

# The Jumping-Lice (Homoptera, Psyllinea) Fauna of the Republic of Altai

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**Abstract**—A faunal list of Psyllinae of the Republic of Altai is given. Out of the 59 species reported, 35 are new to the fauna of the area under study, 10 are new to Siberia, and 3 are recorded for the first time from Russia.

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Though a great deal of data on the psyllid fauna of Siberia (Gegechkori and Loginova, 1990) are available, this group has not been systematized in a faunal review of this area. The present study is the first stage in the investigation aimed with generalization of published and new data on the species composition of the psyllid fauna of various regions of Siberia.

Twenty-four psyllid species were recorded from various areas of the Republic of Altai by Loginova, who conducted a thorough investigation of the psyllid fauna of the Soviet Union in 1950–1970 (Loginova, 1961, 1962, 1964, 1966, 1967, 1968, 1972, 1974, 1979).

The collection of the Zoological Institute, Russian Academy of Sciences (ZIN) also contains unpublished material on the fauna of the Republic of Altai, collected by I.M. Kerzhner, A.F. Emeljanov, and E.P. Nartshuk in 1964 from Ongudaiskii and Kosh-Agachskii districts, by the author of the present paper and N.V. Golub in the period of 23.VI–2.VII.2006 from Chemsalskii district (near Edigan Vill.), by A.V. Barkalov in 2006 from Kosh-Agachskii district (Kuraiskaya steppe), A.N. Zhelokhovtsev in 1935 and V.S. Sorokina in 2005 from Ust-Ulaganskii district, A.A. Silantiev in 1897 from Turochakskii district (Lake Teletskoe), G. Gorbunova in 1927 from Ust-Koksinskii district (Uimonskii highway), and K.V. Yuganova in 1911 from Shebalinskii district (Seminskii Pass). Basing on this material, 35 species are indicated for the first time for the Republic of Altai, 10 species, for Siberia, and 3 species (*Craspedolepta radiosa* Loginova, 1982, *C. costulata* Loginova, 1962, and *C. medvedevi* Loginova, 1962), for Russia.

Thus, the total faunal list of psyllids of the Republic of Altai includes 59 species. Data on these species are given below, including indications of the locality and date of their collection, name of the collector, number of specimens, in some cases, also names of plants, from which the psyllids were collected, and information about published records of the species within the limits of the Republic of Altai. The collecting sites are shown in a map of the Republic of Altai (see figure).

Data on the distribution of species are based on the catalogues by Klimaszewski (1973) and Gegechkori and Loginova (1990), and also on the material from the collection of ZIN.

The following designations are used in text: \*species is recorded for the first time in the fauna of the Republic of Altai, \*\*recorded for the first time in the fauna of Siberia, and \*\*\*recorded for the first time in the fauna of Russia.

## Family *PSYLLIDAE*

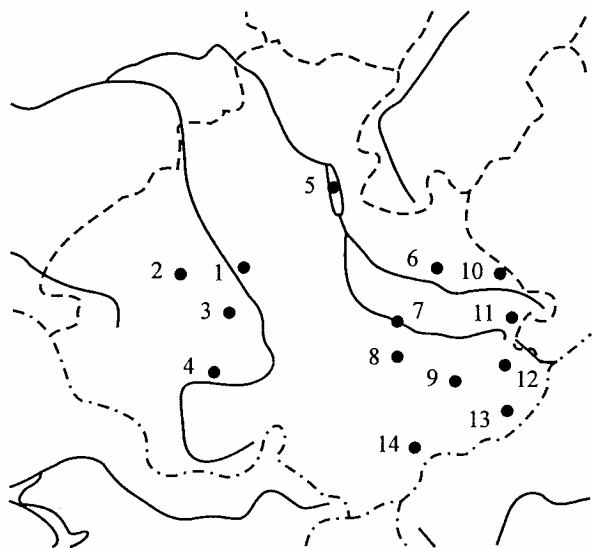
### Subfamily APHALARINAE

#### *Aphalara pauli* Loginova, 1979

The species was earlier indicated from Ongudaiskii [Loginova, 1961 (as *A. exilis* Weber et Mohr, 1804), 1979: Ongudai] and Turochakskii [Loginova, 1961 (as *A. exilis*), 1979: Lake Teletskoe] districts.

**Material.** Lake Teletskoe, 1.IX.1897 (Silantiev), 1 ♀; 20 km SE of Ongudai, 28.VI.1964 (Kerzhner), 1 ♀.

**Distribution.** Russia (Western and Eastern Siberia), Armenia, Central and Eastern Kazakhstan, Mongolia (Töv aimak).



Collecting sites of psyllids in the Republic of Altai: (1) Edigan Vill., Katun River; (2) Seminskii Pass; (3) Ongudai; (4) Uimonskii highway; (5) Lake Teletskoe; (6) Shavla River; (7) Ust-Ulagan; (8) Kurai; (9) Kosh-Agach; (10) Shapshalskii Mt. Range, Chulyshmanskoe Plateau; (11) Mt. Range of Chikhachev; (12) Buguzun River; (13) Tashanta; (14) upper course of Zhumaly River.

**\**Aphalara polygoni* Förster, 1848**

**Material.** 45 km S of Ust-Ulagan Vill., upstream along Bashkaus River, 1500 m a.s.l., 13, 14.VI.2005 (Sorokin), 4 ♀, 1 spm. without apex of abdomen.

