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TO THE KNOWLEDGE OF JUMPING PLANT-LICE (HEMIPTERA:  
PSYLLOIDEA) OF THE RUSSIAN FAR EAST

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**Summary.** The three misidentified species of the jumping plant-lice from the Russian Far East are reviewed: *Aphalara polygoni* (*sensu* Konovalova, 1988, nec Foerster, 1848) = *A. avicularis* Ossiannilsson, 1981; *Psylla pyricola* (*sensu* Konovalova, 1988, nec Foerster, 1848) = *Cacopsylla maculatili* Li, 2011; *P. pyrisuga* (*sensu* Konovalova, 1988, nec Foerster, 1848) = *C. burckhardti* Luo, Li, Ma et Cai, 2012. The species *Cacopsylla abdominalis* (Meyer-Dür, 1871) is newly recorded from the Russian Far East.

**Key words:** Hemiptera, Psylloidea, psyllids, jumping plant-lice, fauna, new record, taxonomy, misidentification, Russia.

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**Резюме.** В работе проведена ревизия трех ошибочно определенных видов псиллид с Дальнего Востока России: *Aphalara polygoni* (*sensu* Konovalova, 1988, nec Foerster, 1848) = *A. avicularis* Ossiannilsson, 1981; *Psylla pyricola* (*sensu* Konovalova, 1988, nec Foerster, 1848) = *Cacopsylla maculatili* Li, 2011; *P. pyrisuga* (*sensu* Konovalova, 1988, nec Foerster, 1848) = *C. burckhardti* Luo, Li, Ma et Cai, 2012. Впервые для Дальнего Востока приводится *Cacopsylla abdominalis* (Meyer-Dür, 1871).

INTRODUCTION

Psyllids (Hemiptera: Psylloidea) are small phytophagous insect, ranging from 1–10 mm. About 4,000 species are known worldwide (Li, 2011; Burckhardt & Ouvrard, 2012). Some species are important pests of crops and forest trees, damaging plants by direct feeding and vectoring plant diseases. They are generally host specific, and related psyllid species often develop on related host taxa (Ouvrard *et al.*, 2015).

Three species described by A. Foerster (1848) have been misidentified by Z.A. Konovalova (1988). In this paper, these misidentifications of psyllids from the Russian Far East are reviewed, and one species is recorded from this region for the first time. Material for this study

was examined from following institutions: IBSS – Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of the Russian Academy of Sciences (former Institute of Biology and Soil Science), Vladivostok, Russia; ZIN – Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia. The plant names follow those given in The Plant List (2013).

## RESULTS

### Superfamily Psylloidea Latreille, 1807

#### Family Aphalaridae Löw, 1879

#### Subfamily Aphalarinae Löw, 1879

#### Genus *Aphalara* Foerster, 1848

#### *Aphalara avicularis* Ossiannilsson, 1981

*Aphalara avicularis* Ossiannilsson, 1981: 24-25.

*Aphalara polygona* (nec Foerster, 1848): Konovalova, 1988: 507, fig. 401, 14 (misidentification); Gegechkori & Loginova, 1990: 20.

MATERIAL EXAMINED. **Russia** (all identified as *Aphalara polygona*): Amurskaya oblast, 2 km W Selenzhinsk Vill., *Persicaria* sp., 11.VII 1977, 2 ♂ (Konovalova) (IBSS, slide-mounted).

DISTRIBUTION. Russia: Far East (Amurskaya oblast). – Europe (Belarus, Czech Republic, Finland, Hungary, Norway, Poland, Slovenia, Sweden, Switzerland), South Korea.

HOST PLANT. *Persicaria* Mill., *Polygonum* L. (Konovalova, 1988; Gegechkori & Loginova, 1990) (Polygonaceae).

NOTES. Based on the material of *Aphalara polygona* (IBSS) and the illustration of the distal portion of the aedeagus by Konovalova (1988: fig. 401, 14), *A. avicularis* has been misidentified as *A. polygona* in the Russian Far East. We do not know whether the material of Konovalova (1988) contains also *A. freyi* Burckhardt et Lauterer, 1997 another species associated with *Persicaria* spp. and *Polygonum* spp.

