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New data of the Trichoptera of Siberia

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Abstract. Recent collections made in South Siberia yielded 109 species from 16 families; some of them are new for certain regions in this territory: 10 for Siberia, 2 for East Siberia, 21 for the Altai Mts., 5 for Pribaikalie, 3 for the Chita region, 1 for Buryatia. The distributions of some species are discussed. The fauna of river Ingoda (upper Amur Basin) has spring and summer components with the European species prevailing in spring.

Introduction

Siberia occupies an enormous portion of the Russian territory and covers approximately 1/10 of the Earth's land-mass. Nevertheless the faunistic records from this area are very scarce regarding its 228 species. This statement formulated by SPURIS (1989) is still factual. The faunistic exploration of Siberia is so limited that rather short collecting tours provide sufficient new material including undescribed species (MEY, 1994). Most of this territory is difficult to access so the sampling areas are limited to the territories adjoining the main transport routes. Nonetheless, knowledge of the Siberian fauna of Trichoptera gradually increases (BEKETOV, 2006; BEKETOV, IVANOV, 2004, etc.).

Materials collected by various entomologists and determined by the authors are summarized below. The main sources are the insects collected in May–June 2002 in the South-Eastern Siberia (Pribaikalie, Chita Region) and in August 2003 in the Altai Mountains by the authors. Other samples were made by S. Melnitsky (Altai, 1996), V. Ivanov (Southern Pribaikalie, 2005), S. Nedoshivina (Tigirlek, the Westernmost limits of the Altai Mountain System, 2006), and N. Kluge (East Siberia, 1994, 1997).

The list below includes only the previously described species. A few new species found in the samples will be described elsewhere. The list includes the following abbreviations: m – male, f – female, l – larva, p – pupa, r – river. The absence of the collector's name presumes that the material have been collected by the authors. The samples are deposited in the Zoological Institute, Sankt Petersburg.

Psychomyiidae Walker, 1852

Psychomyia flavida HAGEN, 1861

Barnaul, r.Ob', 14.07.96, 1 m; Gusinoe Ozero, r. Tzagan-Gol, 11.06.02, 13 m, 1 f.

Psychomyia minima (MARTYNOV, 1910)

Cherga (50 km SW from Gorno-Altaysk), at light, 21-23. 08.03, 9 m, 34 f.

Polycentropodidae Ulmer, 1903

Holocentropus picicornis (STEPHENS, 1836)

Altai Region, Kosh-Agach (480km SE from Gorto-Altaysk), lake near r. Toshak, 07.08.03, 1 m. First record for Altai; previously this species was known from Yakutia and Sayan Mts.

Polycentropus sp.

Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 04.06.02, 1 f.

Polycentropus flavomaculatus (PICTET, 1834)

Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 28.06.2006, Nedoshivina, 1m

First indication of this species for the Altai Mts; previous eastern findings were confined to the West Siberian Plains, Sajon Mts., Baikal area and Chukotka Peninsula.

Hydropsychidae Curtis, 1835

Cheumatopsyche lepida (PICTET, 1834)

Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 04.06.02, numerous adults.

First record for Eastern Siberia; the easternmost point in the areal of this species.

Hydropsyche angustipennis (CURTIS, 1834)

Altai, Mayma (6 km N from Gorno-Altaysk), r. Zemlyanaya, 26.08.03, 1 l.

First record for Altai.

Hydropsyche contubernalis MACLACHLAN, 1865

Southern Buryatia, Naushki, 3.08.97, Kluge, 3 m, 2 f; Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 4.06.02, 5 f; Novosibirsk, r. Ob', 28.08.03, 9 m, 7 f; Southern Buryatia, vic. Gusinoe Ozero, small lakes south to the Gusinoe Lake, 12.08.05, 1f; Southern Buryatia, lake Tsaidam, 1 km south of the Gusinoe Lake, 12.08.05, 1 m.

First record for the Chita Region and Buryatia.

Hydropsyche kozhantschikovi MARTYNOV, 1924

Southern Buryatia, Naushki, 3.08.97, Kluge, 2 m; Irkutsk Region, Bolshaya Rechka, 19.06.02, 2m,1f; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24 and 28.06.06, Nedoshivina, 8 f.

Hydropsyche newae KOLENATI, 1858

Southern Buryatia, Naushki, 3.08.97, Kluge, 1 m; Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 4-5.06.02, numerous adults; Cherga (50 km SW from Gorno-Altaysk), at light 21-23.08.03, numerous adults; Altai, Tjungur, r. Katun', 16.07.96, 1 m, 1 f; Altai, Tjungur, r. Katun', 28.07.96, 8 m, 3 f; Altai, vic. Akkem lake, r. Tekelushka, 22-25.07.96 1 m, 2 f; Altai, Kucherlinskoe lake near source r. Kucherla, 26.07.96, 4 m, 2 f; Altai, r. Chuya, Suhodol, 10-11.08.03, 1 m; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24 and 28.06.2006, Nedoshivina, 4 f.

