

A new species of the jumping plant-louse belonging to the genus *Cacopsylla* dwelling on Japanese rowan tree from Korea (Homoptera: Psyllidae)

Jin Hyung KWON^{1,C}, Sang Jae SUH² and Yong Jung KWON²

¹ Illinois Natural History Survey, University of Illinois, Champaign, IL 61820, USA

² School of Applied Biosciences, Kyungpook National University, Daegu 41519, Korea

^cCorresponding author. E-mail: jhkwon@illinois.edu

Abstract

As the continuous taxonomic survey on the jumping plant-lice in Korean peninsula since the recent completion of the monograph on the Korean Psylloidea (Kwon & Kwon, 2020), the authors have found a further species new to science: *Cacopsylla magamoka* sp. nov. Both nymphal stages and adults have been observed dwelling on Japanese rowan trees (*Sorbus commixta*) at high altitude of Mt. Palgongsan, South Korea. It has been also monitored that the adult populations after emergence emigrate often from the nymphal host to *Ilex macropoda* near by, predominantly during early summer. Description with illustration of morphological features and host record are provided respectively.

Key words: Sternorrhyncha, Psylloidea, taxonomy, morphology, identification, pine tree.

Introduction

The jumping plant-lice genus *Cacopsylla* Ossiannilsson, 1970 reveals a wide degree of adaptive evolution in species richness with various supraspecific taxa. However, the current boundaries with the genus *Psylla* Geoffroy, 1762 are confusedly defined so far, although the former genus provisionally can be differentiated morphologically by having 6-7 saltatorial spurs on hindtibia apically, on the other hand, while the latter has 5 saltatorial spurs.

As the continuous taxonomic survey on the jumping plant-lice in Korean peninsula since the recent completion of the monograph on the Korean Psylloidea (Kwon & Kwon, 2020), the authors have found a further species new to science: *Cacopsylla magamoka* sp. nov.

Both nymphal stages and adults have been observed dwelling on Japanese rowan trees (*Sorbus commixta*) at high altitude of Mt. Palgongsan, South Korea. It has been also monitored that the adult populations after emergence emigrate often from the nymphal host to *Ilex macropoda* near by, predominantly during early summer.

Description with illustration of morphological features and host record are provided respectively.

Systematics

Cacopsylla magamoka sp. nov.

Diagnosis: Genal cones about as long as vertex mesally, well divergent distally. Forewings with apical margin somewhat oblique before middle; surface spinules very dense and compact, distributing in all cells, leaving thread-like narrow spinule-free stripes along margins of veins, except for around vein stocks of R+M+Cu1 where slightly broader spinule-free stripes. Aedeagus with distal segment somewhat straight; apical inflated portion slightly shorter than 1/3 of shaft. Female proctiger with anus slightly exceeding half length of remainder part.

Description: Body coloring in general yellowish green to bright green. Vertex slightly exceeding half as long as wide, with discal impressions deep and located next to middle near posterior margin. Genal cones about as long as vertex mesally, long and slender, well divergent distally. Antennae long, 1.8-2.0 times as long as width of head including eyes.

Forewings elongate, about 2.5-2.6 times as long as wide, with apical margin somewhat oblique before middle; membrane clear, with veins concolorous; surface spinules very dense and compact, distributing in all cells, leaving thread-like narrow spinule-free stripes along margins of veins, except for around vein stocks of R+M+Cu1 where slightly broader spinule-free stripes. Hindwings about 2.6 times as long as wide. Aedeagus with apical inflated portion slightly shorter than 1/3 of shaft.

Male proctiger longer than parameres. Parameres narrowed distally, with apices sharply hooked. Aedeagus with distal segment somewhat straight; apical inflated portion slightly shorter than 1/3 of shaft.

Female genitalia subtriangular, as long as wide in latera view. Proctiger with apex somewhat dull, gently narrowed: length of anus slightly exceeding half of remainder of proctiger.

Length: Body male 2.0-2.3mm, female 2.3-2.6mm; to tip of folded wings male 3.4-3.7mm, female 3.7-4.2mm.