**Distribution.** Widely in the Palaearctics.

***Caillardia anabasisidis* Loginova, 1960**

The species was earlier indicated from Kosh-Agachskii Distr. (Loginova, 1972: Kosh-Agach).

**Material.** Kosh-Agach, *Anabasis brevifolia*, 23, 24, 30.VI.1964 (Kerzhner), 13 ♂, 22 ♀.

**Distribution.** Russia (Lower Volga, Northern Caucasus, Western Siberia), Azerbaijan, Kazakhstan (widely), Tajikistan, Mongolia (widely).

***Craspedolepta aberrantis* Loginova, 1962.**

The species was earlier recorded from Ongudaiskii Distr. (Loginova, 1972: Chiket-Aman Pass).

**Material.** Chiket-Aman Pass SE of Ongudai, 28.VI.1964 (Kerzhner, Emeljanov), 2 ♂, 2 ♀.

**Distribution.** Russia (Lower Volga, Western Siberia), Kazakhstan (widely), Kirghizia, Western, Northern, and Central Mongolia.

**\*\**Craspedolepta capitata* Loginova, 1962**

**Material.** Right bank of the Katun River, 2 km upstream of flowing of the Edigan River, 2.VII.2006 (Labina), 1 ♂, 3 ♀; right bank of the Katun River at flowing of the Edigan River, steppeified area, *Spiraea* sp., 2.VII.2006 (Labina), 1 ♂, 1 ♀.

**Distribution.** Russia (Western Siberia, southern part of the Far East).

**\*\*\**Craspedolepta costulata* Loginova, 1962**

**Material.** Edigan River, 3 km SW of Edigan Vill., *Thalictrum* sp., 24, 28.VI.2006 (Labina), 1 ♂, 1 ♀.

**Distribution.** Russia (Western Siberia), Central, Southern, and Eastern Kazakhstan, Kirghizia, Tajikistan, Turkmenistan, Mongolia (Uvs aimak).

***Craspedolepta dracunculi* Loginova, 1962**

The species was earlier recorded from the Republic of Altai (Loginova, 1972).

**Material.** Chiket-Aman Pass SE of Ongudai, 28.VI.1964 (Kerzhner), 1 ♂, 1 ♀.

**Distribution.** Russia (Western and Eastern Siberia), Central and Eastern Kazakhstan, Kirghizia, Tajikistan, Western, Northern, and Central Mongolia.

**\**Craspedolepta emeljanovi* Loginova, 1966**

**Material.** 3 km SW of Edigan Vill., northern steppeified slope, 23.VI.2006 (N. Golub), 1 ♂.

**Distribution.** Russia (Western and Eastern Siberia, southern part of the Far East).

**\**Craspedolepta fraterna* Loginova, 1966**

**Material.** 20 km SE of Ongudai, 28.VI.1964 (Kerzhner), 1 ♂, 1 ♀; Chiket-Aman Pass SE of Ongudai, 28.VI.1964 (Kerzhner), 3 ♂, 1 ♀; same locality, 27.VI, 15.VII.1964 (Emeljanov), 2 ♂, 8 ♀.

**Distribution.** Russia (Western and Eastern Siberia, southern part of the Far East), Eastern Kazakhstan.

**\**Craspedolepta latior* W. Wagner, 1944**

**Material.** Kuraiskaya steppe SW of Kurai Vill., 9.VII.2006 (Barkalov), 2 ♀; Edigan River, 3 km SW of Edigan Vill., *Artemisia* sp., 25.VI.2006 (Labina), 2 ♂, 1 ♀.

**Distribution.** Widely in the Palaearctics.

**\**Craspedolepta lineolata*** Loginova, 1962

**Material.** Edigan River, 3 km SW of Edigan Vill., *Artemisia* sp., 23–25, 29.VI.2006 (Labina), 106 ♂, 5 ♀; right bank of the Katun River at flowing of the Edigan River, steppefied area, *Artemisia* sp., *Urtica cannabina*, 2.VII.2006 (Labina), 87 ♂, 3 ♀; right bank of the Katun River, 2 km upstream of flowing of the Edigan River, *Artemisia* sp., 2.VII.2006 (Labina), 60 ♂, 2 ♀; right bank of the Katun River, Tildyk-Pyan rift, below Edigan River, *Artemisia* sp. 27.VI.2006 (Labina), 103 ♂, 4 ♀; spurs of the Kuminskii Mt. Range, northern slope, 3 km SW of Edigan Vill., *Artemisia* sp., *Cannabis* sp., 28.VI.2006 (Labina), 11 ♂.

**Distribution.** Russia (southern part of the Urals, Western and Eastern Siberia, southern part of the Far East), Northern, Central and Eastern Kazakhstan, Kirghizia, Tajikistan, Northern and Eastern Mongolia.