Hydropsyche ornatula MACLACHLAN, 1878

Southern Buryatia, Naushki, 3.08.97, Kluge, 1 m.

First record for the Eastern Siberia, the easternmost point of the species dispersal range.

Hydropsyche pellucidula (CURTIS, 1834)

Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 4.06.02, 5 f.

First record for the Chita Region, the easternmost point of the species areal.

Hydropsyche valvata MARTYNOV, 1927

Novosibirsk, r. Ob', 28.08.03, 2 m, 1 f; Altai, Tjungur, r. Katun', 28.07.96, 2 m; Altai, Kucherlinskoe lake near source of r. Kucherla, 26.07.96, 1 m.

Potamyia czezanovskii (MARTYNOV, 1910)

Southern Buryatia, Naushki, 3.08.97, Kluge, 1 m.

Arctopsychidae Martynov, 1924

Arctopsyche ladogensis (KOLENATI, 1859)

Irkutsk Region, Bolshaya Rechka, 19.06.02, 1 f; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24.06.2006, Nedoshivina, 15 f.

Stenopsychidae Martynov, 1924

Stenopsyche marmorata NAVAS, 1920

Altai, Mayma (6 km N from Gorno-Altaysk), r. Zemlyanaya, 26.08.03, 2 f; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 28.06.2006, Nedoshivina, 6m, 4f.

The Tigirlek locality is the westernmost point if dispersal of this species.

Rhyacophilidae Stephens, 1836***Rhyacophila angulata* MARTYNOV, 1910**

Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga and its left tributary, at light, 21-23.08.03, 5 m, 5 f; Altai, Tjungur, r. Katun', 17.07.96, 3 m, 1 f, and 28.07.96, 5 m, 1 f; Altai, vic. Beluha Mountain, r. Akkem, 19.07.96, 1 m.

***Rhyacophila depressa* MARTYNOV, 1910**

Chita Region, Beklemishevo, r. Zhepkovshczina, 06.06.02, 3 m.

***Rhyacophila impar* MARTYNOV, 1914**

Irkutsk Region, 7 km S Vydrino, r. Snezhnaya, 13.06.02, 2 m.

***Rhyacophila kalatica* LEVANIDOVA & SCHMID, 1977**

Irkutsk Region, Sljudyanka, r. Pohabiha, 15.06.02, numerous adults; Irkutsk Region, Pribaikalie, Slyudyanka, r. Pohabiha, 1 km upstream from the village Pereval, 18.08.2005, 2m, 13 larvae, empty pupal cocoons; Irkutsk Region, Marituy, r. Marituy, 16.06.02, 1 m, 1 f; Altai, vic. Beluha Mt., r. Akkem near r. Tekeljushka, 22-25.07.96, 1 m, 1 f; Altai, vic. Beluha Mt., Akkem Gorge, Seven lakes Valley, 21.07.96, 4 m, 1 f; .

First record for both the Altai Mts. and Pribaikalie; previously known only from the type locality in the Sayan Mts. between these 2 areas.

***Rhyacophila lenae* MARTYNOV, 1910**

Chita Region, Bolshoy Undugun lake (8 km NW Beklemishevo), 07.06.02, numerous p.

First record for Chita Region, SW limit of the species areal.

***Rhyacophila mongolica* LEVANIDOVA, 1993**

Southern Buryatia, Gusinoe Ozero, r. Tzagan-Gol, 11.06.02, 15 m, 1 f.

***Rhyacophila nana* LEVANIDOVA, 1993**

Chita Region, r. Nikishiha, 09.06.02, 1 l, 3 p.

First record for Siberia, the westernmost point of distribution.

***Rhyacophila narvae* NAVAS 1928**

Irkutsk Region, Sljudyanka, r. Pohabikha, 15.06.02 several f.

***Rhyacophila retracta* MARTYNOV, 1914**

Altai, Tjungur, r. Katun', at light, 28.07.96 2 m.

***Rhyacophila sibirica* MACLACHLAN, 1879**

Altai, Kucherlinskoe lake near source r. Kucherla, 26.07.96, 1 m; Irkutsk Region, Sljudyanka, r. Pohabiha, 15.06.02, 1 m; Altai, Ulaganskiy District, 15 km NNW from Aktash, r. Karakudjur, Taldukel lake, 17.08.03, 2 m, numerous f and p; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24 – 28.06.2006, Nedoshivina, 3 m.

Glossosomatidae Wallengren, 1891***Agapetus ochripes* CURTIS, 1834**

Chita Region, Makkaveevka (60 km SE from Chita), 04.06.02, 2 m, 7 f.

First record for Siberia, easternmost point of distribution.

