebleri* Kolenati, 1846**

Material. 7♂, 10♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 18.09.2013; 17.05, 08.09.2014; 19.06, 12–31.08, 28.09.2015.

Distribution. Euro-Siberian. In West Siberia recorded from the Altai Krai (Petrova 1975). First record from the Tigirek Strict Reserve.

List of true bugs (Heteroptera) of the Tigirek Strict Reserve

Family Saldidae Amyot et Serville, 1843

1. Saldula saltatoria (Linnaeus, 1758)

Family Gerridae Leach, 1815

2. Gerris (*Gerris*) *lacustris* (Linnaeus, 1758)

Family Nabidae A. Costa, 1853

3. *Himacerus* (*Himacerus*) *apterus* (Fabricius, 1798)

4. *Nabis* (*Dolichonabis*) *limbatus* Dahlbom, 1851

5. *Nabis* (*Nabicula*) *flavomarginatus* Scholtz, 1847

6. *Nabis* (*Nabis*) *brevis brevis* Scholtz, 1847

Addition material. 1 ex, birch forest, left bank of the Malyy Tigirek river, 500 m, 28.08–8.09.2014; 1♀, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 29.08–8.09.2014; 14♂, 15♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 2.05, 21.06, 19.08, 8.09.2014; 28.05, 12.07, 31.08.2015.

7. *Nabis* (*Nabis*) *ferus* (Linnaeus, 1758)

8. *Nabis* (*Nabis*) *punctatus mimoferus* Hsiao, 1964

Addition material. 1♀, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 29.08–8.09.2014; 4♂, 10♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 1.05, 18.09.2013; 2–17.05, 21.06, 7.07, 19.08, 8.09.2014; 28.05, 12.07, 28.09.2015.

9. *Nabis* (*Nabis*) *rugosus* (Linnaeus, 1758)

Family Anthocoridae Fieber, 1836

10. *Acompocoris alpinus* Reuter, 1875

11. *Anthocoris limbatus* Fieber, 1836

12. *Anthocoris nemorum* (Linnaeus, 1761)

13. *Tetraphleps aterrima* (J. Sahlberg, 1878)

14. *Orius* (*Heterorius*) *minutus* (Linnaeus, 1758)

15. *Orius* (*Orius*) *niger* (Wolff, 1811)

Family Miridae Hahn, 1833

16. *Monalocoris (Monalocoris) filicis* (Linnaeus, 1758)

17. *Bothynotus pilosus* (Boheman, 1852)

18. *Deraeocoris* (*Camptobrochis*) *punctulatus* (Fallén, 1807)

19. *Deraeocoris* (*Deraeocoris*) *annulipes* (Herrich-Schaeffer, 1842)

20. *Deraeocoris* (*Deraeocoris*) *ater* (Jakovlev, 1889)

21. *Deraeocoris* (*Deraeocoris*) *scutellaris* (Fabricius, 1794)

22. *Adelphocoris lineolatus* (Goeze, 1778)

Addition material. 1 ex, 5♂, 20♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2013; 7–26.07, 19.08, 8.09.2014; 19.06, 12.07, 12–31.08.2015.

23. *Adelphocoris quadripunctatus* (Fabricius, 1794)

24. *Adelphocoris seticornis* (Fabricius, 1775)

25. *Adelphocoris triannulatus* (Stål, 1858)

26. *Allorhinocoris flavus* J. Sahlberg, 1878

27. *Apolygus limbatus* (Fallén, 1807)

28. *Apolygus lucorum* (Meyer-Dür, 1847)

29. *Brachycoleus decolor* Reuter, 1887

Addition material. 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2015.

30. *Capsodes gothicus gothicus* (Linnaeus, 1758)

31. *Capsus cinctus* (Kolenati, 1845)

32. *Capsus pilifer* (Remane, 1950)

33. *Capsus wagneri* (Remane, 1950)

34. *Charagochilus* (*Charagochilus*) *gyllenhalii* (Fallén, 1807)

35. *Closterotomus samojedorum* (J. Sahlberg, 1878)

36. *Lygidea illota* (Stål, 1858)

37. *Lygocoris* (*Lygocoris*) *pabulinus* (Linnaeus, 1761)

Addition material. 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya,

500–600 m, 21.06.2014.

38. Neolygus contaminatus (Fallén, 1807)

39. *Lygus pratensis* (Linnaeus, 1758)

40. *Lygus rugulipennis* Poppius, 1911

41. *Lygus wagneri* Remane, 1955

42. Orthops (*Orthops*) *campestris* (Linnaeus, 1758)

43. *Orthops mutans* (Stål, 1858)

44. *Polymerus* (*Poeciloscytus*) *brevicornis* (Reuter, 1879)

45. *Polymerus* (*Poeciloscytus*) *microphthalmus* (Wagner, 1951)

46. *Polymerus* (*Poeciloscytus*) *unifasciatus* (Fabricius, 1794)

Addition material. 8♂, 10♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 7.07, 19.08.2014; 19.06, 12.07, 12.08.2015.

47. *Polymerus* (*Poeciloscytus*) *vulneratus* (Panzer, 1806)

48. *Polymerus (Pachycentrum) nigrita* (Fallén, 1807)

Addition material. 2♂, 4♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2015.

