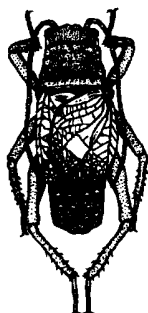


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THE MAYFLIES (INSECTA: EPHEMEROPTERA) OF THE KUNASHIR (KURIL ISLANDS)

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Twenty four species of the mayflies from Kunashir Island are listed. Among them eight species are recorded for the first time from Kunashir, and *Epeorus uenoi* Mats., *Baetis thermicus* Ueno, *Drunella bifurcata* Allen and *Cincticostella okumai* (Goze) are new to Russia.

KEY WORDS: Ephemeroptera, mayflies, faunistics.

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Приведены 24 вида подёнок, из которых 8 видов впервые указываются для Кунашира, а *Epeorus uenoi* Mats., *Baetis thermicus* Ueno, *Drunella bifurcata* Allen и *Cincticostella okumai* (Goze) являются новыми для фауны России.

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INTRODUCTION

Up to present 13 species of mayflies were known from South Kuril Islands: (Sinitshenkova, 1981; Sinitshenkova & Tshernova, 1976; Tiunova, 1984, 1986,

1989; Tshernova & Belov, 1982; Tshernova et al., 1986).

Present paper based mainly on the material collected by staffs of the Laboratory Freshwater Hydrobiology (Institute of Biology and Pedology) Drs. I.M. Leva-nidova, T.S. Vshivkova, E.A. Makarchenko, I.A. Chereshev, fragmental collections of Yu.D. Bodrova and M.P. Tiunov as well as the field survey of author in 1989. As the result the list of 24 species is provided.

Abbreviations used throughout the text are follow: collectors: B. - Yu.D. Bodrova; V. - T.S. Vshivkova; L. - I.M. Levanidova; M. - E.A. Makarchenko; M.T. - M.P. Tiunov.; T.T. - T.M. Tiunova; Ch. - I.A. Chereshev; stage: n - nympha; subim - subimago; im - imago.

FAMILY EPHEMERIDAE

Ephemera japonica McLachlan, 1875

MATERIAL. Kunashir. Yuzhno-Kurilsk, Lebednyi stream, 21.05.1976 - n (L., Ch.); Sernovodsk, Andreevka River, upstream, 23.05.1976 - n (L.); Lesnaya River, 12.06.1976 - n (L., Ch.); Alekhino, Bezimyannyi stream, 30.05.1976 - n (Ch.); Odinkii stream, 2.06.1976 - n (L., Ch.); Bay of sulphurous spring, spring, 2.06.1976 - n (L.); Vtoroi stream, 2.06.1976 - n (L., Ch.); Golovnin's volcano, 1.5 km from Alekhino, 8.06.1976 - n (L.).

DISTRIBUTION. Russia: Sakhalin, Shikotan, Kunashir. Japan.

FAMILY HEPTAGENIIDAE

Cinygma lyriformis (McDunnough, 1930)

MATERIAL. Kunashir. Sernovodsk, Tyurino River, upstream, 23.05.1976 - n (M.); spring, near Sernovodsk, 27.05.1976 - n (L.); spring, right bank of Tyurino River, 26.04.1978 - n (M.); stream between Filatovka River and Kamishevka River, 17.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Chukotka, Kamchatka, Khabarovskii krai, Kunashir, S. Siberia, Altai, N. Ural.

Cinygmula kurenzovi (Bajkova, 1956)

MATERIAL. Kunashir. Yuzhno-Kurilsk, stream near town, 21.05.1976 - n (L.); Sernovodsk, Andreevka River, 23.05.1976 - n (M.); spring near Sernovodsk, 27.05.1976 - n (L.); Alekhino, Bay of sulphurous spring, spring, 4.06.1976 - n (L.); Peschanyi stream, 5 km before waterfall, 4.06.1976 - n (M.); Lesnaya River, 12.06.1976 - n (L.); Filatovka River, 17-19.06.1989 - subim, im (reared from larvae) (T.T.); Balysheva stream, 100 m upper confluence with Filatovka River, 18.06.1989 - n (T.T.); Tyatina River, 1 km before mouth, 18.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Khabarovskii krai, Primorskii krai, Shikotan, Kunashir (first record), Transbaikalia. Kazakhstan.