***Agapetus sibiricus* MARTYNOV, 1918**

Altai, Ulaganskiy District, 15 km NNW from Aktash, r. Karakudjur, Taldukel lake, 17.08.03, 1 l, numerous adults and p.

***Glossosoma angaricum* (LEVANIDOVA, 1967)**

Irkutsk Region, Podkamennaya (60 km SSE from Irkutsk), 02.06.02, numerous l and p; Irkutsk Region, Listvyanka, r. Krestovka, 01.06.02 numerous p; Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga and its left tributary, at light, 21-23.08.03, 4f; Altai, Ongudayskiy District, r. Tuekta (15 km upstream from the village Tuekta), 20.08.03, 5 l; Altai, r. Chibitka (15th km of the road Aktash-Ulagan), 19.08.03, 16 p.; Buryatia, South Shore of Baikal, vic. village Mishikha, r. Bystraya, 21.08.2005, numerous larvae and pupae.

First record for Altai, westernmost point of distribution.

***Glossosoma intermedium* (KLAPALEK, 1892)**

Irkutsk Region, Bolshaya Rechka, 19.06.02, 4 m, 7 f; Irkutsk Region, Bolshaya Rechka, 2.06.02, numerous p; Irkutsk Region,

Listvyanka, r. Krestovka, 18.06.02, 2 m, numerous f; Irkutsk Region, 7 km S Vydrino, r. Snezhnaya, 13.06.02, 4 m, 1 f.

***Glossosoma nylanderii* MACLACHLAN, 1879**

Altai, near Tjungur, r. Katun', r. Kucherla, 16.07.96, 3 m; Altai, r. Kucherla, 26.07.96, 3 m; Chita Region, r. Nikishiha, 09.06.02, 1 f; Chita Region, Makkaveevka (60 km SE from Chita), 05.06.02, 1 m; Southern Buryatia, Gusinoe Ozero, r. Tzagan-Gol, 11.06.02, 1 m.

***Padunia adelungi* MARTYNOV, 1910**

Irkutsk Region, 7 km S Vydrino, r. Snezhnaya, 13.06.02, 1 f.

Hydroptilidae Stephens, 1836***Agraylea multipunctata* CURTIS 1834**

Chita Region, Bolshoy Undugun Lake (8 km NW Beklemishevo), 07.06.02, 12 m; Southern Buryatia, vic. Gusinoe Ozero, Gusinoe Lake, southern shore, 10-11.08.2005, 1m; the same locality, 12. 08.2005, 1f; Southern Buryatia, lake Tsaidam, 1 km south of the Gusinoe Lake 12.08.2005, 2f.

***Hydroptila angulata* MOSELY, 1922**

Southern Buryatia, lake Tsaidam, 1 km south of the Gusinoe Lake 12.08.2005, 1 m., 1 f.

First record for Siberia, the easternmost point of distribution.

***Hydroptila forcipata* EATON, 1873**

Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 04.06.02, 2 m, 3 f.

First record for Siberia, the easternmost point of distribution.

***Hydroptila vectis* CURTIS, 1834**

Altai, Ulaganskiy District, 15 km NNW from Aktash, r. Karakudjur, Taldukel lake, 17-18.08.03, numerous adults.

First record for Siberia, the easternmost point of distribution.

***Oxyethira flavicornis* (PICTET, 1834)**

Altai, Kosh-Agach, Uczteletz (north outskirts of Kosh-Agach), 06.08.03, numerous adults; Southern Buryatia, vic. Gusinoe Ozero, small lakes south to the Gusinoe Lake, 12.08.2005, 2m, 7f; Southern Buryatia, vic. Gusinoe Ozero, 1 km south to the Gusinoe Lake, at a channel, 12.08.2005, 4 m, 5 f.

First record for Altai and Pribaikalie. Previously recorded in Siberia from the Schuchie Lake, Central Buryatia (Grigorenko, 2001).

Phryganeidae Leach, 1815***Agrypnia obsoleta* (HAGEN, 1864)**

Altai, Taldukel and Sorulukel lakes (15 km NNW from Aktash), 16-18.08.03, numerous adults; Altai, small lake (15 km WNW from Kosh-Agach), altitude 2000m, 7.08.03, 3 m; Altai, Kosh-Agach, Uchteletz, 6.08.03, 10 m, 5 f; Altai, Tjungur, 28.07.96, 1 m.

***Agrypnia pagetana* CURTIS, 1835**

Chita Region, Bolshoy Undugun lake (8 km NW Beklemishevo), streams, 07.06.02, 4 m; Chita Region, Beklemishevo village, r. Khilok, 06.07.02, 1 m; Altai, small lake (15 km WNW from Kosh-Agach), altitude 2000 m, 07.08.03, 4 m, 1 f; Southern Buryatia, vic. Gusinoe Ozero, 1 km south to the Gusinoe Lake, at a channel, 12.08.2005, 1 f.

First record for Altai.

