

Classification of the jumping plant-louse subgenus *Koreopsylla* Kwon et Kwon belonging to the genus *Psylla* Geoffroy from Korea (Homoptera: Psylloidea)

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Abstract

The current concepts and boundaries of the jumping plant-lice genera *Psylla* Geoffroy and *Cacopsylla* Ossiannilsson are confusedly defined so far, and badly remained partially as an artificial assemblage of either subgeneric or supra-specific taxa. Yet, it has faced with disagreements as well as retaining old problem for these obscure concepts of the taxa among the authors, inspite of a few attempts to find molecular characteristics by using only limited taxa. The subgenus *Koreopsylla* Kwon et Kwon, 2020 can be separated from other subgenera of *Psylla* by having the slender genal cones, elongate apical setae of antennae, ovoid forewings, hind tibia armed with 6-7 saltatory spurs, and short female genitalia. As the continuous taxonomic survey on the jumping plant-lice in Korea, the authors have found the second constituent species new to science: *Psylla (Koreopsylla) chloae* sp. nov. Description and illustration of morphological features of the new species and key to the Korean species of the genus are provided respectively.

Key words: Hemiptera, Sternorrhyncha, Psyllidae, taxonomy, identification, new species.

Introduction

In the classification system of the jumping plant-lice superfamily Psylloidea of the world, there has been some higher taxa comparatively insufficient to accommodate natural phylogenetic relationship due to the either poor excavations, artificial or old intuitional retaining for taxonomic characteristics incorporating their member group.

The current concepts and boundaries of the jumping plant-lice genera *Psylla* Geoffroy and *Cacopsylla* Ossiannilsson are confusedly defined so far, although the former genus can be differentiated morphologically by having 6-7 saltatorial spurs on hindtibia apically while the latter has 5 saltatorial spurs.

Nevertheless, it badly remains partially as an artificial assemblage of either subgeneric or supra-specific taxa yet, and thus it has often faced with disagreements as well as retaining old problem for these obscure concepts of the taxa among the authors, inspite of a few attempts to find molecular characteristics by using only limited taxa.

The subgenus *Koreopsylla* Kwon et Kwon, 2020 can be separated from other subgenera of *Psylla* by having the slender genal cones, elongate apical setae of antennae, ovoid forewings, hind tibia armed with 6-7 saltatory spurs, and short female genitalia.

As the continuous taxonomic survey on the jumping plant-lice in Korea, the authors have found the second constituent species new to science: *Psylla (Koreopsylla) chloae* sp. nov.

Description and illustration of morphological features of the new species and key to the Korean species of the genus are provided respectively.

Systematics

Family Psyllidae Latreille, 1807

Subfamily Psyllinae Latreille, 1807

Tribe Psyllini Latreille, 1807

Genus *Psylla* Geoffroy, 1762

Subgenus *Koreopsylla* Kwon et Kwon, 2020

Type-species: *Psylla visci* Curtis, 1835

Type-locality: U.K.

Diagnosis: Eye moderately extruded from lateral side of vertex. Antenna with apical 2 setae slender, about as long as apical segment. M. Hindtibia with a genual spine basally, armed with 6-7 saltatorial spurs apically; basitarsus with a pair of saltatorial spurs laterally. Male paramere dully narrowed apically, armed with a terminal tooth. Female genitalia short subtriangular, at most as long as remainder of abdomen, gradually narrowed apically in lateral view.

Key to species of the subgenus *Koreopsylla* from Korea

1. Genal cones slender, about as long as vertex mesally. Forewing with pterostigma reaching to level with apex of vein M. Female genitalia short; length of anus slightly shorter than remainder of proctiger ----- *P. (K.) visci*
- . Genal cones rather stout conical, about 2/3 long as vertex mesally. Forewing with pterostigma apparently short, reaching to level with before apex of vein M. Female genitalia moderate subtriangular; length of anus half as long as remainder of proctiger ----- *P. (K.) chloae* sp. nov.

Checklist of the species from Korea

1. *Psylla (Koreopsylla) visci* (Curtis, 1835)

Distribution: Korea (Central, South: new record, Jeju: new record), Japan (Honshu, Kyushu), Mongolia, Europe, Iraq, Morocco.

Host-plant: *Viscum coloratum*.

2. *Psylla (Koreopsylla) chloae* sp. nov.