***Cinygmula cava* (Ulmer, 1927)**

MATERIAL. Kunashir. Sernovodsk, spring, 27.05.1976 - n (L.); Vlasova stream, 28.05.1976 - n (L.); Alekhino, Bezimyannii stream, 30.05.1976 - n (Ch.); Vtoroi stream, 2.06.1976 - n (L.); Odinskii stream, 2.06.1976 - n (L.); Tyatina River, 1 km before mouth, 18.06.1989 - n (T.T.); stream 1 km before hot spring "Chaika", 21-27.06.1989 - n, subim, im (reared from larvae) (T.T.).

DISTRIBUTION. Russia: Magadanskaia oblast, Kamchatka, S. Primorskii krai, Sakhalin, Kunashir, Transbaikalia, Altai. Mongolia.

***Cinygmula latifrons* Tshernova et Belov, 1982**

MATERIAL. Kunashir. Mendeleevo, Tyurino River, 22.04.1978 - n (Ch.).

DISTRIBUTION. Russia: Primorskii krai, Kunashir (first record).

***Cinugmula* (?) *putoranica* Kluge, 1980**

MATERIAL. Kunashir. Alekhino, Odinskii stream, 2.06.1976 - n (L.).

DISTRIBUTION. Russia: Taimyr peninsula, Kamchatka, Primorskii krai, Kunashir (first record).

***Cinygmula grandifolia* Tshernova, 1952**

MATERIAL. Kunashir. Mendeleevo, Tyurino River, 22.04.1978 - n (Ch.); Balysheva stream, 100 m upper confluence with Filatovka River, 18.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Khabarovskii krai, Amur River, Primorskii krai, Sakhalin, Kunashir (first record), Transbaikalia, E. Siberia.

***Epeorus* (*Iron*) *aesculus* Imanishi, 1934**

MATERIAL. Kunashir. Vinai River, 28.08.1974 - n (B.); Andreevka River, the lower reaches, 22.05.1976 - n (L.); upstream, 23.05.1976 - n (M.); Yuzhno-Kurilsk, Bezimyannii stream, 23.05.1976 - n (L.); Lebednyi stream, 25.05.1976 - n (L.); Sernovodsk, spring, 27.05.1976 - n (L.); Vlasova stream, 28.05.1976 - n (L.); Alekhino, Alekhino stream, 30.05.1976 - n (L., Ch.); Vtoroi stream, 2.06.1976 - n (L., Ch.); Odinskii stream, 2.06.1976 - n (L.); Bay of sulphurous spring, spring, 4.06.1976 - n (L.); Golovnin's volcano, 1.5 km of Alekhino, 8.06.1976 - n (L.); Lesnaya River, 12.06.1976 - n (L., Ch.); Balysheva stream, 100 m upper confluence with Filatovka River, 16.06.1989 - n (T.T.); Filatovka River, 19.06.1989 - n, subim, im (reared from larvae) (T.T.); Tyatina River, 1 km upper mouth, 16.06.1989 - n, subim, im (reared from larvae); 18.06.1989 - n; 21.06.1989 - im (reared from larvae) (T.T.); stream near Tyatina River,

20.06.1989 - subim, im (reared from larvae) (T.T.); Severyanka River, 24.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Khabarovskii krai, Amur River, Primorskii krai, Sakhalin, Kunashir. Japan, N-E. China.

