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NEW RECORDS OF CADDISFLIES (TRICHOPTERA) FROM SALAIR RIDGE, WEST SIBERIA

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Summary. New data on the caddisflies (Trichoptera) inhabiting rivers and streams of Salair Ridge, south of West Siberia, Russia are provided. Twenty five species are recorded for the territory of Salair Ridge for the first time. Five species, *Plectrocnemia conspersa* (Curtis, 1834), *Anabolia laevis* (Zetterstedt, 1840), *Limnephilus lunatus* Curtis, 1834, *Chaetopteryx villosa* (Fabricius, 1798), and *Allomyia sajanensis* Levanidova, 1967, are new for the south of West Siberia.

Key words: Trichoptera, fauna, new records, Kemerovo oblast, Novosibirsk oblast, Russia.

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Резюме. Приводятся новые данные по фауне ручейников (Trichoptera) водотоков Салаирского кряжа (юг Западной Сибири, Россия). Двадцать пять видов указаны впервые для Салаирского кряжа. Впервые для юга Западной Сибири указаны пять видов: *Plectrocnemia conspersa* (Curtis, 1834), *Anabolia laevis* (Zetterstedt, 1840), *Limnephilus lunatus* Curtis, 1834, *Chaetopteryx villosa* (Fabricius, 1798) и *Allomyia sajanensis* Levanidova, 1967.

INTRODUCTION

The trichopteran fauna of south of West Siberia is slightly investigated. Since beginning of XX century study of West Siberia trichopteran fauna was focused at Altai Mountains and lower course of the Ob' River on the north-west (Martynov, 1910, 1929; Lepneva, 1930, 1949; Borisova, 1985). More recent publications summarized the data of geographical distribution of caddisflies in West Siberia (Ivanov *et al.*, 2001). However, some regions of West Siberia are still poorly investigated. One of the most interesting in faunistic aspect is Salair Ridge – natural border between Alai-Sayan Mountains system and West Siberian Plate. Formed by low-mountains with frequent river net, Salair is considered as natural “transitional corridor” for aquatic insect between East and West Palaearctic Provinces (Chertoprud & Palatov, 2014; Baturina, 2018). First data of caddisfly diversity from Salair (Novosibirsk Province) was obtained by Beketov & Ivanov (2004). According to published data trichopteran fauna included

38 species, but this is evidently far from complete list for this territory. Since that time 27 species were added to the species list by several researches (Beketov, 2006; Bezmaternyh, 2007; Chertoprud & Palatov, 2014). The present paper is focused on providing a more complete species list of Trichoptera of Salair Ridge.

MATERIAL AND METHODS

Caddisflies larvae were collected in rivers, small rivers and brooks of Salair Ridge on the territory of the Kemerovo oblast and Novosibirsk oblast at summer period since 2007 till 2018. We used the GPS navigators to determine geographical coordinates and altitudes. Samplings were done by quantitative sampling methods for macrozoobenthos, using water net, at different water stations. All samplings were fixed in 75% ethanol and marked. Specimen identification was done using available keys (Lepneva, 1964, 1966; Bicchierai & Moretti, 1983; Zamora-Muñoz *et al.*, 1995; Ivanov *et al.*, 2001; Neu & Tobias, 2004; Torii *et al.*, 2012). Herein used taxonomy follows the Trichoptera World Checklist (Morse, 2019). The distribution of species is given according to literary data (Ivanov & Melnitsky, 2007; Ivanov, 2011; Zhong *et al.*, 2012; Chuluunbat *et al.*, 2016; Kuranishi & Tanida, 2016; Pan'kov & Krasheninnikov, 2016; Smirnova *et al.*, 2016; Yang *et al.*, 2016; Zasypkina, 2016; Melnitsky & Ivanov, 2017; Loskutova & Rafikova, 2018; Morse, 2019). The main part of studied specimens is deposited in the collections of Novosibirsk State University.

Our data is based on material collected in 2007–2018 at rivers and streams of Salair Ridge. Description of sampling places: coordinates, the nearest settlement or village, type of watercourse, are presented at the Table 1. Further, the number of the sampling point will be given according to Table 1 at the species list.

NEW RECORDS

Family Glossosomatidae

Agapetus sibiricus Martynov, 1918

MATERIAL. Larvae from locations: 7, 8, 16, 17, 24, 25, 26.

DISTRIBUTION. Russia (Altai, West Siberia, Sayan Mountains, Yakutia, Far East), Kazakhstan, Mongolia, Korea, Japan, Taiwan. Якутия

Family Polycentropodidae

Plectrocnemia conspersa (Curtis, 1834)

MATERIAL. Larvae from locations: 14, 26.

DISTRIBUTION. Russia (European part, Ural Mountains), Europe, China.

REMARKS. This species is recorded for West Siberia for the first time.