**\**Craspedolepta linosiridis*** Loginova, 1962

**Material.** 20 km SE of Ongudai, 28.VI.1964 (Kerzhner), 2 ♂, 1 ♀.

**Distribution.** Russia (Western Siberia), Central and Eastern Kazakhstan, Kirghizia, Tajikistan.

**\**Craspedolepta malachitica*** (Dahlbom, 1850)

**Material.** Chiket-Aman Pass SE of Ongudai, 28.VI, 14.VII.1964 (Emeljanov), 4 ♂, 2 ♀.

**Distribution.** Widely in the Palaearctics.

**\*\*\**Craspedolepta medvedevi*** Loginova, 1962

**Material.** Edigan River, 3 km SW Edigan Vill., *Thalictrum* sp., I.VII.2006 (Labina), 1 ♀.

**Distribution.** Ukraine, Russia (Western Siberia), Northern, Central, and Eastern Kazakhstan.

**\**Craspedolepta omissa*** W. Wagner, 1944

**Material.** Edigan River, 3 km SW of Edigan Vill., *Artemisia* sp., 25, 29.VI, 1.VII.2006 (Labina), 18 ♂; spurs of the Kuminskii Mt. Range, northern slope, 3 km SW of Edigan Vill., 29.VI.2006 (Labina), 4 ♂, 2 ♀.

**Distribution.** Widely in the Palaearctics.

***Craspedolepta pilosa*** (Oshanin, 1870)

The species was earlier recorded from Kosh-Agachskii Distr. (Loginova, 1972: Kosh-Agach).

**Material.** Kosh-Agach, *Artemisia* (*Seriphidium*), 26, 30.VI, 10 and 21.VII.1964 (Kerzhner), 20 ♂, 28 ♀; same locality, saline land with cereals, 11, 16, 24.VI.1964 (Emeljanov), 4 ♂, 4 ♀.

**Distribution.** Great Britain, Switzerland, Russia (Lower Volga, Northern Caucasus, Western Siberia, southern part of the Far East), Armenia, Western, Central, and Eastern Kazakhstan, Kirghizia, Tajikistan, Mongolia (widely, except for the western part).

**\*\*\**Craspedolepta radiosa*** Loginova, 1972

**Material.** Kosh-Agach, 6.VII.1964 (Kerzhner), 1 ♂, 1 ♀.

**Distribution.** Russia (Western Siberia), Mongolia (Uvs aimak).

**\**Craspedolepta sima*** Loginova, 1972

**Material.** Kosh-Agach, 6.VII.1964 (Kerzhner), 1 ♂, 1 ♀.

**Distribution.** Russia (Western Siberia), Central Kazakhstan, Mongolia (Khubsugul aimak).

**\**Craspedolepta sonchi*** (Förster, 1848)

**Material.** Kosh-Agach, 6, 7, 10, 12, 21.VII, 3.VIII.1964 (Kerzhner), 6 ♂, 10 ♀; mountains SE of Kosh-Agach, 2000–3000 m a.s.l., 2.VII.1964 (Kerzhner), 4 ♂, 2 ♀.

**Distribution.** Widely in the Palaearctics.

**\**Craspedolepta villosa*** Loginova, 1962

**Material.** 20 km SE of Ongudai, 15.VII.1964 (Kerzhner), 1 ♂; Edigan River, 3 km SW of Edigan Vill., *Artemisia* sp., 24.VI.2006 (Labina), 14 ♂, 2 ♀; same locality, *Artemisia vulgaris*, 29.VI.2006 (N. Golub), 1 ♂; right bank of the Katun River at flowing of the Edigan River, steppefied area, *Artemisia* sp., 2.VII.2006 (Labina), 2 ♀; right bank of the Katun River 2 km upstream of flowing of the Edigan River, *Artemisia* sp., 23.VI, 2.VII.2006 (Labina), 19 ♂, 10 ♀; spurs of the Kuminskii Mt. Range, 3 km SW of Edigan Vill., northern steppefied slope, *Artemisia* sp., 28, 29.VI.2006 (Labina), 14 ♂, 8 ♀; same locality, 23.VI.2006 (N. Golub), 1 ♂.

**Distribution.** Russia (Western and Eastern Siberia, southern part of the Far East), Mongolia (Töv and Omnogovi aimaks).

*Crastina montana* Loginova, 1964

The species was recorded from Ust-Ulaginskii Distr. (Loginova, 1972: upper course of the Shavla River).

**Material.** Upper course of the Shavla River, Chulyshman River basin, 13.VIII.1935 (Zhelokhovtsev), 2 ♂, 1 ♀.

**Distribution.** Russia (Western Siberia), Eastern Kazakhstan, Kirghizia, Tajikistan, Western and Northern Mongolia.

**\*\*Crastina myricariae** Loginova, 1964

**Material.** Right bank of the Edigan River, 3 km SW of Edigan Vill., *Myricaria* sp., 29, 30.VI, 1 and 2.VII.2006 (Labina), 45 ♂, 23 ♀; same locality, 29.VI.2006 (N. Golub), 4 ♂, 2 ♀.

**Distribution.** Russia (Northern Caucasus, Western Siberia), Azerbaijan, Armenia, Georgia, Turkey, Southern and Eastern Kazakhstan, Kirghizia, Tajikistan.

**\*Eumetoecus kochiae** (Horváth, 1897)

**Material.** Kosh-Agach, 19.VI, 2, 10.VII.1964 (Kerzhner), 3 ♂, 9 ♀.

**Distribution.** Bulgaria, Hungary, Ukraine, Russia (Lower Volga, Northern Caucasus, southern part of the Urals, Western Siberia), Azerbaijan, Armenia, Georgia, Western, Central, and Eastern Kazakhstan, Turkmenistan, Mongolia (Sühbaatar and Dornodgovi aimaks).