***Epeorus (Iron) uenoi* Matsumura, 1931**

MATERIAL. Kunashir. Sernovodsk, Tyurino River, the lower reaches, 24.05.1976 - n (V.); 25.05.1976 - n (L.); Tyurino River, near Mendeleevo, 22.04.1978 - n (Ch.). Iturup. Reidovaya River, 8-9.05.1974 - n (B.); Kurilka River, 25.05.1974 - n (B.).

DISTRIBUTION. Russia (first record): Kunashir, Iturup. Japan.

***Epeorus (Belovius) ermolenkoi* Tshernova, 1981**

MATERIAL. Kunashir. Yuzhno-Kurilsk, Lebednyi stream, 21.05.1976 - n (L.); Sernovodsk, Tyurino River, the lower reaches, 24.05.1976 - n (L.); Tyurino River, 2 km before third waterfall, 25.05.1976 - n (V.); Mendeleevo, Tyurino River, 22.04.1978 - n (Ch.); Alekhino, Vtoroi stream, 2.06.1976 - n (L.); Lesnaya River, 12.06.1976 - n (L.); Filatovka River, 1 km before mouth, 6.08.1985 - n (M.T.); 2 km before mouth, 15.06.1989 - n (T.T.); Balysheva stream, 100 m upper confluence with Filatovka River, 18.06.1989 - n (T.T.); Tyatina River, 18.06.1989 - n (T.T.); stream near Tyatina River, 17-20.06.1989 - n, subim, im (reared from larvae) (T.T.); stream between Filatovka River and Kamyshevka River, 17.06.1989 - n (T.T.); stream 1 km before hot spring "Chaika", 20.06.1989 - n; 21-23.06.1989 - n, subim, im (reared from larvae) (T.T.); Severyanka River, 24.06.1989 - n (T.T.); Shtolnyi stream, tributary of Zolotaya River, 24.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Kunashir, Shikotan.

***Rhithrogena* sp.**

MATERIAL. Kunashir. Sernovodsk, Tyurino River, the lower reaches, 24.05.1976 - n (L.); Mendeleevo, Tyurino River, 22.04.1978 - n (Ch.); Filatovka River, 1 km before mouth, 6.08.1985 - n (M.T.); 2 km before mouth, 15.06.1989 - n (T.T.); Tyatina River, 18.06.1989 - n (T.T.); stream 1 km before hot spring "Chaika", 22.06.1989 - n (T.T.).

FAMILY SIPHLONURIDAE

***Siphonurus lacustris* Eaton, 1870**

MATERIAL. No specimens examined.

DISTRIBUTION. Palearctic, including Kunashir (Tshernova et al., 1986).

***Ameletus costalis* Matsumura, 1931**

MATERIAL. Kunashir. Yuzhno-Kurilsk, Lebednyi stream, 21.05.1976 - n (L., Ch.); Sernovodsk, Tyurino River, the lower reaches, 24.05.1976 - n (L.); Vlasova stream, 28.05.1976 - n (L.); Alekhino, Alekhinskii stream, 1.06.1976 - n (Ch.); Vtoroi stream, 2.06.1976 - n (L., Ch.); Lesnaya River, 12.06.1976 - n (L., Ch.); Filatovka River, 2 km upper mouth, 15.06.1989 - n (T.T.); Tyatina River, 1 km upper mouth, 18.06.1989 - n (T.T.); Zolotaya River, 24.06.1989 - n (T.T.); Severyanka River, 24.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Primorskii krai, Sakhalin, Kunashir, Shikotan. Japan, N-E. China.

***Ameletus montanus* Imanishi, 1930**

MATERIAL. No specimens examined.

DISTRIBUTION. Russia: throughout Russian Far East including Kunashir (Sinitshenkova & Tshernova, 1976).