49. *Salignus distinguendus* (Reuter, 1875)

50. *Stenotus binotatus* (Fabricius, 1794)

51. *Leptopterna albescens* Reuter, 1891

52. *Megaloceroea recticornis* (Geoffroy, 1785)

53. *Notostira elongata* (Geoffroy, 1785)

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2015.

54. *Notostira sibirica* Golub, 1978

55. *Stenodema* (*Brachystira*) *calcarata* (Fallén, 1807)

56. *Stenodema* (*Brachystira*) *trispinosa* Reuter, 1904

57. *Stenodema* (*Stenodema*) *holsata* (Fabricius, 1787)

58. *Stenodema* (*Stenodema*) *sibirica* Bergroth, 1914

59. *Trigonotylus caelestialium* (Kirkaldy, 1902)

60. *Anapus rugicollis* (Jakovlev, 1877)

61. *Dimorphocoris* (*Dimorphocoris*) *fuscus* Joakimov, 1909

62. *Euryopicoris nitidus* (Meyer-Dür, 1843)

63. *Halticus apterus apterus* (Linnaeus, 1758)

64. *Halticus pusillus* (Herrich-Schaeffer, 1835)

65. *Labops sahlbergii* (Fallén, 1829)

Addition material. 1♂, 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.08.2014; 19.06.2015.

66. *Orthocephalus saltator* (Hahn, 1835)

67. *Orthocephalus vittipennis* (Herrich-Schaeffer, 1835)

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.06.2015.

68. Strongylocoris leucocephalus (Linnaeus, 1758)

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06.2014.

69. *Strongylocoris niger* (Herrich-Schaeffer, 1835)

Addition material. 9♂, 8♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07, 18.09.2013; 07–26.07, 08.09.2014; 12.07, 12.08.2015.

70. *Blepharidopterus diaphanus* (Kirschbaum, 1856)

71. *Excentricus planicornis* (Herrich-Schaeffer, 1836)

72. *Globiceps* (*Kelidocoris*) *flavomaculatus* (Fabricius, 1794)

73. *Mecomma* (*Mecomma*) *ambulans ambulans* (Fallén, 1807)

74. *Orthotylus* (*Melanotrichus*) *flavosparsus* (C.R. Sahlberg, 1841)

75. *Orthotylus* (*Orthotylus*) *interpositus* Schmidt, 1938

76. Orthotylus (*Orthotylus*) *marginalis* Reuter, 1883

77. *Orthotylus* (*Orthotylus*) *melanotylus* Kerzhner, 1962

78. *Orthotylus* (*Pseudorthotylus*) *bilineatus* (Fallén, 1807)

79. *Hallodapus pumilus* Horváth, 1901

80. *Atractotomus kolenatii* (Flor, 1860)

81. *Chlamydatus* (*Euattus*) *drymophilus* Vinokurov, 1982

82. *Chlamydatus* (*Euattus*) *pulicarius* (Fallén, 1807)

83. *Chlamydatus* (*Euattus*) *pullus* (Reuter, 1870)

Addition material. 17♂, 2♀, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 18–28.05, 29.08–8.09.2014.

84. *Criocoris quadrimaculatus* (Fallén, 1807)

85. *Europiella artemisiae* (Becker, 1864)

86. *Europiella albipennis* (Fallén, 1829)

87. *Plagiognathus arbustorum arbustorum* (Fabricius, 1974)

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2015.

88. *Plagiognathus chrysanthemi* Wolff, 1804

89. *Parapsallus vitellinus* (Scholtz, 1847)

90. *Psallus (Apocremnus) betuleti* (Fallén, 1826)

91. *Sacculifer picticeps* Kerzhner, 1959

92. *Salicarus* (*Salicarus*) *roseri* (Herrich-Schaeffer, 1838)

Family Tingidae Laporte, 1832

93. *Acalypta marginata* (Wolff, 1804)

94. *Derephysia* (*Paraderephysia*) *longispina* Golub, 1974

95. *Dictyla echii* (Schrank, 1782)

Addition material. 1♂, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 18–28.05.2014; 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.06.2015.

96. *Dictyla humuli* (Fabricius, 1794)

97. *Physatocheila costata* (Fabricius, 1794)

98. *Tingis* (*Tingis*) *ampliata* (Herrich-Schaeffer, 1838)

99. *Tingis* (*Tingis*) *crispata* (Herrich-Schaeffer, 1838)

100. Tingis (*Neolasiotropis*) *pilosa* Hummel, 1825

Addition material. 1♀, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 18–28.05.2014.

Family Reduviidae Latreille, 1807

101. *Phymata (Phymata) crassipes* (Fabricius, 1775)

Addition material. 3♂, 2♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06.2014; 19.06.2015.

102. *Coranus (Coranus) aethiops* Jakovlev, 1893

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.08.2014; 1♂, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 29.08–8.09.2014.

103. *Rhynocoris (Rhynocoris) annulatus* (Linnaeus, 1758)

104. *Rhynocoris (Rhynocoris) iracundus* (Poda, 1761)

Family Aradidae Brullé, 1836

105. *Aradus lugubris* Fallén, 1807

Family Berytidae Fieber, 1851

106. *Berytinus (Berytinus) clavipes* (Fabricius, 1775)

107. *Berytinus* (*Lizinus*) *crassipes* (Herrich-Schaeffer, 1835)

108. *Berytinus (Berytinus) minor minor* (Herrich-Schaeffer, 1835)

Addition material. 1♂, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 29.08–8.09.2014.