*Eurotica distincta* (Loginova, 1960)

The species was earlier recorded from the Republic of Altai (Loginova, 1972: southeastern Altai).

**Material.** Kosh-Agach, *Chenopodium* sp., *Eurotia ceratoides*, 23.VI, 2 and 10.VII.1964 (Kerzhner), 11 ♂, 7 ♀; same locality, 24.VI.1964 (Emeljanov), 3 ♂, 3 ♀.

**Distribution.** Russia (Lower Volga, Western Siberia, southern part of the Far East), Azerbaijan, Armenia, Kazakhstan (widely), Kirghizia, Tajikistan, Turkmenistan, Uzbekistan, Mongolia (Uvs and Bayan-Hongor aimaks).

## Subfamily ARYTAININAE

*Cyamophila appendiculata* (Klimaszewski, 1962)

The species was earlier recorded from Ust-Kokinskii Distr. (Loginova, 1964: Uimonskii highway).

**Material.** Uimonskii highway, 20.VII.1927 (Gorbunova), 1 ♀; 20 km SE of Ongudai, *Spiraea* sp., *Urtica cannabina*, *Caragana arborescens*, 26, 28.VI, 15, 16, 17.VII.1964 (Kerzhner), 21 ♂, 13 ♀; Kosh-Agach, *Caragana bungei*, 21, 23.VI, 25.VIII.1964 (Kerzhner), 47 ♂, 43 ♀, 1 larva; Edigan River, 3 km SW of Edigan Vill., *Caragana* sp., 23–27, 30.VI, 1.VII.2006 (Labina), 99 ♂, 8 ♀, 6 larvae; same locality, 24.VI.2006 (N. Golub), 1 ♂, 3 ♀; Edigan River, winter way [a road, which can be used only at the winter conditions, when the temperature is below zero] SW of Edigan Vill., *Betula pendula*, 25.VI.2006 (Labina), 1 ♂, 2 ♀; right bank of the Katun River at flowing of the Edigan River, steppefied area, *Spiraea* sp., 2.VII.2006 (Labina), 1 ♂; spurs of the Kuminskii Mt. Range, northern slope, 3 km SW of Edigan Vill., *Populus tremula*, *Betula pendula*, *Padus* sp., *Artemisia* sp., 23, 28, 29.VI.2006 (Labina), 5 ♂.

**Distribution.** Russia (Western and Eastern Siberia), Northern, Central, and Eastern Kazakhstan, Tajikistan, Mongolia (widely).

**\*Cyamophila fabra** (Loginova, 1964)

**Material.** 20 km SE of Ongudai, *Caragana pygmaea*, 15–17.VII.1964 (Kerzhner), 8 ♂, 8 ♀; Kosh-Agach, *Caragana* sp., 23.VI.1964 (Kerzhner), 1 ♂, 7 ♀.

**Distribution.** Russia (Western and Eastern Siberia), Central and Eastern Kazakhstan, Kirghizia, Turkmenistan, Mongolia (widely).

**\*Cyamophila gemella** (Loginova, 1972)

**Material.** Mountains N of Kosh-Agach, 20.VI.1964 (Kerzhner), 2 ♂, 2 ♀.

**Distribution.** Russia (Western Siberia), Mongolia (Govialtay and Bayan-Hongor aimaks).

**\*\*Cyamophila glycyrrhizae** (Becker, 1874)

**Material.** Edigan River, 3 km SW of Edigan Vill., *Artemisia* sp., *Urtica* sp., 24, 26.VI.2006 (Labina), 5 ♂, 2 ♀; right bank of the Katun River 2 km upstream of flowing of the Edigan River, sweeping on grass, 2.VII.2006 (Labina), 1 ♂, 3 ♀; spurs of the Kuminskii Mt. Range, northern slope, 3 km SW of Edigan Vill., 29.VI.2006 (Labina), 10 ♂, 2 ♀.

**Distribution.** Ukraine, Russia (Lower Volga, Northern Caucasus, Western and Eastern Siberia, southern part of the Far East), Azerbaijan, Armenia,



Georgia, Turkey, Israel, Iran, Afghanistan, Kazakhstan (widely), Kirghizia, Tajikistan, Turkmenistan, Uzbekistan.

***Cyamophila gorodkovi*** Loginova, 1978

The species was earlier recorded from Ongudaiskii and Kosh-Agachskii districts (Loginova, 1978: Ongudai, Kosh-Agach).

**Material.** 20 km SE of Ongudai, *Spiraea* sp., 28.VI.1964 (Kerzhner), 1 ♂, 1 ♀; Kosh-Agach, *Caragana bungei*, *C. spinosa*, *Artemisia vulgaris*, 16, 20, 23.VI, 2, 6, 12.VII.1964 (Kerzhner), 8 ♂, 5 ♀; same locality, 20.VI.1964 (Nartshuk), 1 ♀; mountains N of Kosh-Agach, 20.VI.1964 (Kerzhner), 1 ♂, 1 ♀; same locality, 19.VI.1964 (Emeljanov), 1 ♂; 45 km S of Ust-Ulagan Vill., upstream along the Bashkaus River, 1500–1900 m a.s.l., 12.VI.2005 (Sorokin), 2 ♂, 2 ♀.

**Distribution.** Russia (Western Siberia), Kazakhstan (widely), Kirghizia, Tajikistan, Uzbekistan.

***Cyamophila kallima*** (Klimaszewski, 1962)

The species was earlier recorded from Kosh-Agachskii Distr. (Loginova, 1972: Kosh-Agach).