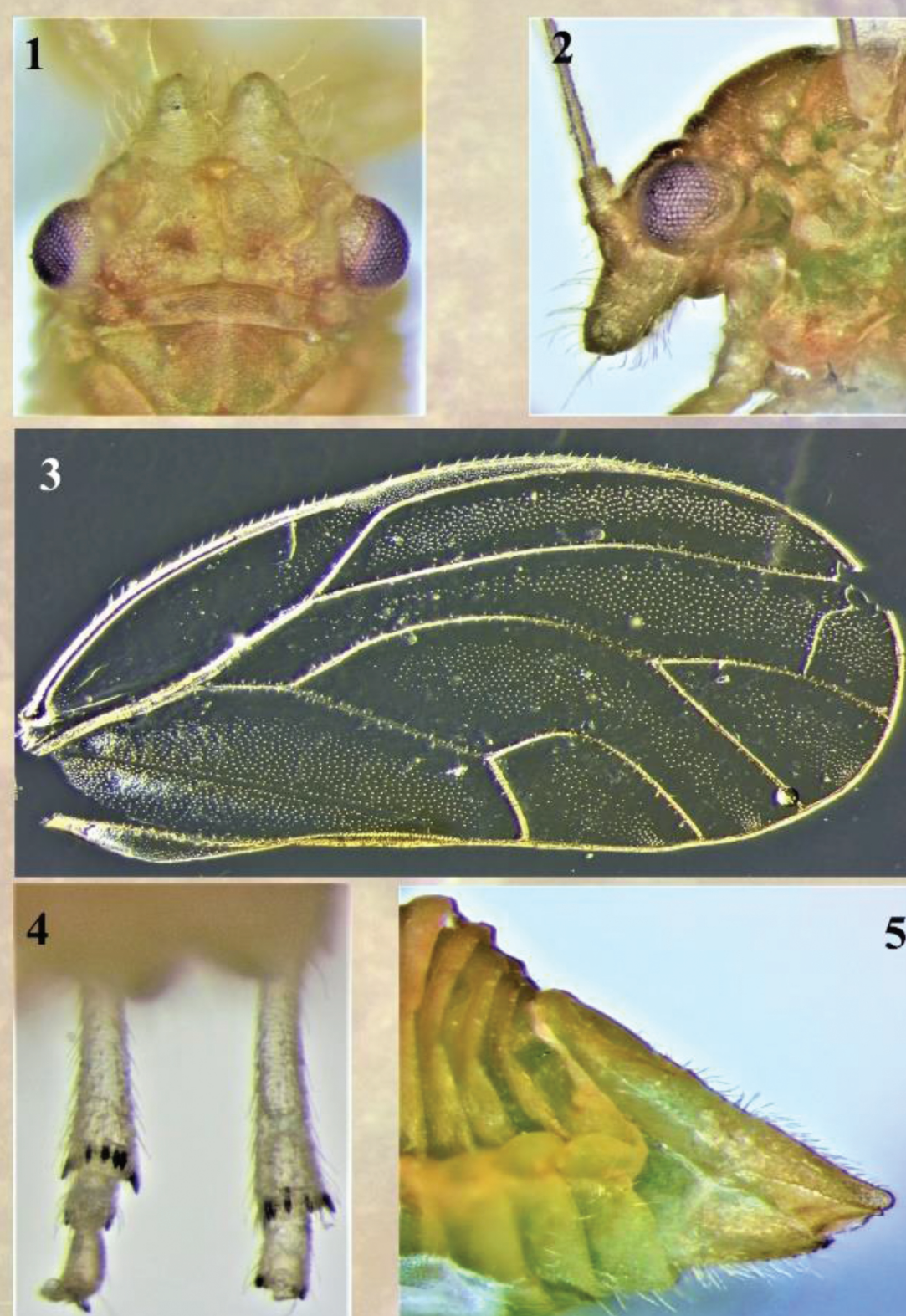
Diagnosis: Genal cone rather stout conical, about 2/3 long as vertex mesally. Forewing with pterostigma short, reaching to level with before apex of vein M. Hindtibia with a genual spine basally, armed with 6 saltatorial spurs apically; basitarsus with a pair of saltatorial spurs laterally. Female genitalia moderate subtriangular; length of anus half as long as remainder of proctiger.

Distribution: Korea (new record: Central).

Host-plant: Unknown.

References

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Figs. 1-4. *Psylla (Koreopsylla) chloae* sp. nov. 1: head in anterior view, 2: ditto, lateral view, 3: forewing with spinulation, 4: hindleg, 5: female genitalia in lateral view.