Family Lygaeidae Schilling, 1829

109. Lygaeus simulans Deckert, 1985

110. Nithecus jacobaeae (Schilling, 1829)

Addition material. 64♂, 61♀, 4 larvae, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06, 7.07, 19.08, 8.09.2014; 12.07, 12–31.08.2015; 1♂, 6♀, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 18–28.05.2014.

111. Nysius helveticus (Herrich-Schaeffer, 1850)

Addition material. 2♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 31.08.2015.

112. Nysius thymi thymi (Wolff, 1804)

Addition material. 1♂, 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.08.2014.

113. Ortholomus punctipennis (Herrich-Schaeffer, 1838)

Addition material. 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.08.2015; 2♂, bushy idle field, near Mts. Shlyapnaya and Kozyr', 510 m, 29.08–8.09.2014.

114. Kleidocerys resedae resedae (Panzer, 1797)

Addition material. 1♂, Chernevaya taiga, northeastern slope of Mt. L’vinyy kamen’, 605 m, 18–28.05.2014; 3♂, 2♀, 1 larvae, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 17–30.05.2014; 12–31.08.2015.

115. *Cymus aurescens* Distant, 1883

116. *Cymus glandicolor* Hahn, 1832

117. *Geocoris* (*Geocoris*) *mongolicus* Horváth, 1901

Addition material. 1♀, petrophytic feather grass steppe, southern slope of Mt. Kozyr’, 550 m, 29.08–8.09.2014.

118. *Heterogaster artemisiae* Schilling, 1829

119. *Camptotelus lineolatus lineolatus* (Schilling, 1829)

120. *Oxycarenus* (*Euoxycarenus*) *pallens* (Herrich-Schaeffer, 1850)

121. *Drymus* (*Sylvadrymus*) *brunneus brunneus* (R.F. Sahlberg, 1848)

122. *Drymus* (*Sylvadrymus*) *parvulus* Jakovlev, 1881

123. *Drymus* (*Sylvadrymus*) *sylvaticus* (Fabricius, 1775)

Addition material. 1♂, Chernevaya taiga, northeastern slope of Mt. L’vinyy kamen’, 605 m, 18–28.05.2014; 1♂, 1♀, birch forest, left bank of the Malyy Tigirek river, 500 m, 28.08–8.09.2014.

124. *Lamproplax membranea* Distant, 1883

125. *Aphanus rolandri* (Linnaeus, 1758)

126. *Emblethis denticollis* Horváth, 1878

127. *Pterotmetus staphyliniformis* (Schilling, 1829)

Addition material. 1♂, 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.08.2014; 19.06.2015.

128. *Trapezonotus* (*Gnopherus*) *anorus* (Flor, 1860)

129. *Trapezonotus* (*Trapezonotus*) *arenarius arenarius* (Linnaeus, 1758)

130. *Lamprodema maura* (Fabricius, 1803)

131. *Megalonotus chiragra* (Fabricius, 1794)

132. *Ligyrocoris sylvestris* (Linnaeus, 1758)

Addition material. 2♂, 2♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 7.07, 19.08.2014; 12.07.2015; 1♂, 2♀, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 29.08–8.09.2014.

133. *Panaorus adspersus* (Mulsant et Rey, 1852)

Addition material. 1♀, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 18–28.05.2014.

134. *Peritrechus convivus* (Stål, 1858)

135. *Peritrechus geniculatus* (Hahn, 1832)

136. *Rhyparochromus pini* (Linnaeus, 1758)

Addition material. 3♂, 3♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06, 19.08, 08.09.2014; 28.05, 19.06.2015; 1♀, shrubland, the lower part of the eastern slope of Mt. Chaynaya, 500 m, 29.08–8.09.2014; 1♀, birch forest, left bank of the Malyy Tigirek river, 500 m, 28.08–8.09.2014; 4♂, 13♀, bushy idle field, near Mts. Shlyapnaya and Kozyr’, 510 m, 18–28.05.2014.

137. *Xanthochilus quadratus* (Fabricius, 1798)

138. *Stygnocoris rusticus* (Fallén, 1807)

Family Pyrrhocoridae Amyot et Serville, 1843

139. *Pyrrhocoris apterus* (Linnaeus, 1758)

Family Stenocephalidae Dallas, 1852

140. *Dicranocephalus agilis* (Scopoli, 1763)

Family Coreidae Leach, 1815

141. *Coriomeris scabricornis scabricornis* (Panzer, 1805)

142. *Ulmicola spinipes* (Fallén, 1807)

143. *Coreus marginatus marginatus* (Linnaeus, 1758)

Addition material. 1♂, 2♀, 1 larvae, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 7–26.07.2014; 28.05, 19.06.2015.

144. *Spathocera obscura* (Germar, 1847)

Family Alydidae Amyot et Serville, 1843

145. *Alydus calcaratus* (Linnaeus, 1758)

Addition material. 2♂, petrophytic feather grass steppe, southern slope of Mt. Kozyr’, 550 m, 29.08–8.09.2014.

146. *Megalotomus junceus* (Scopoli, 1763)

Addition material. 1♂, 2♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 18.09.2013; 8.09.2014; 31.08.2015.

Family Rhopalidae Amyot et Serville, 1843

147. *Brachycarenus tigrinus* (Schilling, 1829)

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 17.05.2014.

