

CORRESPONDENCE

First record of *Stigmatijanus* Wei (Hymenoptera: Cephidae) from South Korea with description of a new species

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Abstract The genus *Stigmatijanus* Wei, 2007 is recorded from Korea for the first time. A diagnosis of the genus is briefly discussed. A new species, *Stigmatijanus koreanus* **sp. nov.**, is described from Mt. Homyeong, Gyeonggi-do, South Korea. A key to the three species of the genus is provided.

Key words Hartigiinae, new species, new record, South Korea, *Prunus*.

1 Introduction

The genus *Stigmatijanus* Wei, 2007 (Wei & Nie, 2007) is a very small genus of Cephidae, with 2 extant species endemic to China: *S. stigmaticus* (Maa, 1949) from Shandong, Shanghai and *S. armeniaca* Wu, 2008 from Gansu. The genus can be recognized by the peculiar and unique pterostigma in the forewing within the family. The type species of the genus was described by Maa (1949) based on a female collected in 1931 from Shanghai, China. There was no further record of the species until Wei and Nie (2007) reported a second female of the species from Shandong and erected the genus *Stigmatijanus*. Wu and Xin (2008) described a second species of *Stigmatijanus* from southern Gansu. The host plant of *S. armeniaca* Wu is *Prunus* spp. (Wu & Xin, 2008).

In 2013, JWL invited MCW to visit Yeungnam University, Gyeongsan, South Korea. In the Insect Collection of Yeungnam University, WMC found 8 specimens of *Stigmatijanus* and confirmed that they represent an undescribed species of the genus.

This is the first record of *Stigmatijanus* from South Korea, and it is also the first distribution record outside of China.

2 Materials and methods

The type specimens of the new species are deposited in the Department of Life Sciences, Yeungnam University, Gyeongsan, South Korea (YNU) and the Insect Collection of Central South University of Forestry and Technology, Changsha, Hunan, China (CSCS).

Specimen images were taken using a digital camera with a series of images montaged using Helicon Focus (©HeliconSoft). Terminology of sawfly genitalia follows Ross (1945), and terminology of wing venation follows Niu and Wei (2010).

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3 Systematics

Stigmatijanus Wei, 2007

Stigmatijanus Wei, 2007: 110. Type species: *Janus stigmaticus* Maa, 1949: 20, by original designation.

Diagnosis. This genus can be easily recognized from other genera by the peculiar pterostigma and small cell 2R1 (Fig. 3).

Description. Left mandible tridentate, with a distinct middle tooth, inner tooth not shouldered and as long as outer tooth; 4th segment of maxillary palp 2 times as long as 6th segment; labial palp 4-segmented; distance between antennal sockets slightly longer than distance between antennal socket and inner margin of eye, and as long as distance between antennal socket and tentorial pit on same side; malar space as long as diameter of front ocellus; eyes medium-sized, inner margins parallel, shortest distance between eyes clearly broader than height of an eye; OCL about 2.5 times POL; occipital carina extending to upper part of postorbit; head broader than thorax, not strongly swollen behind eyes, temple slightly shorter than eye and feebly narrowing backwards in dorsal view. Antenna filiform, second antennomere not broader than long, 3rd antennomere 1.0–1.2 times as long as 4th antennomere. Pronotum slightly broader than long in dorsal view and strongly oblique in lateral view. Middle tibia with 1 pre-apical spur; hind tibia as long as hind tarsus with 2 pre-apical and 2 apical spurs; metabasitarsus slender, longer than following 3 tarsomeres together; claw with an acute basal lobe, inner tooth slightly longer and broader than outer tooth. Pterostigma very short and broad, vein 1r close to 2r and both joining stigma at about middle; hind wing with cell Rs and M closed (Fig. 3). Abdomen strongly compressed laterally, lateral halves of 1st tergite not meeting at middle (Fig. 1), 2nd segment short, almost 3 times higher than long in lateral view; ovipositor sheath shorter than hind tibia, distinctly bent ventrally, apical sheath clearly shorter than basal sheath (Fig. 2). Lancet simple, with 2–3 apical annular sutures, serrulae subtruncate at apex, without subbasal teeth.

Distribution. China, Korea.

Remarks. Three species of *Stigmatijanus* are reported till present, all from eastern Asia. The present distribution pattern of the genus is a narrow transverse band in the East Asia Region (Wei & Nie, 2008). Considering the research state of Cephidae in China and the diversity of *Prunus* in eastern Asia, the distribution pattern of the genus might be changed, and we estimate that there are probably more species in eastern Asia.