Nyctiophylax angarensis Martynov, 1910

MATERIAL. Larvae from locations: 20, 25, 27.

DISTRIBUTION. Russia (Altai, southeastern Siberia, Far East).

REMARKS. This record is the most west locality in Russia.

Holocentropus stagnalis (Albarda, 1874)

MATERIAL. Larvae from locations: 7, 25, 29.

DISTRIBUTION. Russia (West Siberia), Europe, Caucasus.

REMARKS. The most eastern locality in Russia.

Table 1. Description of sampling point at watercourses of Salair Ridge

No	Rivers, year of sampling	The nearest settlement	Longitude / Latitude
Rivers			
1	Berd', 2008	Novososedovo	54.65843 N / 83.72928 E
2	Berd', 2011	Perebor	54.31379 N / 84.38027 E
3	Berd', 2012	Malaja Tomka	54.32135 N / 84.39786 E
4	Berd', 2013	Berezovo	54.50690 N / 84.04741 E
5	Berd', 2014	Starososedovo	54.60213 N / 84.02080 E
6	Berd', 2015	Paivino	54.40757 N / 84.13650 E
7	Berd', 2016	Nikonovo	54.44780 N / 83.9890 E
8	Chumysh, 2017	Apanas	53.51326 N / 86.84374 E
9	Kara-Chumysh, 2017	Kamennyy Klyuch	54.08013 N / 86.18328 E
10	Kara-Chumysh, 2017	Kara-Chumysh	53.78186 N / 86.54793 E
11	Suyenga, 2013	Suyenga	54.44648 N / 84.57344 E
12	Suyenga, 2018	Yegoryevskoe	54.52853 N / 84.60014 E
Brooks			
13	Kolturak, 2013	Mokrushino	54.76064 N / 84.86639 E
14	Volotomikha, 2013	Mirnyy	54.72444 N / 84.74444 E
15	Kolturak, 2014	Mokrushino	54.70223 N / 84.84837 E
16	Chuhta, 2017	Kamennyy Klyuch	54.09213 N / 86.07851 E
17	Nameless, 2017	Apanas	53.53097 N / 86.76212 E
18	Osipovka, 2017	Salair	54.19870 N / 85.76125 E
Small rivers			
19	Zuryanka, 2007	Academgorodok	54.82475 N / 83.11281 E
20	Kinterep, 2009	Suyenga	54.46008 N / 84.51760 E
21	Bugotak, 2012	Ust'-Kamenka	55.05165 N / 83.93768 E
22	Frolikha, 2012	Starogutovo	54.74134 N / 84.62189 E
23	Karpysak, 2012	Karpysak	55.04646 N / 83.72665 E
24	Vydrikha, 2012	Belovo	54.55952 N / 83.61764 E
25	Kinterep, 2013	Bol'shoy Izyrak	54.52407 N / 84.46220 E
26	Poldnevaya, 2013	Dubrovka	54.55112 N / 84.85388 E
27	Tars'ma, 2013	Kourak	54.83453 N / 84.73782 E
28	Izyrak, 2015	Chupino	54.40732 N / 84.14108 E
29	Kamenka, 2015	Payvino	54.43524 N / 84.11092 E
30	Kamenka, 2015	Payvino	54.42520 N / 84.09456 E
31	Kuryia, 2015	Chupino	54.38759 N / 84.19933 E
32	Mostovka, 2015	Chupino	54.40637 N / 84.18165 E
33	Petrushikha, 2017	Gubernskaya zastava	54.19421 N / 85.15940 E
34	Izdrevaya, 2018	Izdrevaya	54.97118 N / 83.22672 E
35	Shiptunikha, 2018	Medvedskoe	54.45607 N / 83.60669 E

***Holocentropus picicornis* (Stephens, 1836)**

MATERIAL. Larvae from locations: 12, 14, 19.

DISTRIBUTION. Russia (European part, Ural Mountains, Altai, West Siberia, Yakutia, Far East), Europe, Caucasus, Kazakhstan, Mongolia, North America.

Family Hydropsychidae

Arctopsyche ladogensis (Kolenati, 1859)

MATERIAL. Larvae from locations: 26, 28.

DISTRIBUTION. Russia (European part, Ural Mountains, Altai, Yakutia, Far East), Europe, Kazakhstan, Mongolia, North America.

Hydropsyche ornatula McLachlan, 1878

MATERIAL. Larvae from locations: 2, 3, 4, 12.

DISTRIBUTION. Russia (European part, Ural Mountains, East Siberia), Europe, Caucasus, Kazakhstan, China.

Cheumatopsyche lepida (Pictet, 1834)

MATERIAL. Larvae from locations: 5, 13, 26.

DISTRIBUTION. Russia (European part, Ural Mountains, West Siberia, East Siberia), Europe, Caucasus, Kazakhstan.