***Agrypnia varia* (FABRICIUS, 1793)**

Southern Buryatia, Gusinoe Ozero, railway station at the railway bridge, 10.08.2005, 1f; Southern Buryatia, vic. Gusinoe Ozero, Gusinoe Lake, southern shore, at light, 10-11.08.2005, 1m, 8f.

***Oligotricha lapponica* (HAGEN, 1864)**

Chita Region, Bolshoy Undugun lake (8 km NW Beklemishevo), streams, 07.06.02, 5 m, 1 f.

***Semblis atrata* (GMELIN, 1789)**

Chita Region, Bolshoy Undugun lake (8 km NW Beklemishevo), streams, 07.06.02, 2 m; Irkutsk Region, South Baikal Shore, Sljudyanka, r. Sljudyanka, 15.06.02, 2 m.

Lepidostomatidae Ulmer, 1903***Dinarthodes elongatus* MARTYNOV 1935**

Irkutsk Region, Bolshaya Rechka, 19.06.02, 4 m, 4 f.

***Lepidostoma hirtum* FABRICIUS, 1775**

Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24.06.2006, Nedoshivina, 1f

Brachycentridae Ulmer, 1903***Brachycentrus americanus* (BANKS, 1899)**

Irkutsk Region, Bolshaya Rechka, 02.06.02, numerous l; Chita Region, r. Nikishiha, 09.06.02, 1 f, numerous l; Irkutsk Region, Listvyanka, r. Krestovka, 01.06.02, numerous l; Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 4.06.02, numerous l; Irkutsk Region, Podkamennaya (60 km SSE from Irkutsk) 02.06.02, numerous l; Altai, Kosh-Agach, 05.08.03, 6 m, 8 f; Altai, r. Tabozhok (12 km N from Kosh-Agach), 08.08.03 1 l; Altai, r. Chuya, Suhodol, 10-11.08.03, 1 f; Altai, r. Chuya, r. Ruchey (25 km WNW from Kosh-Agach), 09.08.03, 5 m, 2 f; Altai, Ongudayskiy District, r. Tuekta (15 km upstream from the village Tuekta), 20.08.03, 1 fem; Altai, r. Chibitka (15 km road Aktash-Ulagan), 19.08.03, 1 m; Altai, Taldukel lake (15 km NNW from Aktash), 17-18.08.03, numerous adults; Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga and left tributary, at light, 21-23 08.2003, numerous adults; Altai, near Tjungur, r. Katun', vic. r. Kucherla, 16-28.07.96, 3 m; Buryatia, 5 km W Ulan-Ude, 3 km N village Gurulba, r. Bolshaya Rechka, 23.08.2005, 5 l.

***Brachycentrus subnubilus* CURTIS, 1834**

Barnaul, r. Ob', 14.07.96, 1 m, 2 f; Altai, Akkem lake, r. Akkem, 19.07.96, 3 f; Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 04.06.02, 1 m.

***Micrasema gelidum* MACLACHLAN, 1876**

Irkutsk Region, Bolshaya Rechka, 02.06.02, 5 m, 1 f; Chita Region, r. Nikishiha, 09.06.02, 12 m, 2 f; Altai, Taldukel lake (15 km NNW from Aktash), 17.08.03, numerous adults; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24 and 28.06.2006, Nedoshivina, 4 m.

First record from the Altai Mts.

Uenoidae Iwata, 1927***Neophylax ussuriensis* (MARTYNOV, 1914)**

Buryatia, South Shore of Baikal, vic. village Mishikha, r. Bystraya, 21.08.2005, numerous larvae and pupae.

Apataniidae Wallengren, 1886***Apatania crymophyla* MACLACHLAN, 1880**

Irkutsk Region, Bolshaya Rechka, 19.06.02, 1 f, numerous l; Irkutsk Region, Bolshaya Rechka, 02.06.02, 1 m, 7 f; Irkutsk Region, 7 km S from Vydrino, r. Snezhnaya, 13.06.02, 1 m, 8 f.

***Apatania doehleri* SCHMID, 1954**

Altai, r. Chuya, Suhodol, 10-11.08.03, 3 m, 6 f; Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga and left tributary, at light, 21-23.08.03 numerous f; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24.06.2006, Nedoshivina, 6m, 32 f; Irkutsk Region, Pribaikalie, Slyudyanka, r. Pohabiha, 1 km upstream from the village Pereval, 18.08.2005, 1m, 1f.

First record for Altai; previous findings were limited by the East Siberia.

***Apatania majuscula* MACLACHLAN, 1872**

Irkutsk Region, vic. Baikal lake, Listvyanka, r. Angara, 29.05.02 and 02.06.02, numerous adults; Irkutsk, r. Angara, 31.05.02, numerous adults; Irkutsk Region, Slyudyanka, r. Pohabiha, 15.06.02, numerous adults; Altai, Kucherlinskoe lake near source r. Kucherla,

26.07.96, 2 m, 22 f; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 28.06.2006, Nedoshivina, 1m, 6f.