#### Family Psyllidae Latreille, 1807

#### Subfamily Psyllinae Latreille, 1807

#### Genus *Cacopsylla* Ossiannilsson, 1970

#### *Cacopsylla abdominalis* (Meyer-Dür, 1871)

*Psylla abdominalis* Meyer-Dür, 1871: 394.

MATERIAL EXAMINED. **Russia**: Primorsky krai, Dalnegorsky (= Tetyukhe) District, 23 km N Tayon Vill., willow (*Salix* sp.), 06.VIII 1971, 5♂, 12 ♀ (Konovalova) (IBSS, dry mounted).

DISTRIBUTION. Russia: European part, Far East (Primorsky krai). – Europe (Austria, Czech Republic, Georgia, Germany, Greece, Greenland, Italy, Poland, Romania, Slovakia, Switzerland, Ukraine), Tajikistan, Kazakhstan, Mongolia, South Korea.

HOST PLANT. *Salix alba* L., *S. aurita* L., *S. purpurea* L., *S. viminalis* L. (Salicaceae) (Gegechkori & Loginova, 1990).

NOTES. This species is recorded from the Russian Far East for the first time.

### ***Cacopsylla burckhardti* Luo, Li, Ma et Cai, 2012**

*Cacopsylla burckhardti* Luo, Li, Ma & Cai, 2012: 62.

*Psylla pyrisuga* (nec Foerster, 1848): Konovalova, 1988: 532 (misidentification); Gegechkori & Loginova, 1990: 76 (part.).

**MATERIAL EXAMINED.** **Russia** (all identified as *Psylla pyrisuga*): Primorsky krai, near Partizansk, pear (*Pyrus* sp.), 19.V 1978, 14 ♂, 5 ♀ (Konovalova) (IBSS, dry mounted); same data but 20.V 1978, 18 ♂, 11 ♀ (IBSS, dry and slide-mounted).

**DISTRIBUTION.** Russia: Far East (Khabarovsk krai, Primorsky krai). – South Korea, China (Gansu), Japan (Hokkaido, Honshu, Shikoku).

**HOST PLANT.** *Pyrus pyrifolia* var. *culta* (Makino) Nakai (Cho *et al.*, 2017), *P. ussuriensis* Maxim. ex Rupr. (Rosaceae) (Luo *et al.*, 2012; Cho *et al.*, 2017).

**NOTES.** Previous records of *Psylla pyrisuga* from Russian Far East (Konovalova, 1988; Gegechkori & Loginova, 1990) are misidentifications of *C. burckhardti*, as was suggested by Cho *et al.* (2017).

### ***Cacopsylla maculatili* Li, 2011**

*Cacopsylla maculatili* Li, 2011: 880.

*Psylla pyricola* (nec Foerster, 1848): Konovalova, 1988: 521 (misidentification); Gegechkori & Loginova, 1990: 75-76.

**MATERIAL EXAMINED.** **Russia** (all identified as *Psylla pyricola*): Khabarovsk, VII 1961, 2 ♂, 1 ♀ (date and collector are not given) (ZIN, dry mounted); Primorsky krai, 20 km NW Kamen-Rybolov, pear (*Pyrus* sp.), 29.VI 1974, 11 ♂, 10 ♀ (Konovalova) (IBSS, dry and slide-mounted).

**DISTRIBUTION.** Russia: Far East (Khabarovsk krai, Primorsky krai). – South Korea, China (Jilin, Liaoning), Japan (Honshu).

**HOST PLANT.** *Pyrus ussuriensis* Maxim. ex Rupr. (Rosaceae) (Li, 2011; Luo *et al.*, 2012; Cho *et al.*, 2017).

**NOTES.** All previous records of *Psylla pyricola* (Konovalova, 1988; Gegechkori & Loginova, 1990) from Russian Far East concern *Cacopsylla maculatili*.

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