**Material.** Kosh-Agach, *Caragana bungei*, *C. spinosa*, *Artemisia vulgaris*, 16, 21, 22, 30.VI, 12, 22, 31.VII, 25.VIII.1964 (Kerzhner), 13 ♂, 33 ♀; mountains N of Kosh-Agach, floodland, *Caragana spinosa*, 25.VIII.1964 (Kerzhner), 6 ♂, 6 ♀.

**Distribution.** Russia (Western and Eastern Siberia), Mongolia (widely, except for the eastern part).

**\*\**Cyamophila rhombifera*** (Loginova, 1964)

**Material.** Edigan River, 3 km SW of Edigan Vill., 23.VI.2006 (Labina), 1 ♀; 3 km SW of Edigan Vill., northern steppefied slope, 23.VI.2006 (N. Golub), 2 ♀.

**Distribution.** Moldova, Russia (Lower Volga, Northern Caucasus, Western Siberia), Azerbaijan, Kazakhstan (widely), Tajikistan.

Subfamily. PSYLLINAE

***Cacopsylla ambigua*** (Förster, 1848)

The species was earlier recorded from the Republic of Altai (Loginova, 1967: southeastern Altai).

**Material.** 10 km W of Tashanta, 9.VII.1964 (Kerzhner, Emeljanov), 1 ♂, 1 ♀; Kosh-Agach, *Salix* sp., 22, 23, 30, 31.VII.1964 (Kerzhner), 38 ♂, 31 ♀;

Chiket-Aman Pass, SE of Ongudai, 28.VI.1964 (Kerzhner), 2 ♀; Chuya River floodland, Kosh-Agach, willows and grasses, 24.VII.1964 (Emeljanov), 5 ♂, 3 ♀; Edigan River, 3 km SW of Edigan Vill., *Salix* sp., 23, 26.VI, 1.VII.2006 (Labina), 21 ♂, 7 ♀.

**Distribution.** Widely in the Palaearctics, except for the southern part.

***Cacopsylla arcuata*** (Loginova, 1965)

The species was earlier recorded from Ongudaiskii Distr. (Loginova, 1967: Chiket-Aman Pass).

**Material.** Chiket-Aman Pass, 20 km SE of Ongudai, *Spiraea* sp., 28.VI.1964 (Kerzhner), 5 ♂, 2 ♀.

**Distribution.** Russia (Western and Eastern Siberia, Far East), Eastern Kazakhstan, Mongolia (Arhangay and Töv aimaks).

***Cacopsylla elegantissima*** (Loginova, 1964)

The species was earlier recorded from Kosh-Agachskii Distr. (Loginova, 1967: Kosh-Agach)

The ZIN collection contains no material on this species from the Republic of Altai.

**Distribution.** Russia (Western Siberia), Eastern Kazakhstan, Kirghizia, Tajikistan.

***Cacopsylla elegantula*** (Zetterstedt, 1840)

The species was earlier recorded from Kosh-Agachskii Distr. (Loginova, 1967: Kurai)

**Material.** Kurai, 1.VIII.1964 (Kerzhner), 1 ♂.

**Distribution.** Widely in the Palaearctics.

***Cacopsylla fasciata*** (Löw, 1881)

The species was earlier recorded from the Republic of Altai [Loginova, 1968 (as *Psylla sarmatica*): mountains of Altai].

**Material.** Kurai, 1.VIII.1964 (Kerzhner), 4 ♂, 2 ♀; right bank of the Katun River at flowing of the Edigan River, steppefied area, *Urtica cannabina*, *Spiraea* sp., 2.VII.2006 (Labina), 10 ♂, 3 ♀, 1 larva; spurs of the Kuminskii Mt. Range, northern slope, 3 km SW of Edigan Vill., 29.VI.2006 (Labina), 1 ♀.

**Distribution.** Russia (Lower Volga, Northern Caucasus, Western and Eastern Siberia, northern part of the Far East), Azerbaijan, Armenia, Georgia, Kazakhstan (widely), Kirghizia, Tajikistan, Turkmenistan,

Uzbekistan, Mongolia (widely, except for the eastern part).

*\*Cacopsylla flori* (Puton, 1871)

**Material.** Kosh-Agach, 30.VII.1964 (Kerzhner), 1 ♂.

**Distribution.** Poland, Estonia, Russia (Western and Eastern Siberia, northern part of the Far East).

*\*Cacopsylla hippophaes* (Förster, 1848)

**Material.** Kosh-Agach, *Salix* sp., 31.VII.1964 (Kerzhner), 1 ♀.

**Distribution.** Widely in the Palaearctics, except for the southern part.

*\*Cacopsylla intacta* (Loginova, 1964)

**Material.** Edigan River, 3 km SW of Edigan Vill., *Salix* sp., *Crataegus* sp., *Artemisia* sp., *Betula pendula*, sweeping on grass, 23, 25–28.VI, 1.VII.2006 (Labina), 59 ♂, 7 ♀, 2 larvae; same locality, *Salix* sp., *Crataegus* sp., *Betula pendula*, 23.VI.2006 (N. Golub), 4 ♂, 3 ♀; Edigan River, winter way SW of Edigan Vill., *Salix* sp., *Betula pendula*, 25.VI.2006 (Labina), 17 ♂, 8 ♀; right bank of the Katun River at flowing of the Edigan River, steppeified area, *Urtica cannabina*, 2.VII.2006 (Labina), 1 ♂.