First finding of this species in the Altai Mts.

***Apatania stigmatella* (ZETTERSTEDT, 1840)**

Altai, Ulaganskiy District, 12 km NNW from Aktash, Cheybekkel lake, 15.08.03, 1 m, 1 f.

***Apatania zonella* (ZETTERSTEDT, 1840)**

Irkutsk Region, Bolshaya Rechka, 19.06.02, 1 f, numerous l; Irkutsk Region, 7 km S from Vydrino, r. Snezhnaya, 13.06.02, 3 f; Southern Buryatia, Gusinoe Ozero, springs and streams, 10.06.02 3 f; Altai, r. Tabozhok (12 km N from Kosh-Agach), 08.08.03, 2 f, 1 l; Altai, Cherga (50 km SW from Gorno-Altaysk), springs near r. Sema, 23 08.03, 4 p, 12 l; Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga and left tributary, 23.08.03, 1 f, 1 p; Altai, Mayma (6 km N from Gorno-Altaysk) r. Zemlyanaya, 26.08.03, numerous f and p; Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24.06.2006, Nedoshivina, 1f.

First record for the Pribaikalie.

***Apataniana impexa* SCHMID, 1968**

Altai, river Chuya Valley, r. Sukhodol and nearest springs, 10-11.08.03, 2 m, 4 p, numerous l.

***Baicalina bellicosa* MARTYNOV, 1914**

Irkutsk Region, Slyudyanka, Baikal lake, 15.06.02, numerous adults.

***Baicalina levanidovae* IVANOV & MENSHTUKINA, 1996**

Irkutsk Region, Marituy, Baikal lake, 17.06.02, 10 m, 6 f.

***Baicalina reducta* MARTYNOV, 1924**

Irkutsk Region, Listvyanka, Baikal lake, 26.05.02, numerous adults.

***Baicalina thamastoides* MARTYNOV, 1914**

Irkutsk Region, Marituy, Baikal lake, 17.06.02, numerous adults; Irkutsk Region, Listvyanka, Baikal lake, 18.06.02, numerous adults.

***Baicalinella foliata* (MARTYNOV, 1914)**

Irkutsk Region, Slyudyanka, Baikal lake, 15.06.02, numerous adults.

***Baicalodes ovalis* (MARTYNOV, 1914)**

Irkutsk Region, Listvyanka, Baikal lake, 18.06.02, numerous adults.

***Protobaicalina spinosa* (MARTYNOV, 1914)**

Irkutsk Region, Listvyanka, Baikal lake, 18.06.02, numerous adults.

***Thamastes dipterus* HAGEN, 1858**

Irkutsk Region, Listvyanka, Baikal lake, 29.05.02, numerous adults.

Goeridae Ulmer, 1903***Goera tungusensis* MARTYNOV, 1909**

Chita Region, Beklemishevo, r. Zhepkovshczina 06.06.02, numerous adults; Southern Buryatia, Gusinoe Ozero, r. Tsagan-Gol, 11.06.02, numerous adults; Southern Buryatia, vic. Gusinoe Ozero, r. Bayan Gol, 500 m S to the Lake Gusinoe, 15.08.2005, 3m.

***Goera squamifera* MARTYNOV, 1909**

Altai Mts., Tigirlek Nature reserve, 51°08' N, 83°02'E, at light, 24.06.2006, Nedoshivina, 1m.

First record for both the West Siberia and Altai Mts., all previous findings were made in the Eastern Siberia and the Far East Regions.

Limnephilidae Kolenati, 1848***Anabolia concentrica* (ZETTERSTEDT, 1840)**

Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga at light, 21-23.08.03, 1 m.

***Anisogamodus flavipunctatus* (MARTYNOV, 1914)**

Altai, r. Chuya, r. Ruchey (25 km WNW from Kosh-Agach), 09.08.03, 15 f.

***Arctopora trimaculata* (ZETTERSTEDT, 1940)**

Altai, Taldukel lake (15 km NNW from Aktash), 18.08.03, 1 f.

First record for Altai.