148. *Corizus hyoscyami hyosciamy* (Linnaeus, 1758)

Addition material. 3♂, 3♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 17.05, 21.06, 7.07, 8.09.2014.

149. *Corizus tetraspilus* Horváth, 1917

150. *Rhopalus* (*Aeschyntelus*) *latus* (Jakovlev, 1883)

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 18.09.2013.

151. *Rhopalus* (*Aeschyntelus*) *maculatus* (Fieber, 1837)

Addition material. 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.08.2014.

152. *Rhopalus* (*Rhopalus*) *conspersus* (Fieber, 1837)

Addition material. 2♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 7.07.2014; 19.06.2015.

153. *Rhopalus* (*Rhopalus*) *distinctus* (Signoret, 1859)

154. *Rhopalus* (*Rhopalus*) *parumpunctatus* Schilling, 1829

Addition material. 2♂, 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 28.05, 31.08, 28.09.2015.

155. *Rhopalus* (*Rhopalus*) *subrufus* (Gmelin, 1790)

Addition material. 4♂, 2♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 18.09.2013; 7.07, 08.09.2014; 28.05, 12–31.08.2015.

156. *Stictopleurus abutilon* (Rossi, 1790)

157. *Stictopleurus crassicornis* (Linnaeus, 1758)

Addition material. 17♂, 8♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 18.09.2013; 2–30.05, 21.06, 8.09.2014; 28.05, 19.06, 31.08., 28.09.2015.

158. *Stictopleurus punctatonervosus* (Goeze, 1778)

Addition material. 2♂, 3♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2013; 7.07.2014; 19.06, 28.09.2015.

159. *Stictopleurus sericeus* (Horváth, 1896)

160. *Stictopleurus viridicatus* (Uhler, 1872)

161. *Chorosoma schillingii* (Schilling, 1829)

162. *Myrmus miriformis miriformis* (Fallén, 1807)

Family Plataspidae Dallas, 1851

163. *Coptosoma scutellatum* (Geoffroy, 1785)

Family Acanthosomatidae Signoret, 1864

164. *Acanthosoma spinicolle* Jakovlev, 1880

165. *Elasmostethus brevis* Lindberg, 1934

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 31.08.2015.

166. *Elasmostethus interstinctus* (Linnaeus, 1758)

167. *Elasmucha fieberi* (Jakovlev, 1865)

168. *Elasmucha grisea grisea* (Linnaeus, 1758)

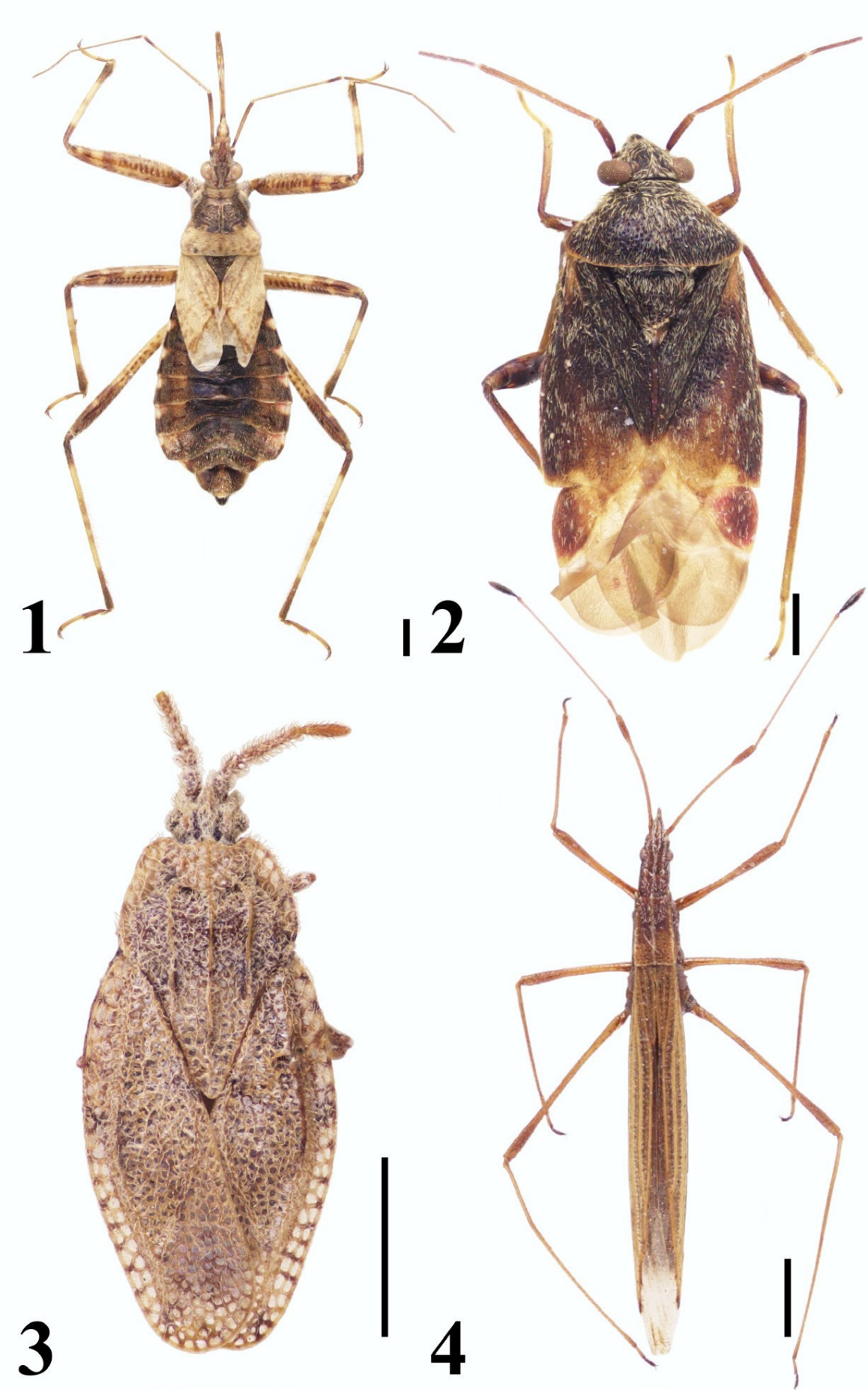
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Figure 3. *New species of Heteroptera from the Tigirek State Nature Reserve for Siberia and the Altai Krai.* ***1*** *– Himacerus apterus F. (Nabidae);* ***2*** *– Charagochilus gyllenhalii Fall. (Miridae);* ***3*** *– Tingis crispata H.-S. (Tingidae);* ***4*** *– Berytinus crassipes H.-S. (Berytidae) (1–4 – dorsal view). Black scale bar – 1 mm.*