**Distribution.** Ukraine, Russia (Lower Volga, Western and Eastern Siberia, southern part of the Far East), Kazakhstan (widely), Uzbekistan, Mongolia (Töv aimak), northern part of the Korean Peninsula.

*Cacopsylla intergerina* (Loginova, 1966)

The species was earlier recorded from Kosh-Agachskii Distr. (Loginova, 1966: Zhumaly River; middle course of the Buguzun River).

**Material.** Middle course of the Buguzun River, *Salix* sp., 23.VII.1964 (Kerzhner), 3 ♂, 1 ♀; upper course of the Zhumaly River, tributary of the Dzhazator River, 22.VII.1964 (Emeljanov), 14 ♂, 8 ♀.

**Distribution.** Russia (Western and Eastern Siberia), Georgia, Eastern Kazakhstan, Kirghizia, Mongolia (Uvs aimak).

*Cacopsylla memor* (Loginova, 1964)

The species was earlier recorded from Kosh-Agachskii Distr. (Loginova, 1967, 1972: Kosh-Agach; lower course of the Buguzun River).

**Material.** Lower course of the Buguzun River, 27.VII.1964 (Kerzhner), 4 ♂, 3 ♀; 30 km ESE of Kosh-Agach, *Salix* sp., 27.VII.1964 (Kerzhner), 15 ♂, 9 ♀.

**Distribution.** Russia (Northern Caucasus, Western Siberia), Azerbaijan, Armenia, Eastern Kazakhstan, Tajikistan, Mongolia (Arhangay and Bayan-Hongor aimaks).

*Cacopsylla palmeni* (Löw, 1882)

The species was earlier recorded from Ust-Ulaginskii Distr. (Loginova, 1962: Chulyshman River).

**Material.** Maidugem, Chulyshman River basin, 12.VIII.1935 (Zhelokhovtsev) 2 ♂, 1 ♀, 1 specimen without apex of abdomen; Mt. Range of Chikhachev, upper course of the Buguzun River, 27.VII.1964 (Kerzhner), 4 ♂, 5 ♀; 30 km ESE of Kosh-Agach, tundra, *Salix* sp., 24, 26.VII.1964 (Kerzhner), 24 ♂, 18 ♀.

**Distribution.** USA (Alaska), Norway, Finland, Sweden, Russia (north of the European part, Western and Eastern Siberia, northern part of the Far East), Mongolia (Arhangay aimak).

*\*Cacopsylla vondraceki* (Klimaszewski, 1963)

**Material.** Chiket-Aman Pass SE of Ongudai, *Salix* sp., 28.VI.1964 (Kerzhner), 6 ♂, 5 ♀; 20 km SE of Ongudai, *Spiraea* sp., 28.VI.1964 (Kerzhner), 1 ♂, 4 ♀.

**Distribution.** Russia (center of the European part, Western and Eastern Siberia, southern part of the Far East), Georgia, Western, Central, and Eastern Kazakhstan, Kirghizia, Tajikistan, Turkmenistan, Uzbekistan, Mongolia (Selenge and Töv aimaks), northern part of the Korean Peninsula.

*Cacopsylla zaicevi* (Šulc, 1915)

The species was earlier recorded from the Republic of Altai (Loginova, 1967: southeastern Altai).

**Material.** 30 km ESE of Kosh-Agach, *Salix* sp., 27.VII.1964 (Kerzhner), 1 ♂, 1 ♀; mountains N of Kosh-Agach, 20.VI.1964 (Kerzhner), 1 ♀; Mt. Range of Chikhachev, upper course of the Buguzun River, 27.VII.1964 (Kerzhner), 3 ♀.

**Distribution.** USA (Alaska), Finland, Sweden, Russia (north of the European part, Western and Eastern

Siberia, northern part of the Far East), Mongolia (Gobi-Altay aimak).

**\**Cacopsylla zetterstedti*** (Thomson, 1877)

**Material.** 10 km W of Tashanta, 9.VII.1964 (Kerzhner), 1 ♀; Kosh-Agach, 5.VII.1964 (Nartshuk), 1 ♀.

**Distribution.** Widely in the Palaearctics.

**\*\**Psylla betulae*** (Linnaeus, 1758)

**Material.** 20 km SE of Ongudai, *Betula* sp., 16.VII.1964 (Kerzhner), 3 ♂, 2 ♀; Edigan River, 3 km SW of Edigan Vill., *Betula pendula*, 23, 25, 26.VI.2006 (Labina), 1 ♂; same locality, *Salix* sp., *Crataegus* sp., *Betula pendula*, 23.VI.2006 (N. Golub), 1 ♂, 1 ♀.

**Distribution.** Canada, widely in the Palaearctics.

**\**Psylla betulaenanae*** Ossiannilsson, 1952

**Material.** Shapshalskii Mt. Range., Chulyshman-skoe Plateau, 4.VIII.1935 (Zhelokhovtsev), 6 ♀; 10 km W of Tashanta, *Salix* sp., 9.VII.1964 (Kerzhner), 11 ♂, 11 ♀; Mt. Range of Chikhachev, Kosh-Agach, *Betula rotundifolia*, 24.VII.1964 (Kerzhner), 4 ♂, 1 ♂; 10 km W of Tashanta, *Betula rotundifolia*, 9.VII.1964 (Emeljanov), 8 ♂, 3 ♀; Zhumaly River valley, tributary of the Dzhazator River, 21.VII.1964 (Nartshuk), 6 ♂, 3 ♀.