- Asynarchus amurensis* (ULMER, 1905)
Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga at light, 21-23.08.03, 1 m.
- Asynarchus lapponicus* (ZETTERSTEDT, 1840)
Altai, vic. Beluha Mt., Akkem Gorge, Seven lakes Valley, 21.07.96, 1 m.
- Dicosmoecus palatus* (MACLACHLAN, 1872)
Altai, Ongudayskiy District, r. Tuekta (15 km up to the village Tuekta), 20.08.03 numerous p and l; Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga, at light, 21-23.08.03, 3 m.
- Ecclisomyia digitata* (MARTYNOV, 1929)
Altai, r. Tabozhok (12 km N from Kosh-Agach), 08.08.03, 1 p; Irkutsk Region, Pribaikalie, vic. Slyudyanka, r. Pohabiha, upstream from the village Pereval, 18.08.2005, 1m, 1f.
- Halesus radiatus* (CURTIS, 1831)
Altai, Kucherlinskoe lake near source r. Kucherla, 26.07.96, 5 l.
- Halesus tessellatus* (RAMBUR, 1842)
Altai, r. Chuya, Suhodol, 10-11.08.03, 3 m; Altai, r. Chuya, r. Ruchey (25 km WNW from Kosh-Agach), 09.08.03, 3 f; Buryatia, 5 km W Ulan-Ude, 5 km N village Gurulba, r. Bolshaya Rechka, in the forest, 23.08.2005, 1m.
- Hydatophylax grammicus* (MACLACHLAN, 1880)
Irkutsk Region, Vydrino, Southern Baikal, 13.06.02 numerous adults; Irkutsk Region, Listvyanka, r. Krestovka, 18.06.02, 2 m.
- Hydatophylax nigrovittatus* (MACLACHLAN, 1872)
Irkutsk Region, Vydrino, Southern Baikal, 13.06.02, numerous adults; Irkutsk Region, Bolshaya Rechka, 19.06.02, 1 m; Irkutsk Region, Slyudyanka, r. Pohabiha, 15.06.02, 1 m, 1 f.
- Lenarchus devius* (MACLACHLAN, 1880)
Altai, vic. Beluha Mt., Akkem Gorge, Seven lakes Valley, 21.07.96, 2 f.
First record for Altai, the westernmost point of distribution.
- Limnephilus abstrusus* MACLACHLAN, 1872
Southern Buryatia, vic. Gusinoe Ozero, Gusinoe Lake, southern shore, 16.08.2005, 1 m.
- Limnephilus borealis* (ZETTERSTEDT, 1840)
Altai, Taldukel and Sorulukel lakes (15 km NNW from Aktash), 16.08.03, 8 f.
- Limnephilus externus* HAGEN, 1861
Altai, Taldukel and Sorulukel lakes (15 km NNW from Aktash), 16.08.03, 8 m, 5 f.
First record for Western Siberia and Altai.
- Limnephilus germanus* MACLACHLAN, 1875
Altai, Mayma (6 km N from Gorno-Altaysk) r. Zemlyanaya, 26.08.03, 1 m, 1 f.
First record for Siberia.
- Limnephilus griseus* (LINNAEUS, 1758)
Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga at light, 21-23.08.03, 1 m.
- Limnephilus major* (MARTYNOV, 1909)
Altai, Tjungur, near r. Katun', at light, 28.07.96, 1 m.
First record for Altai.
- Limnephilus nigriceps* (ZETTERSTEDT, 1810)
Altai, Taldukel and Sorulukel lakes (15 km NNW from Aktash), 16.08.03, 3 m.
- Limnephilus politus* MACLACHLAN, 1865
Altai, Kosh-Agach, Uchteletz, 6.08.03, 9 ms, 1 f; Irkutsk Region, Pribaikalie, Slyudyanka, ditches and lakes at low course of r. Pohabiha, 19.08.2005, 3m, 3f.
First record for Pribaikalie; the male genitalia of the Slyudyanka specimens are slightly different from those of the European population: the internal teeth of the superior appendages are absent.
- Limnephilus rhombicus* (LINNAEUS, 1758)
Altai, Kosh-Agach, on light, 5.08.03, 1 m; Altai, Mayma (6 km N from Gorno-Altaysk) r. Zemlyanaya, 26.08.03, 1 fem.
- Limnephilus sericeus* (SAY, 1824)
Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga at light, 21-23.08.03, 1 m.
- Limnephilus sparsus* CURTIS, 1834
Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga, at light, 21-23.08.03, 1 f; Irkutsk Region, Pribaikalie, Slyudyanka, r. Pohabiha, 19.08.2005, 1f.
First record for the Western Siberia and Altai, and for Pribaikalie.
- Limnephilus stigma* CURTIS, 1834
Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 04.06.02, numerous l.; Altai, Taldukel and Sorulukel lakes (15 km NNW from Aktash), 16.08.03, 1 f; Altai, Cherga (50 km SW from Gorno-Altaysk), r. Cherga, at light, 21-23.08.03, 2 f.
- Limnephilus subcentralis* BRAUER, 1857
Altai, Taldukel and Sorulukel lakes (15 km NNW from Aktash), 16.08.03, 1 m, 3 f.
- Molannidae Wallengren, 1891**
- Molanna albicans* (ZETTERSTEDT, 1840)
Altai, Taldukel and Sorulukel lakes (15 km NNW from Aktash), 16.08.03, 8 m, 2 f; Altai, Manzhelok, Manzhelokskoe lake, 25.08.03, 2 f; Southern Buryatia, vic. Gusinoe Ozero, Gusinoe Lake, southern shore, 17.08.2005, 2m.
- Molanna submarginalis* MACLACHLAN, 1872
Southern Buryatia, lake Tsaidam, 1 km south of the Gusinoe Lake 12.08.2005, 1m.
- Molannodes tinctus* (ZETTERSTEDT, 1840)
Altai, Ulaganskiy District, 15 km NNW from Aktash, r. Karakudjur, Taldukel lake, 17-18.08.03, 1 m.
- Leptoceridae Leach, 1815**
- Athripsodes albifrons* (LINNAEUS, 1758)
Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 04.06.02, 2 m, 1f.
First record for Siberia, the easternmost point of the distribution area.
- Ceraclea annulicornis* (STEPHENS, 1836)
Altai, Tjungur, r. Katun', 17.07.96, 1 m.
- Ceraclea dissimilis* (STEPHENS, 1836)
Southern Buryatia, Naushki, 3.08.97, Kluge, 1 m.
First record for Siberia, the easternmost point of the distribution area.
- Ceraclea excisa* (MORTON, 1904)
Altai, Ulaganskiy District, 15 km NNW from Aktash, r. Karakudjur, Taldukel lake, 17.08.03, numerous adults.
First record for Altai.
- Ceraclea fulva* (RAMBUR, 1842)
Altai, small lake (15 km WNW from Kosh-Agach), altitude 2000m, 7.08.03, 1 m; Altai, Taldukel and Sorulukel lakes (15 km NNW from Aktash), 16.08.03, 3 m, 2 f; Altai, Kosh-Agach, Uchteletz, 5-6.08.03, 2 m, 2 f; Barnaul, r. Ob', 14.07.96, 1 f; Altai, near Tjungur, r. Katun', 17.07.96, 1 m; Southern Buryatia, vic. Gusinoe Ozero, Gusinoe Lake, southern shore, 10-11.08.2005, 2m, 1f; the same locality, 17.08.2005, 1m, 1f; 12.08.2005, 1m.
First record for Altai.
- Ceraclea globosa* YANG & MORSE, 1988
Chita Region, r. Amodova-Narymka, 5 km S from Elizavetino, 29.07.1994, N. Kluge.
First record for Siberia; previously known from China and the Russian Far East.
- Ceraclea lobulata* (MARTYNOV, 1935)
Novosibirsk, r. Ob', 28.08.2003, 2 f.
- Ceraclea nigronervosa* RETZIUS 1783
Chita Region, Makkaveevka (60 km SE from Chita), r. Ingoda, 4-5.06.02, numerous adults; Southern Buryatia, vic. Gusinoe Ozero, Gusinoe Lake, southern shore, 11.06.02, numerous adults.
- Mystacides bifidus* MARTYNOV, 1924
Southern Buryatia, Gusinoe Ozero, r. Tzagan-Gol, 11.06.02, numerous m, 3 f; the same locality, 10.08.2005, 1m; 16.08.2005, 1m.