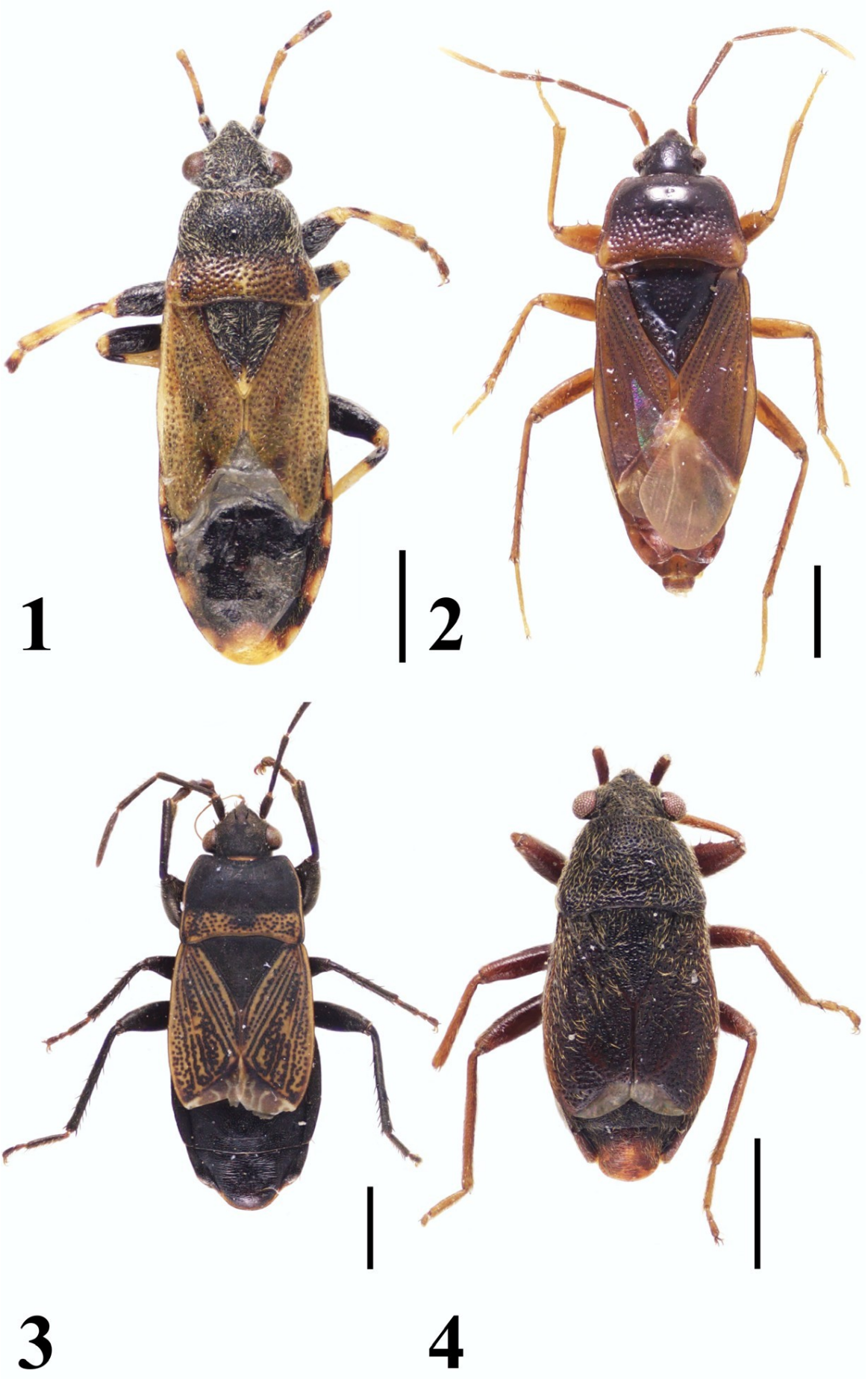
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Figure 4. *New Heteroptera species from the Tigirek State Nature Reserve for Asian part of Russia and the Altai Krai, as well as confirmation of the species distribution in the Altai Krai.* ***1*** *– Heterogaster artemisiae Schill. (Lygaeidae);* ***2*** *– Lamproplax membranea Dist.; 3 – Trapezonotus anorus Fl.;* ***4*** *– Stygnocoris rusticus Fall. (Lygaeidae) (****1****–****4*** *– dorsal view). Black scale bar – 1 mm.*