FAMILY BAETIDAE

***Baetis thermicus* Ueno, 1928**

MATERIAL. Kunashir. Yuzhno-Kurilsk, Lebednyi Stream, 21.05.1976 - n (L., Ch.); Mendelevo, Tyurino River, 2 km of waterfall, 25.05.1976 - n (V.); Tyurino River, 22.04.1978 - n (Ch.); Sernovodsk, spring, 27.05.1976 - n (L.); Vlasova stream, 28.05.1976 - n (L.); Alekhino, Vtoroi stream, 2.06.1976 - n (L., Ch.); Odinkii stream, 2.06.1976 - n (L., Ch.); Bay of sulphurous spring, spring, 4.06.1976 - n (L.); Golovnin's volcano, stream near Lake Kipyashchee, 7.06.1976 - n (L.); stream about 1.5 km of Alekhino, 8.06.1976 - n (L.); Lesnaya River, 12.06.1976 - n (L., Ch.); Filatovka River, 15.06.1989 - n (T.T.); 17-18.06.1989 - subim, im (reared from larvae) (T.T.); Saratovka River, 17.06.1989 - im (reared from larvae) (T.T.); Tyatina River, 1 km before mouth, 18.06.1989 - n (T.T.); stream 1 km before hot spring "Chaika", 21.06.1989 - subim, im (reared from larvae) (T.T.); Shtolnyi stream, tributary of Zolotaya River, 24.06.1989 - im (reared from larvae); 26.06.1989 - n (T.T.).

DISTRIBUTION. Russia (first record): Kunashir. Japan.

***Baetis vernus* Curtis, 1870**

MATERIAL. No specimens examined.

DISTRIBUTION. Palaearctic, including Kunashir (Tshernova et al., 1986).

FAMILY LEPTOPHLEBIIDAE

***Leptophlebia chocolata* (Imanishi, 1937)**

MATERIAL. Kunashir. Yuzhno-Kurilsk, Bezimyannyi stream, 21.05.1976 -

n (L.); hot beach, spring, 21.05.1976 - n (L.); Lesnaya River, 12.06.1976 - n (L., Ch.); Sernovodsk, Andreevka River, upstream, 23.05.1976 - n (L.); Tyurino River, the lower reaches, 24.05.1976 - n (L.); Tyurino River basin, spring, 25.05.1976 - n (L.); 27.05.1976 - n (L.); Tyurino River, 22.04.1978 - n (Ch.); Alekhino, Alekhinskii stream, 1.06.1976 - n (Ch.); Bay of sulphurous spring, spring, 2.06.1976 - n (L.); Peschanyi stream, 5 km of waterfall, 4.06.1976 - n (M.); Golovnin's volcano, stream near Lake Kipyashchee, 7.06.1976 - n (L.); stream about 1.5 km of Alekhino, 8.06.1976 - n (L.); stream between Filatovka River and Kamyshevka River, 17.06.1989 - n (T.T.); Tyatina River, 1 km upper mouth, 18.06.1989 - n (T.T.); Shtolnyi stream, tributary of Zolotaya River, 24.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Khabarovskii krai, Primorskii krai, Kunashir, Shikotan. Japan.

FAMILY EPHEMERELLIDAE

Cincticostella okumai (Gose, 1980)

MATERIAL. Kunashir. Yuzhno-Kurilsk, Bezimyannyi stream, 21.05.1976 - n (L.); Sernovodsk, Tyurino River, 25.05.1976 - n (Ch.); 24.04.1978 - n (L.); Mendeleevo, Tyurino River, 22.04.1978 - n (Ch.); Alekhino, Vtoroi stream, 2.06.1976 - n (L.); Lesnaya River, 12.06.1976 - n (Ch.); Saratovka River, 17.06.1989 - n, subim, im (reared from larvae) (T.T.).

DISTRIBUTION. Russia (first record): Kunashir. Japan.

Cincticostella nigra (Ueno, 1928)

MATERIAL. Kunashir. Sernovodsk, Tyurino River, the lower reaches, 24.05.1976 - n (L.); Tyurino River, 2 km before third waterfall, 25.05.1976 - (V.); Mendeleevo, Tyurino River, 24.04.1978 - n (Ch.).