**Distribution.** USA (Alaska), Denmark and Greenland, Norway, Sweden, Finland, Russia (north of the European part, Western and Eastern Siberia, northern part of the Far East).

**\**Psylla hartigi*** (Flor, 1861)

**Material.** Edigan River, 3 km SW of Edigan Vill., *Betula pendula*, 23.VI.2006 (Labina), 2 ♀; 3 km SW of Edigan Vill., northern steppeified slope, 23.VI.2006 (N. Golub), 1 ♀.

**Distribution.** Widely in the Palaearctics, USA (State of Maine).

Family **TRIOZIDAE**

Subfamily TRIOZINAE

***Bactericera bohémica*** (Šulc, 1913)

The species was earlier recorded from Ongudaiskii Distr. (Loginova, 1972: Ongudai).

**Material.** 20 km SE of Ongudai, 28.VI.1964 (Kerzhner), 1 ♀.

**Distribution.** Canada, widely in the Palaearctics.

**\**Bactericera perrisi*** Puton, 1876

**Material.** Spurs of the Kuminskii Mt. Range, northern slope, 3 km SW of Edigan Vill., 29.VI.2006 (Labina), 1 ♂.

**Material.** Widely in the Palaearctics, except for the northern part.

***Bactericera reuteri*** (Šulc, 1913)

The species was earlier recorded from Kosh-Agachskii Distr. (Loginova, 1974: Kosh-Agach).

**Material.** Seminskii Pass, Chuiskii highway, 5.VI.1911 (Yurganova), 1 ♂; Kosh-Agach, 15.VI.1964 (Nartshuk), 2 ♀; same locality, floodland, bog, *Carex* sp., 16, 18, 19, 22, 23.VI, 2, 6, 23, 30.VII, 2, 3.VIII.1964 (Kerzhner), 30 ♂, 22 ♀, 1 specimen without apex of abdomen.

**Distribution.** Sweden, Finland, Czech Republic, Poland, Ukraine, Russia (west of the European part, Western and Eastern Siberia), Kirghizia, Western and Northern Mongolia.

**\**Bactericera rossica*** Horváth, 1901

**Material.** 20 km SE of Ongudai, 28.VI.1964 (Kerzhner), 1 ♀.

**Distribution.** Russia (Middle Volga River Area, Western and Eastern Siberia, southern part of the Far East), Afghanistan, Kirghizia, Uzbekistan, Mongolia (widely, except for the eastern part).

**\*\**Bactericera striola*** Flor, 1861

**Material.** Edigan River, 3 km SW of Edigan Vill., *Thalictrum* sp., *Betula pendula*, *Artemisia* sp., 23, 25, 28.VI, 1.VII.2006 (Labina), 29 ♂, 31 ♀; same locality, 24.VI.2006 (N. Golub), 9 ♀; right bank of the Katun River, 2 km upstream of flowing of the Edigan River, sweeping on grass, 26.VI, 1.VII.2006 (Labina), 2 ♂, 2 ♀; spurs of the Kuminskii Mt. Range, 3 km SW of Edigan Vill., northern steppeified slope, 29.VI.2006 (Labina), 10 ♂, 3 ♀; same locality, 23.VI.2006 (N. Golub), 6 ♂, 10 ♀, 1 larva.

**Distribution.** Widely in the Palaearctics.

**\*\**Trioza agrophila* Löw, 1888**

**Material.** Right bank of the Katun River, 2 km upstream of flowing of the Edigan River, 26.VI.2006 (Labina), 1 ♂.

**Distribution.** Widely in the Palearctics.

***Trioza galii* Förster, 1848**

The species was earlier recorded from the Republic of Altai (Loginova, 1962).

**Material.** Kosh-Agach, 2, 6.VII.1964 (Kerzhner), 7 ♂, 5 ♀; Buguzun River, E of Kosh-Agach, 24.VII.1964 (Kerzhner), 1 ♂; 20 km SE of Ongudai, 16.VII.1964 (Kerzhner), 1 ♂; Chiket-Aman Pass, SE of Ongudai, 27.VI.1964 (Kerzhner), 2 ♂, 1 ♀; same locality, 28.VI.1964 (Emeljanov), 1 ♀; right bank of the Katun River 2 km upstream of flowing of the Edigan River, 30.VI.2006 (Labina), 1 ♂, 1 ♀.

**Distribution.** Widely in the Palearctics.

**\**Trioza pallida* Haupt, 1935**

**Material.** Edigan River, 3 km SW of Edigan Vill., 23.VI.2006 (Labina), 1 ♀.

**Distribution.** Widely in Europe; Eastern Kazakhstan, Kirghizia.

***Trioza subberbericola* Loginova, 1974**

The species was earlier recorded from Ongudaiskii Distr. (Loginova, 1974: Ongudai).

**Material.** 20 km SE of Ongudai, 16.VII.1964 (Kerzhner), 2 ♀.

**Distribution.** Russia (Western Siberia), Central Kazakhstan, Mongolia (Hovd aimak).

***Trioza thomasi* Löw, 1882**

The species was earlier recorded from Kosh-Agachskii Distr. (Loginova, 1972: Kosh-Agach).