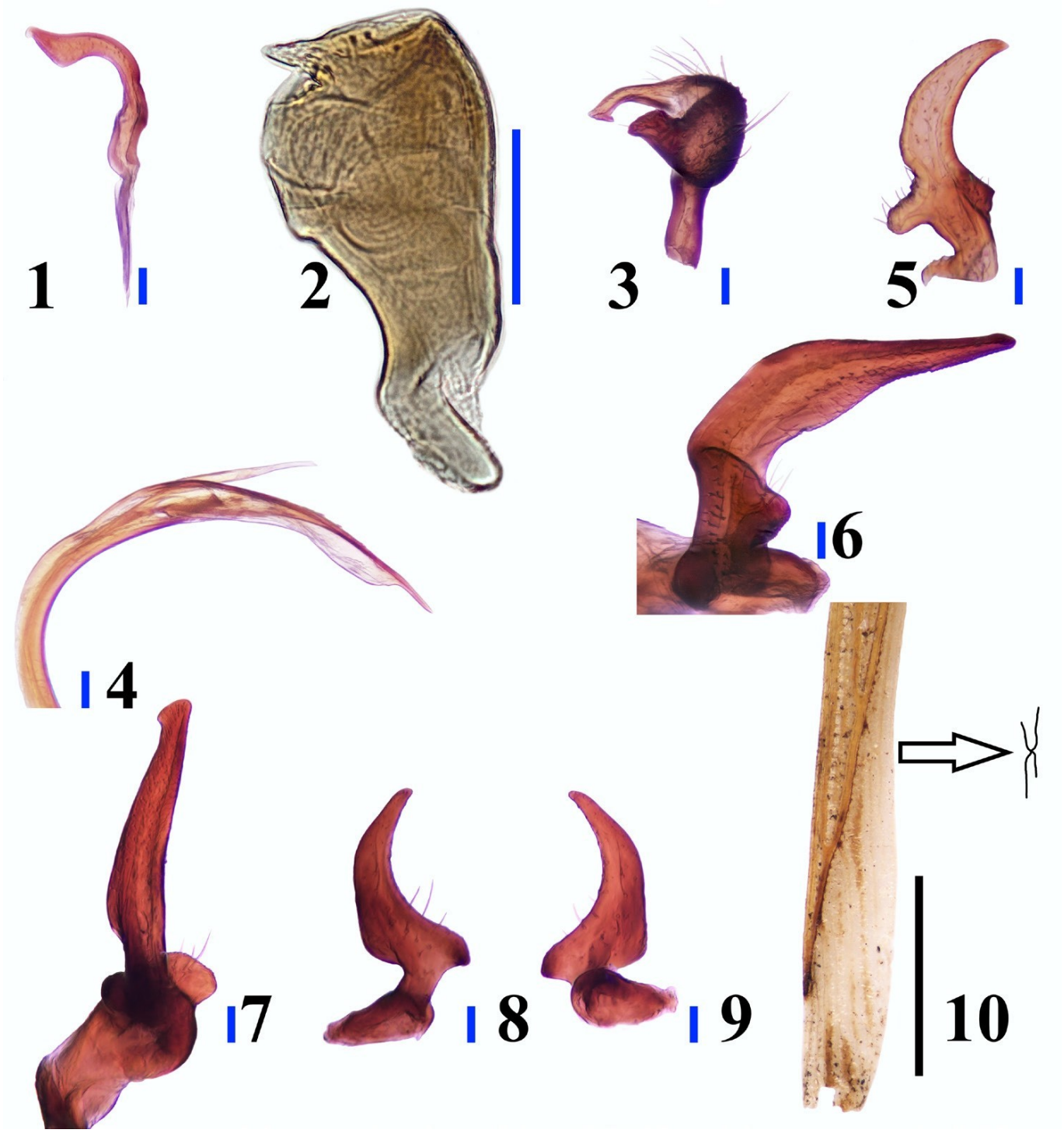

Figure 5. *Genitals and corium of new Heteroptera species from the Tigirek State Nature Reserve for Asian part of Russia, Western Siberia and the Altai Krai. 1, 2 – Charagochilus gyllenhalii Fall., 3, 4 – Sacculifer picticeps Kerzhner (Miridae); 5 – Heterogaster artemisiae Schill.; 6, 7 – Trapezonotus anorus Fl., 8, 9 – Stygnocoris rusticus Fall. (Lygaeidae); 10 – Berytinus crassipes H.-S. (Berytidae) (1, 3, 6, 7, 8, 9 – left paramere, 2 – right paramere, 4 – aedeagus, 10 – left corium and two internal veins). Black scale bar – 1 mm, blue scale bar – 0.05 mm.*

Family Cydnidae Billberg, 1820

169. *Canthophorus impressus impressus* (Horváth, 1880)

170. *Canthophorus mixtus mixtus* Asanova, 1964

171. *Sehirus luctuosus* Mulsant et Rey, 1866

172. *Tritomegas bicolor* (Linnaeus, 1758)

Family Scutelleridae Leach, 1815

173. *Psacasta* (*Psacasta*) *exanthematica exanthematica* (Scopoli, 1763)

174. *Eurygaster dilaticollis* Dorhn, 1860

175. *Eurygaster maura* (Linnaeus, 1758)

176. *Eurygaster testudinaria* (Geoffroy, 1785)

Addition material. 7♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 30.05, 21.06, 7.07, 19.08.2014; 19.06, 12.07.2015.