DISTRIBUTION. Russia: Primorskii krai, Sakhalin, Kunashir. Japan.

Drunella bifurcata Allen, 1971

MATERIAL. Kunashir. Yuzhno-Kurilsk. Lebednyi stream, 21.05.1976 - n (L.); Sernovodsk, Andreevka River, upstream, 23.05.1976 - n (M.); Mertvyi stream, 24.05.1976 - n (L.); Tyurino River, the lower reaches, 24.05.1976 - n (L.); Tyurino River, 2 km before third waterfall, 25.05.1976 - n (V.); Tyurino River near Mendeleevo, 22.04.1978 - n (Ch.); Vlasova stream, 28.05.1976 - n (L.); Lesnaya River, 12.06.1976 - n (L.); Tyatina River, 2 km before mouth, 18.06.1989 - n (T.T.); Filatovka River, 15.06.1989 - n (T.T.); Severyanka River, 24.06.1989 - n (T.T.).

DISTRIBUTION. Russia (first record): Kunashir. Japan.

***Drunella basalis* (Imanishi, 1931)**

MATERIAL. Kunashir. Sernovodsk, Tyurino River, the lower reaches, 24.05.1976 - n (L.); Tyurino River, 2 km before third waterfall, 25.05.1976 - n (V.); Tyurino River, near Mendeleevo, 22.04.1978 - n (Ch.); Balysheva stream, 100 m upper confluence with Filatovka River, 18.06.1989 - n (T.T.), Severyanka River, 24.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Kunashir. Japan.

***Drunella triacantha* (Tshernova, 1949)**

MATERIAL. Kunashir. Tyatina River, 1 km before mouth, 18.06.1989 - n (T.T.).

DISTRIBUTION. Russia: throughout Russian Far East, Kunashir (first record), Transbaikalia, Tuva, Altai. Japan, Korea, Mongolia.

***Drunella trispina* (Ueno, 1928)**

MATERIAL. Kunashir. Vinai River, 26.07.1974 - n (B.); Sernovodsk, Tyurino River, the lower reaches, 24.05.1976 - n (L.); Tyurino River, 2 km before third waterfall, 25.05.1976 - n (V.); Tyurino River, near Mendeleevo, 22.04.1978 - n (Ch.); Filatovka River, 1 km before mouth, 6.08.1985 - n (M.T.).

DISTRIBUTION. Russia: Primorskii krai, Kunashir (first record). Japan.

***Drunella cryptomeria* (Imanishi, 1937)**

MATERIAL. Kunashir. Vinai River, 26.07.1974 - n (B.); Sernovodsk, Tyurino River, the lower reaches, 24.05.1976 - n (L.); Tyurino River, 2 km before third waterfall, 25.05.1976 - n (V.); Tyurino River, near Mendeleevo, 22.04.1978 - n (Ch.); Lesnaya River, 12.06.1976 - n (Ch.); Filatovka River, 1 km before mouth, 6.08.1985 - n (M.T.); 2 km before mouth, 15.06.1989 - n (T.T.); Tyatina River, 1 km before mouth, 18.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Primorskii krai, Kunashir (first record). Japan.

***Ephemerella aurivillii* (Bengtsson, 1908)**

MATERIAL. Kunashir. Sernovodsk, spring, 27.05.1976 - n (L.); Alekhino, Peschanyi stream, 4.06.1976 - n (M.); Mendeleevo, Tyurino River, 22.04.1978 - n (Ch.); spring near Tyurino River, 26.04.1978 - n (M.); Filatovka River, 2 km before mouth, 15.06.1989 - n (T.T.); stream between Filatovka River and Kamyshevka River, 17.06.1989 - n (T.T.).

DISTRIBUTION. Russia: Kamchatka, Amur River, Primorskii krai, Sakhalin, Kunashir (first record), Angara River, Altai. N. Europa.

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