Key to species of *Stigmatijanus* Wei, 2008

1. Abdomen robust and entirely black, segments 2–10 together about 1.8 times as long as high; basal sheath about 1.8 times as long as apical sheath; cercus 1/3 length of sheath in dorsal view. China (Shandong, Shanghai)..... ***S. stigmaticus* (Maa, 1949)**
Abdomen narrow and long, segments 2–4 partly orange or yellowish brown, segments 2–10 together 2.5–2.7 times as long as high; basal sheath about 1.4 times as long as apical sheath; cercus about 1/4 length of sheath in dorsal view 2
2. Third antennomere 1.2 times as long as fourth antennomere; POL: OOL=6: 5; cell 2Rs about 1.3 times as long as broad and clearly longer than 1Rs; dorsal side of mesoscutum densely microsculptured without polished patch; metapostnotum densely microsculptured, first abdominal terga hardly microsculptured. South Korea (Gyeongsan) ***S. koreanus* sp. nov.**
Third antennomere as long as fourth antennomere; POL as long as OOL; cell 2Rs about as long as broad and usually slightly shorter than 1Rs; dorsal side of mesoscutum densely microsculptured with a polished patch; metapostnotum similar to first abdominal terga, both feebly microsculptured. China (Gansu) ***S. armeniacae* Wu, 2008**

Stigmatijanus koreanus sp. nov. (Figs 1–3)

Female. Body length 7.5–9.0 mm (Fig. 1). Black, mandibles except for narrow basal margin and apical teeth yellow white; palpi, lateral part of abdominal tergites 2–4 largely, large maculae on dorsum of tergites 3–4 and abdominal sternites 3–5 largely yellowish brown. Each coxa largely, apical margin of hind femur, apical 0.65 of hind tibia and hind tarsus entirely black; apical margin of each coxa, trochanters entirely, fore and middle tibiae and tarsi, basal 0.35 of hind tibia yellow white; femora largely orange. Wings hyaline, vein C and base of pterostigma brown, pterostigma largely blackish brown, other veins dark brown. Hairs on dorsal side of head and thorax brown, hairs on mesopleuron silver.

Body shiny. Supraclypeal area shallowly and finely punctured, frons with some large punctures, temple and postocellar area minutely and very sparsely punctured, postorbit hardly punctured; anterior 0.65 of pronotum polished, without punctures or sculpture, posterior 0.35 with shallow and obscure punctures; prescutum polished with very sparse punctures; scutum densely punctured, mat, dorsum densely microsculptured except a small polished outer corner; center of mesoscutellum punctured, lateral smooth; metapostnotum densely microsculptured; upper half of mesepisternum densely



Figs 1–3. *Stigmatijanus koreanus* **sp. nov.**, female. 1. Adult, dorsal view. 2. Abdomen, lateral view. 3. Wings.

punctured, spaces between punctures smaller than punctures, smooth; punctures on lower half of mesepisternum denser and smaller than upper half; first abdominal terga feebly coriaceous, center of terga 2–3 largely polished, lateral of terga 2–4 and most part of terga 5–10 shallowly punctured.

Malar space as long as front ocellus; distance between eyes at level of toruli 1.1 times as long as longest axis of eye; distance between toruli as long as distance between torulus and eye; frons with a shallow middle furrow; postocellar furrow and lateral furrows absent; POL: OOL=6: 5; temple shorter than eye in dorsal view and distinctly narrowed backwards. Antenna with 21 antennomeres, second antennomere as long as broad, third antennomere 1.2 times as long as fourth antennomere, each flagellomere longer than broad. Mesoscutellum as long as broad, anterior margin protruding. Venation as Fig. 3, cell 2Rs longer than broad and clearly longer than 1Rs. Abdomen narrow and long, segments 2–10 together 2.7 times as long as broad; ovipositor sheath distinctly bent ventrally at an angle of about 145 degrees, basal sheath 1.4 times as long as apical sheath, cercus about 0.25 times as long as sheath in dorsal view.

Male. Unknown.

Holotype ♀, Mt. Homyeong, Goseong, Korea G G, M.T (ii) (37°43'45.58"N, 127°26'45.71"E; elev. 220 m), 1–26 May 2009, coll. J. O. Lim (deposited in YNU). Paratypes 5♀, same data as holotype (4 deposited in YNU, 1 deposited in CSCS).

Etymology. The specific epithet refers to the type locality.

Biology. Unknown. The host plant of the new species is probable to be *Prunus* spp., as its sister species, *S. armeniaca* Wu, 2008 is known feeding on *Prunus armeniaca* L.

Remarks. This species is close to *S. armeniaca* Wu, 2008. The differences between them can be seen from the key of *Stigmatijanus*.

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