Family Pentatomidae Leach, 1815

177. *Zicrona caerulea* (Linnaeus, 1758)

178. *Aelia acuminata* (Linnaeus, 1758)

Addition material. 3♂, 1♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 26.07, 19.08, 8.09.2014; 28.05.2015.

179. *Aelia frigida* Kiritshenko, 1930

180 *Aelia sibirica* Reuter, 1884

181. *Neottiglossa leporina* (Herrich-Schaeffer, 1830)

Addition material. 4♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.08.2014; 28.05, 19.06.2015.

182. *Neottiglossa pusilla* (Gmelin, 1790)

183. *Carpocoris* (*Carpocoris*) *fuscispinus* (Bohemann, 1851)

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07.2015.

184. *Carpocoris* (*Carpocoris*) *purpureipennis* (De Geer, 1773)

Addition material. 8♂, 6♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 30.05, 21.06, 7.07, 08.09.2014; 28.05, 12.07, 12–31.08.2015; 1♂, shrubland, the lower part of the eastern slope of Mt. Chaynaya, 500 m, 29.08–8.09.2014.

185. *Dolycoris baccarum* (Linnaeus, 1758)

Addition material. 6♂, 7♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 18.09.2013; 21.06, 07.07, 8.09.2014; 28.05, 31.08.2015.

186. *Peribalus (Peribalus) strictus vernalis* (Wolff, 1804)

Addition material. 1♂, 3♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 21.06, 8.09.2014.

187. *Palomena prasina* (Linnaeus, 1761)

188. *Palomena viridissima* (Poda, 1761)

Addition material. 2♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.08.2014; 12.08.2015.

189. *Rubiconia intermedia* (Wolff, 1811)

Addition material. 19♂, 21♀, 2 larvae, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.07, 18.09.2013; 30.05, 21.06, 7.07, 19.08, 8.09.2014; 19.06, 12.07, 31.08, 28.09.2015.

190. *Rubiconia peltata* Jakovlev, 1890

191. *Eysarcoris aeneus* (Scopoli, 1763)

192. *Pentatoma* (*Pentatoma*) *rufipes* (Linnaeus, 1758)

193. *Piezodorus lituratus* (Fabricius, 1794)

194. *Sciocoris (Sciocoris) cursitans cursitans* (Fabricius, 1794)

195. *Sciocoris (Sciocoris) distinctus* Fieber, 1851

196. *Eurydema* (*Eurydema*) *gebleri gebleri* Kolenati, 1846

197. *Eurydema* (*Eurydema*) *oleracea* (Linnaeus, 1758)

Addition material. 7♂, 6♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 19.08.2014.

198. *Eurydema* (*Eurydema*) *ornata* (Linnaeus, 1758)

Addition material. 1♂, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 12.08.2015.

199. *Graphosoma (Graphosoma) italicum italicum* (O.F. Müller, 1766)

Addition material. 6♂, 26♀, petrophytic meadow steppe, southern and eastern slopes of Mt. Chaynaya, 500–600 m, 18.09.2013; 7–26.07, 8.09.2014; 19.06, 12.07, 12–31.08.2015.

Discussion

We performed the study in the territory of the Tigirek Strict Reserve to provide a number of new records for the following species.

Heterogaster artemisiae Schilling, 1829 (Lygaeidae) is a new species for Asian Russia. This bug is confined to the western and central Palaearctic. The most eastern records have so far belonged to Kazakhstan, where these species are ubiquitous. Thus, its presence in the Tigirek Strict Reserve is not surprising, though this is the eastern border of the species range.

Tingis (*Tingis*) *crispata* (Herrich-Schaeffer, 1838) (Tingidae) is a new species for Siberia. This Trans-Palaearctic species is confined to Mongolia and China, and the east and southeast of Kazakhstan. In Russia, it is known from the European part and the Far East. The record from the Tigirek Strict Reserve expands the central part of the species range to the north.

Sacculifer picticeps Kerzhner, 1959 (Miridae) is a new species for Western Siberia. In Russia, this Eurasian steppe species is known from the European part, Eastern Siberia, and the Far East; in Central Asia, it is known from Northern China, Mongolia, and Kazakhstan. Similar to the above species, the record from the Tigirek Strict Reserve expands the central part of the species range to the north.