Family Limnephilidae

Anabolia laevis (Zetterstedt, 1840)

MATERIAL. Larvae from locations: 7, 9, 19, 21, 30.

DISTRIBUTION. Russia (Ural Mountains), Europe, Caucasus, Kazakhstan.

REMARKS. This species is recorded for West Siberia for the first time.

Asynarchus amurensis (Ulmer, 1905)

MATERIAL. Larvae from location: 14.

DISTRIBUTION. Russia (European part, Ural Mountains, Altai, West Siberia, Far East), Europe, Kazakhstan, Mongolia, Korea, Japan.

Chaetopteryx villosa (Fabricius, 1798)

MATERIAL. Larvae from locations: 7, 13, 14.

DISTRIBUTION. Russia (European part, Ural Mountains), Europe.

REMARKS. This species is recorded for West Siberia for the first time.

Grensia praeterita (Walker, 1852)

MATERIAL. Larvae from locations: 15, 19.

DISTRIBUTION. Russia (European part, Ural Mountains, West Siberia, Far East), Europe, North America.

Grammotaulius sibiricus McLachlan, 1874

MATERIAL. Larvae from location: 14.

DISTRIBUTION. Russia (European part, Ural Mountains, Altai, West Siberia, Yakutia, Far East), Europe, Mongolia.

Limnephilus lunatus Curtis, 1834

MATERIAL. Larvae from locations: 4, 7.

DISTRIBUTION. Russia (European part, Ural Mountains), Europe, Caucasus.

REMARKS. This species is recorded for West Siberia for the first time.

***Pseudostenophylax* sp.**

MATERIAL. Larvae from locations: 1, 2, 3, 4, 5, 6, 7, 8, 12, 20, 21, 22, 25.

Family Brachycentridae

***Brachycentrus americanus* (Banks, 1899)**

MATERIAL. Larvae from locations: 2, 3, 4, 5, 6, 7, 11, 12, 23, 25.

DISTRIBUTION. Russia (Ural Mountains, Altai, West Siberia, Yakutia, Far East), Kazakhstan, Mongolia, China, Japan, North America.

Family Apataniidae

***Allomyia sajanensis* Levanidova, 1967**

MATERIAL. Larvae from locations: 15, 16.

DISTRIBUTION. Russia (Sayan Mountains, Tuva), Mongolia.

REMARKS. This species is recorded for West Siberia for the first time.

***Apatania zonella* (Zetterstedt, 1840)**

MATERIAL. Larvae from locations: 15, 19.

DISTRIBUTION. Russia (European part, Ural Mountains, Siberia, Far East), Europe, Kazakhstan, Mongolia, China, North America.

Family Phryganeidae

***Agrypnia obsoleta* (Hagen, 1864)**

MATERIAL. Larvae from locations: 12, 13, 19.

DISTRIBUTION. Russia (European part, Ural Mountains, Altai, West Siberia, Far East), Europe, Caucasus, Kazakhstan, Mongolia, North America.

Family Leptoceridae

***Triaenodes reuteri* McLachlan, 1880**

MATERIAL. Larvae from locations: 20, 25.

DISTRIBUTION. Russia (European part, Siberia), Europe, Caucasus, Mongolia, North America.

***Ceraclea nigronervosa* (Retzius, 1783)**

MATERIAL. Larvae from locations: 7, 9, 15, 18.

DISTRIBUTION. Russia (European part, Ural Mountains, East Siberia, Far East), Europe, Mongolia, Japan.

Family Molannidae

***Molanna angustata* Curtis, 1834**

MATERIAL. Larvae from locations: 1, 7, 13.

DISTRIBUTION. Russia (European part, Ural Mountains, Altai, West Siberia, Far East), Europe, Caucasus, Kazakhstan.

Family Rhyacophilidae

***Rhyacophila impar* Martynov, 1914**

MATERIAL. Larvae from locations: 10, 20.

DISTRIBUTION. Russia (European part, West and East Siberia, Far East), Kazakhstan, Mongolia, Korea, Japan.

***Rhyacophila lata* Martynov, 1918**

MATERIAL. Larvae from locations: 3, 7, 12, 15.

DISTRIBUTION. Russia (Southeastern Siberia, Yakutia, Far East), Kazakhstan, Mongolia, China, Korea.

***Rhyacophila obliterata* McLachlan, 1863**

MATERIAL. Larvae from locations: 1, 2, 7, 12.

DISTRIBUTION. Russia (European part, Ural Mountains, Altai, West Siberia), Europe.

CONCLUSION

According to published data and the results of processing the collected material in 2007–2018 the list of caddisflies of Salair Ridge contains 90 species from 48 genera and 14 families. Twenty five species were recorded for investigated territory for the first time and five of them are new to the West Siberia.

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