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Short communication

A New Record of Parasitic Wasp, *Coleopioides postpectalis* (Hymenoptera: Braconidae: Opiinae), from South Korea

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ABSTRACT

The small genus *Coleopioides* van Achterberg & Li, 2013 (Hymenoptera: Braconidae: Opiinae) of Opiinae which parasitize in fruit fly (Diptera: Tephritidae), have been reported for the first time in China. There are three species of the genus *Coleopioides* in Madagascar; and Hunan, Shandong in China. The genus *Coleopioides* of which including *Coleopioides postpectalis* Li et al., 2013 is reported for the first time from South Korea. In this study, specimens were collected by sweeping and using Malaise trap in campus of Kunsan National University (KSNU), Jeonbuk, South Korea. Diagnosis of genus, description, distribution, and diagnostic illustration of *C. postpectalis* are provided.

Keywords: Ichneumonoidea, morphological identification, newly recorded genus, natural enemy, parasitoid

INTRODUCTION

The subfamily Opiinae is one of the biggest groups in the family Braconidae (Hymenoptera: Ichneumonoidea), containing approximately 2,000 species in 39 genera worldwide (Yu et al., 2016). Most of the Opiinae are koinobiont endoparasitoids of Diptera (Wharton et al., 1997). Because of attacking the agricultural pests such as Tephritidae (Diptera), some members of this subfamily can be commercially used for biological control (Wharton et al., 1997; Ovruski et al., 2000). *Coleopioides* is morphologically similar to *Coleopius* Fischer, 1964 by hypoclypeal depression, clypeus shape and short metasoma (Li et al., 2013). Up to date, three species of *Coleopioides* from the world: *C. granulellus* Fischer, 1994 from Madagascar, *C. diversinotum* Li et al., 2013 from China and *C. postpectalis* Li et al., 2013 from China (Yu et al., 2016). As results of taxonomic studies on Korean Opiinae, the genus *Coleopioides* is newly discovered from South Korea. Because no biological information of both genus *Coleopioides* and the species *Coleopioides postpectalis* has been known to date (Li et al., 2013), the first record of *Coleopioides postpectalis* in South Korea will be significant for further studies. Diagnosis, description, biology and illustrations are provided in this study.

The specimens examined were collected by sweeping and Malaise trap in campus of Kunsan National University (KSNU) in 12−18 Jun 2015, which were preserved in 80% ethyl alcohol for dried. These specimens are deposited in Kunsan National University (KSNU). We used LEICA DMC2900 digital camera and LEICA M205 C microscope (Leica Geosystems AG, Jena, Germany) for observation and photography in this study. Illustrations were stacked using Helicon software (Helicon Soft, Kharkiv, Ukraine). Terminology used for morphological characters followed van Achterberg (1993).

SYSTEMATIC ACCOUNTS

Family Braconidae Nees, 1811
Subfamily Opiinae Blanchard, 1845

[1]*Genus *Coleopioides* van Achterberg & Li, 2013

Coleopioides van Achterberg & Li, 2013: 52−53.