**Material.** Mountains NE of Kosh-Agach, 2000–3000 m a.s.l., 2.VII.1964 (Kerzhner), 1 ♀; mountains N of Kosh-Agach, 2.VII.1964 (Emeljanov), 1 ♂.

**Distribution.** Austria, Russia (Western Siberia, southern part of the Far East), Mongolia (Töv aimak).

**\**Trioza urticae* (Linnaeus, 1758)**

**Material.** 20 km SE of Ongudai, *Urtica cannabina*, 27.VI, 16.VII.1964 (Kerzhner), 4 ♂, 8 ♀; Edigan

River, 3 km SW of Edigan Vill., *Urtica cannabina*, *Salix* sp., 23.VI, 2.VII.2006 (Labina), 7 ♂, 6 ♀; right bank of the Katun River at flowing of the Edigan River, steppefied area, *Urtica cannabina*, *Artemisia* sp., 26.VI.2006 (Labina), 2 ♂; right bank of the Katun River 2 km upstream of flowing of the Edigan River, 1.VII.2006 (Labina), 2 ♀; spurs of the Kuminskii Mt. Range, northern slope, 3 km SW of Edigan Vill., *Padus* sp., 29.VI.2006 (Labina), 1 ♂.

**Distribution.** Widely in the Palearctics, northern India.

The psyllid fauna of the Republic of Altai is richest among those of the other areas of Siberia. This fact is accounted for by a great number of the species shared by adjacent regions of Eastern Kazakhstan and north-western Mongolia. The fauna comprises slightly less than half of the species richness of the fauna of entire Siberia (137 species). The psyllid fauna of the republic is presented only by two out of the six known psyllid families, these are Psyllidae Löw, 1888 and Triozidae Löw, 1888, including all the known representatives of the psyllid fauna of Siberia. The first family includes three subfamilies in the fauna of Altai, and the second one, one subfamily.

Most of the species recorded in the Republic of Altai were also found in adjacent areas of Kazakhstan (East Kazakhstan, Semipalatinsk and Taldy-Kurgan provinces) and Mongolia (Uvs, Bayan-Ölgiy, Hövsgöl, and Hovd aimaks), but did not occur in close territories of Siberia. This can be accounted for by the fact that the psyllid fauna of Siberia is studied to a lesser extent than the faunas of the countries listed above. The territory of the Republic of Altai is also very irregularly studied with respect to the fauna of psyllids: plenty of material have been collected from restricted areas of Kosh-Agachskii, Ongudaiskii and Chemalskii districts, whereas psyllids collected from the other districts are presented in the ZIN collection only by separate specimens of several species, and collections from Choiskii, Maiminskii, and Ust-Kanskii districts are absent at all.

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## REFERENCES

1. Gegechkori, A.M. and Loginova, M.M., *Psyllids (Homoptera, Psylloidea) of the USSR (an Annotated List)* (Metsniereba, Tbilisi, 1990) [in Russian].
2. Klimaszewski, S.M., "The Jumping Plant Lice or Psyllids (Homoptera, Psylloidea) of the Palaearctic. An Annotated Check-list," *Ann. Zool. Warszawa* **30** (7), 157–286 (1973).
3. Loginova, M.M., "Revision of the Genera *Aphalara* Frst. and *Craspedolepta* Enderl. (Homoptera, Psylloidea) of the Fauna of the USSR," *Entomol. Obozr.* **40**, 602–623 (1961).
4. Loginova, M.M., "On the Fauna of Psyllids (Homoptera, Psylloidea) of Leningrad Province," *Trudy Zool. Inst. Akad. Nauk USSR* **31**, 33–45 (1962).
5. Loginova, M.M., "New and Little-known Psyllids of Kazakhstan. Notes on the System and Classification of Psylloidea (Homoptera)," *Trudy Zool. Inst. Akad. Nauk USSR* **34**, 52–112 (1964).
6. Loginova, M.M., "New and Little-known Species of Psyllids (Homoptera, Psylloidea) of the Fauna of the USSR," *Trudy Zool. Inst. Akad. Nauk USSR* **37**, 3–35 (1966).
7. Loginova, M.M., "Review of Palaearctic Psyllids of the Genus *Psylla* Geoffr. (Homoptera, Psylloidea), Associated with Willows," *Ann. Zool. Warszawa* **24** (7), 427–461 (1967).
8. Loginova, M.M., "New Data on the Fauna and Biology of Psyllids (Psylloidea, Homoptera) of the Caucasus," *Trudy Vses. Entomol. O-va* **52**, 275–328 (1968).
9. Loginova, M.M., "Psyllid (Psylloidea, Homoptera) of the Mongolian People's Republic," *Nasekomye Mongolii*, No. 1, 261–324 (1972).
10. Loginova, M.M., "Psyllid (Psylloidea, Homoptera) of the Mongolian People's Republic (Homoptera, Psylloidea)," *Nasekomye Mongolii*, No. 2, 51–66 (1974).
11. Loginova, M.M., "New Species of Jumping Plant Lice (Homoptera, Psylloidea) from Arid Regions of the USSR," *Trudy Zool. Inst. Akad. Nauk USSR* **88**, 15–25 (1979).