***Mystacides longicornis* (LINNAEUS, 1758)**

Altai, small lake (15 km WNW from Kosh-Agach), altitude 2000m, 7.08.03, 16 m, 4 f; Altai, Ulaganskiy District, 15 km NNW from Aktash, r. Karakudjur, Taldukel lake, 16.08.03, 1 m, 1 f; Altai, Kosh-Agach, Uchteletz, 6.08.03, 3 m, 9 f; Altai, Manzhherok, Manzhherokskoe lake, 25.08.03, 1 m, 3 f; Southern Buryatia, Gusinoe Ozero, r. Tzagan-Gol, 10.08.2005, 1m.

***Mystacides sibiricus* MARTYNOV, 1935**

Southern Buryatia, vic. Gusinoe Ozero, small lakes south to the Gusinoe Lake, 12.08.2005, 1 m; Southern Buryatia, vic. Gusinoe Ozero, 1 km south to the Gusinoe Lake, at a channel, 12.08.2005, 16 m, 4 f.

***Oecetis lacustris* (Pictet 1834)**

Altai, Manzhherok, Manzhherokskoe lake, 25.08.03, 3 f; Southern Buryatia, vic. Gusinoe Ozero, Gusinoe Lake, southern shore, 10–11.08.2005, 1 m.

First record for Altai.

***Oecetis furva* (RAMBUR, 1842)**

Southern Buryatia, vic. Gusinoe Ozero, 1 km south to the Gusinoe Lake, at a channel, 12.08.2005, 2 m, 1 f.