These species are new for the Altai Krai: *Himacerus* (*Himacerus*) *apterus* (Fabricius, 1798) (Nabidae) is known from the Altai Republic, Kemerovo region, Eastern Siberia, the Far East, and west, south, and southeast of Kazakhstan; *Charagochilus* (*Charagochilus*) *gyllenhalii* (Fallén, 1807) (Miridae) is recorded from the Altai Republic and Tyumen region, and north, west and southeast of Kazakhstan; *Berytinus* (*Lizinus*) *crassipes* (Herrich-Schaeffer, 1835) (Berytidae) is known from the Altai Republic, north and southeast of Kazakhstan; *Lamproplax membranea* Distant, 1883 (Lygaeidae) is known from the Altai Republic; *Trapezonotus* (*Gnopherus*) *anorus* (Flor, 1860) (Lygaeidae) is known from Tyumen, Novosibirsk and Tomsk regions, the Altai Republic, and north, east and southeast of Kazakhstan. Two species, *Himacerus* (*Himacerus*) *apterus* (Fabricius, 1798) (Nabidae) and *Trapezonotus* (*Gnopherus*) *anorus* (Flor, 1860) (Lygaeidae), are Trans-Palaearctic; *Charagochilus* (*Charagochilus*) *gyllenhalii* (Fallén, 1807) (Miridae) and *Berytinus* (*Lizinus*) *crassipes* (Herrich-Schaeffer, 1835) (Berytidae) are confined to the western and central Palaearctic. The presence of these four species in the Altai Krai was not surprising due to their abundance in the nearby regions. The eastern Palaearctic species *Lamproplax membranea* Distant, 1883 (Lygaeidae) has been recently found in Western Siberia in the Altai Republic. Its presence in the Tigirek Strict Reserve expands our understanding of species distribution within the Altai Mountain Country. The species range is likely to expand westwards due to humid mountain areas. *Lamproplax membranea* Distant, 1883 (Lygaeidae) was collected in mesophytic areas with meadow vegetation near Lake Teletskoye in the Altai Republic; at one of the sampling plots with ruderal vegetation in stony soil of the anthropogenically disturbed forest edge at the foot of the mountain slope (Golub et al. 2021); in the floodplain birch forest of the Tigirek Strict Reserve.

The biotopic distribution of most of the listed species in the Tigirek Strict Reserve generally corresponds to the literature data on their biotopic preferences. Thus, *Heterogaster artemisiae* Schilling, 1829 (Lygaeidae), which is confined to xerophytic biotopes (Esenbekova 2013), in the Tigirek Strict Reserve was found in the petrophytic meadow steppe; the forest mesophile *Himacerus* (*Himacerus*) *apterus* (Fabricius, 1798) (Nabidae) (Esenbekova 2013) – in Chernevaya taiga; *Trapezonotus* (*Gnopherus*) *anorus* (Flor, 1860) (Lygaeidae), inhabiting plant litter in forest meadows, forest edges and clearings (Esenbekova 2013) – in the bushy idle field.

Several species, found in the petrophytic meadow steppe on Mt. Chaynaya, are more likely confined to forested habitats: *Berytinus* (*Lizinus*) *crassipes* (Herrich-Schaeffer, 1835) (Berytidae), inhabiting sparse forests, parks, forest edges and clearings, and the tamnobiont *Sacculifer picticeps* Kerzhner, 1959 (Miridae) (Esenbekova 2013). However, the studied steppe locality at the reserve is situated in the lowmountain exposure forest-steppe, and the distance from this locality to forested plots on the slopes of other exposures does not exceed several tens of meters. *Tingis* (*Tingis*) *crispata* (Herrich-Schaeffer, 1838) (Tingidae), known from wetter river floodplains, was also found at the same meadow steppe (Esenbekova 2013); however, finding in the floodplains refers to the semi-desert zone; its occurrence at the steppe habitat in the low mountains of the North-Western

Altai is apparently a vivid example of zonal change of habitats.

Two species known mainly from open habitats were found in the floodplain birch forest: *Charagochilus* (*Charagochilus*) *gyllenhalii* (Fallén, 1807) (Miridae) inhabits a wide range of biotopes from various types of meadows to steppes, as well as clearings; *Lamproplax membranea* Distant, 1883 (Lygaeidae) was found in the Altai Republic in mesophytic meadows and on the anthropogenically disturbed forest edge. Thus, a new record of true bugs from the Tigirek Strict Reserve expands our understanding of biotopic preferences of these species.

These species are the first records for the fauna of the Tigirek Strict Reserve: *Nabis* (*Nabis*) *rugosus* (Linnaeus, 1758) (Nabidae); *Deraeocoris* (*Deraeocoris*) *ater* (Jakovlev, 1889), *Halticus apterus apterus* (Linnaeus, 1758), *Criocoris quadrimaculatus* (Fallén, 1807), *Europiella artemisiae* (Becker, 1864) (Miridae); *Acalypta marginata* (Wolff, 1804), *Dictyla humuli* (Fabricius, 1794) (Tingidae); *Camptotelus lineolatus lineolatus* (Schilling, 1829), *Drymus* (*Sylvadrymus*) *brunneus brunneus* (R.F. Sahlberg, 1848), *Trapezonotus* (*Trapezonotus*) *arenarius arenarius* (Linnaeus, 1758), *Megalonotus chiragra* (Fabricius, 1794) (Lygaeidae); Stictopleurus viridicatus (Uhler, 1872) (Rhopalidae); *Canthophorus impressus* (Horváth, 1880) (Cydnidae); *Eurygaster dilaticollis* Dorhn, 1860 (Scutelleridae); *Eurydema* (*Eurydema*) *gebleri gebleri* Kolenati, 1846 (Pentatomdiae).

At present, the fauna of true bugs in the Tigirek Strict Reserve comprises 199 species from 20 families, and the Altai Krai harbors 361 species from 29 families. It should be noted that the compiled list is not complete, and other new species are expected to be discovered.

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