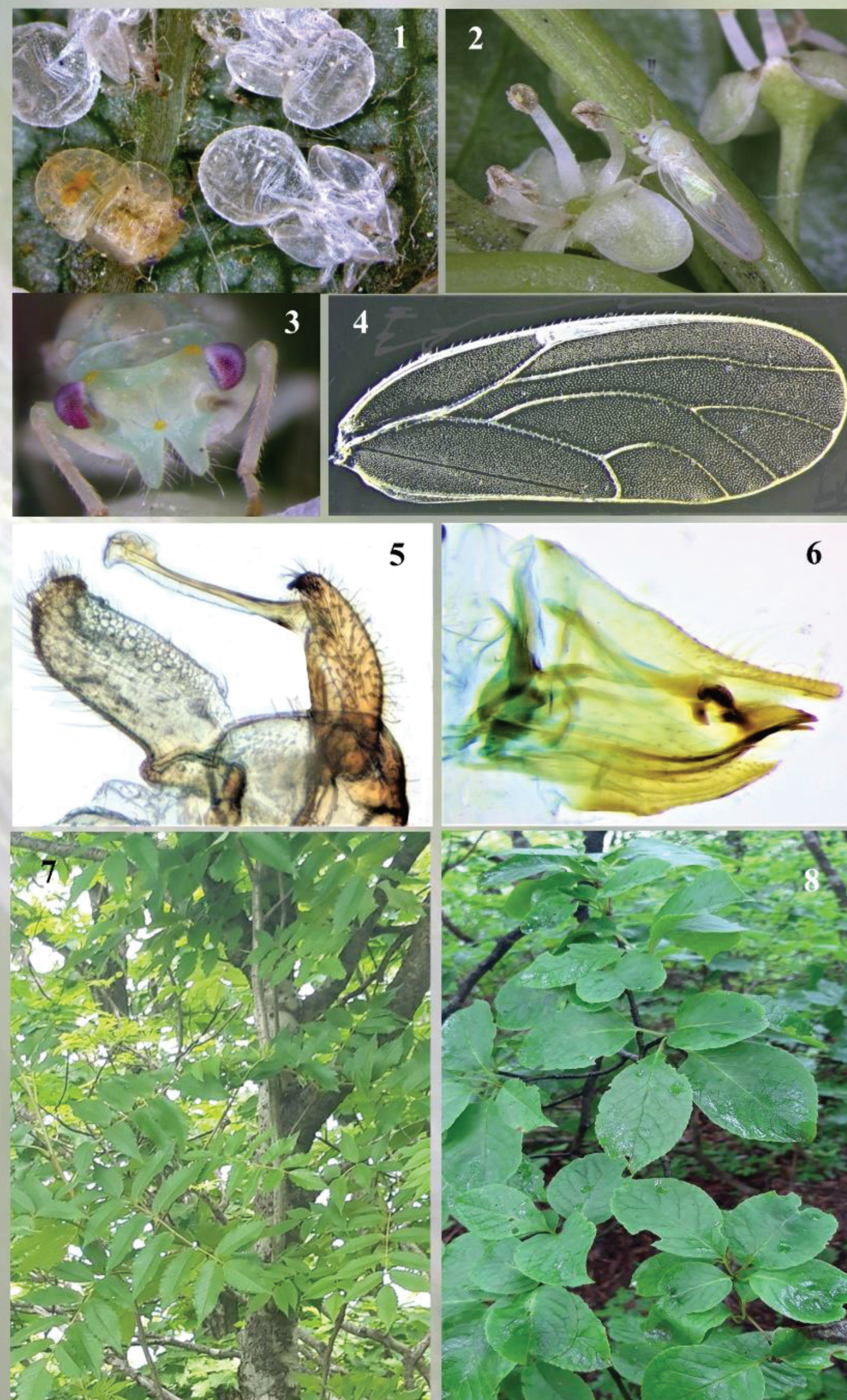
Distribution: Korea (new record: South)

Host: Japanese rowan trees (*Sorbus commixta*).

Remark: It has been observed by the authors annually since the first discovery in 2019, that the adult populations after emergence emigrate often from the nymphal host to *Ilex macropoda* near by, predominantly during early summer.

References

- Kwon, J.H., 2016, Taxonomic revision of the superfamily Psylloidea from Korea (Homoptera: Sternorrhyncha). Ph.D. Thesis, Kyungpook Nat. Univ., Korea, 547pp.
Kwon, J.H. and Y.J. Kwon, 2020, Psylloidea (Arthropoda: Insecta: Hemiptera: Sternorrhyncha). Insect Fauna of Korea 9(9). National Institute of Biological Resources, 405pp.
Kwon, Y.J., 1983, Psylloidea of Korea (Homoptera: Sternorrhyncha). Insecta Koreana 2, 181pp.



Figs. 1-7. *Cacopsylla magamoka* sp. nov. 1: nymphalstage, 2: adult, 3: head in anterior view, 4: forewing with spinulation, 5: male genitalia in lateral view, 6: Female genitalia in lateral view, 7: nymphal host: *Sorbus commixta*, 8: adult host: *Ilex macropoda*.