***Oecetis ochracea* (CURTIS, 1825)**

Southern Buryatia, vic. Gusinoe Ozero, Gusinoe Lake, southern shore, 10–11.08.2005, 4 m, 9f; the same locality, 12.08.2005, 4 m, 8 f; 17.08.2005, 2 m; Southern Buryatia, vic. Gusinoe Ozero, r. Bayan Gol, 500 m S to the Lake Gusinoe, 15.08.2005, 2 m; Southern Buryatia, lake Tsaidam, 1 km south of the Gusinoe Lake 12.08.2005, 2 m; Southern Buryatia, vic. Gusinoe Ozero, 1 km south to the Gusinoe Lake, at a channel, 12.08.2005, 3 m.

***Setodes punctatus* (FABRICIUS, 1793)**

Barnaul, r. Ob', 14.07.96, 1 f.

First record for Altai.

***Triaenodes jakutanus* MARTYNOV, 1910**

Altai, Ulaganskiy District, 15 km NNW from Aktash, r. Karakudjur, Taldukel lake, 17.08.03, numerous adults.

First record for Altai.

***Triaenodes plectus* ULMER, 1908**

Barnaul, r. Ob', 14.07.96, 1 m.

First record for Siberia.

***Triaenodes unanims* MACLACHLAN, 1877**

Southern Buryatia, vic. Gusinoe Ozero, small lakes south to the Gusinoe Lake 12.08.2005, 1m, 1f.

Discussion

The material described above provided a number of species which were new for certain territories in Siberia. Surprisingly, there are many of these species found in Siberia for the first time. These are *Rhyacophila nana*, *Agapetus ochripes*, *Hydroptila angulata*, *Hydroptila forcipata*, *Hydroptila vectis*, *Limnephilus germanus*, *Athripsodes albifrons*, *Ceraclea dissimilis*, *C. globosa*, *Triaenodes plectus*. Most of them, namely *A. ochripes*, *H. angulata*, *H. forcipata*, *H. vectis*, *L. germanus*, *A. albifrons*, and *C. dissimilis* are European in origin; others came from the Far East. Some of the records are new for different regions of Siberia: *Holocentropus picicornis*, *Polycentropus flavomaculatus*, *Hydropsyche angustipennis*, *Rhyacophila kaltatica*, *Glossosoma angaricum*, *Oxyethira flavicornis*, *Agrypnia pagetana*, *Micrasema gelidum*, *Apatania doehleri*, *Apatania majuscula*, *Goera squamifera*, *Arctopora trimaculata*, *Lenarchus devius*, *Limnephilus externus*, *Limnephilus major*, *Limnephilus sparsus*, *Ceraclea excisa*, *Ceraclea fulva*, *Oecetis lacustris*, *Setodes punctatus*, *Triaenodes jakutanus* for Altai; *Cheumatopsyche lepida*, *Hydropsyche ornatula* for Eastern Siberia; *Hydropsyche contubernalis* for Buryatia; *Hydropsyche contubernalis*, *Hydropsyche pellucidula*, *Rhyacophila lenae* for the Chita Region and *Rhyacophila kaltatica*, *Oxyethira flavicornis*, *Apatania zonella*, *Limnephilus politus*, *Limnephilus sparsus* for Pribaikalie.

The most striking samples were obtained at the river Ingoda in the Chita Region: there were a number of species which were previously known as characteristic of the Middle European faunas

(*Cheumatopsyche lepida*, *Hydropsyche pellucidula*, *H. contubernalis*, *Agapetus ochripes*, *Hydroptila forcipata*, *Athripsodes albifrons*, *Polycentropus sp.*). It is very remarkable that these insects fly simultaneously at the upper part of the Amur Basin. Another unusual feature of these species is their early flight period in East Siberia: most of them appear in European Russia at the middle of summer, from the end of June to the middle of July. Probably we have encountered the end of a "spring aspect" of this fauna: there were only females of *Hydropsyche* and *Polycentropus* indicating that the male flight period is over. Subsequent samplings in the same localities in August 2006 revealed other species of the "summer aspect"; the description of this summer aspect will be given separately in another publication. It is not clear whether this spring faunal component is a relic one surviving from pre-glacial times. BEKETOV (2006) reported the Far-Eastern species, *Cheumatopsyche infascia* MARTYNOV, 1934, as an early appearing species which flies in the Novosibirsk Province in the middle of May, whereas at the larger eastern part of its range the species flies in mid-summer. Thus, one can suppose that the "non-native" faunistic elements may choose the unusual time of adult activity to prevent unnecessary interactions, for example, pheromone competition or erratic interspecific copulations. More studies are necessary to prove this hypothesis.

New additions to the fauna of the Altai Mountains are mostly of eastern origin. Nonetheless, there are also a few European species. The general composition of the Altai fauna of Trichoptera remains Eastern Palearctic. The records for other areas reveal a similar mixture of the European and the Far Eastern faunal components, with a sufficient decrease of the European species to the south-east both in diversity and in abundance. Similar introgression of the Far Eastern species occurs in Northern Europe, with a parallel decrease of the eastern elements to the north-west of Europe. Details of both processes of eastern-western faunal interactions require additional studies.

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