Generic diagnosis. The diagnosis follows van Achterberg

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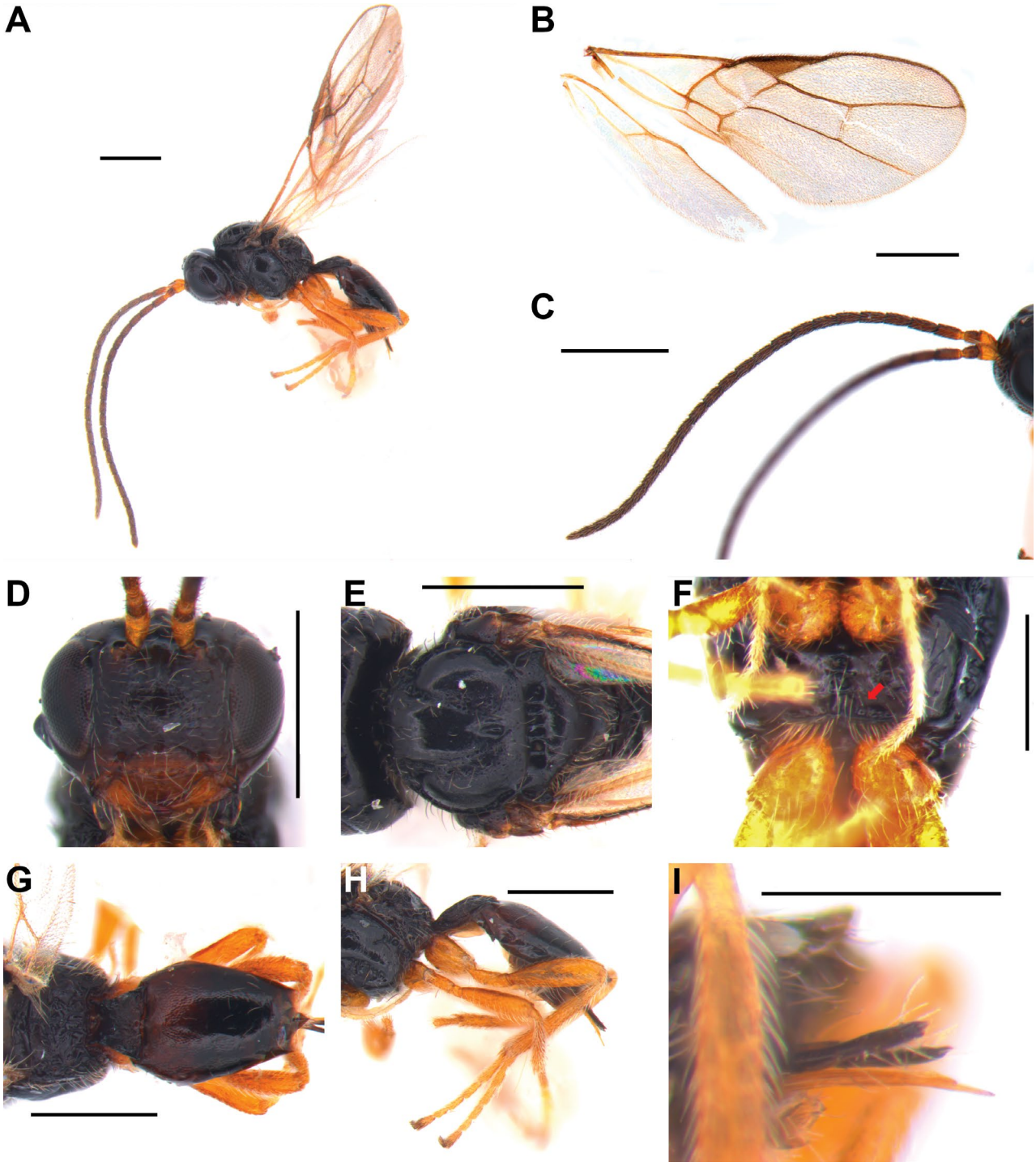

Fig. 1. Habitus of *Coleopioides postpectalis* Li et al., 2013: A, Whole body in lateral view; B, Wings; C, Antenna; D, Head in frontal view; E, Mesosoma in dorsal view; F, Postpectal carina; G, Metasoma in dorsal view; H, Hind leg in lateral view; I, Ovipositor. Scale bars: A–E, G, H = 0.5 mm, F, I = 0.25 mm.

and Li (2013). Face without tubercles. Scapus, fore coxa and trochanter at most weakly compressed. Epistomal suture without large depressions. Inner sides of antennal sockets normal, not protruding. Labrum exposed. Clypeus truncate ventrally and hypoclypeal depression present. Mandibles long and slender. Scutellar sulcus usually rather wide. At least part

of postpectal carina present medio-ventrally. Notauli complete or largely absent. Mesoscutum with medio-posterior depression. Propodeum with a transverse carina subbasally and with long medio-longitudinal carina. Precoxal sulcus wide and crenulate. Second submarginal cell elongate. Dorsope absent. Second and third metasomal tergites enlarged, longer than following segments. Fourth metasomal tergite well exposed (Li et al., 2013).

[1]***Coleopioides postpectalis* Li et al., 2013 (Fig. 1A–E)**

Coleopioides postpectalis Li et al., 2013: 57–61.

Diagnosis. Total length of body 1.90–1.92 mm (Fig. 1A), total length of fore wing 2.18–2.21 mm. Yellowish-brown scape of antenna and annellus, postpectal carina ventrally crenulate.

Description. Head (Fig. 1C, D): Length of head 0.58 times as wide as its width, length of antenna 1.16 times as long as fore wing with 19–23 segments; covered with white setae, depression between antennal sockets, length of eye 6.00 times as long as wide as diameter of anterior ocellus and 1.53 times ocello-ocular line, face covered with yellowish setae overall; face shallowly impressed medially in a circle, clypeus smooth except for some punctures and ventral rim pointed downwards; hypoclypeal depression large, malar suture present, mandible normal and with ventral carina, length of maxillary palp equal as long as length of head, labial palp segments slender than maxillary palp, occipital carina crenulate laterally. Mesosoma (Fig. 1E, F): Length of mesosoma 2.20 times as long as length of propodeum, mesoscutum smooth and with few setae; lateral margin of mesoscutum crenulate, scutellar sulcus wide, superficially rough of dorsal pronotum and mesopleuron, dorsal epicnemial part smooth, precoxal sulcus wide and crenulate, postpectal carina ventrally crenulate, length of propodeum 0.70 times as wide as its width. Wing (Fig. 1A, B): covered with yellowish-brown setae overall, fore wing pterostigma triangular and length of fore wing 6.20 times as long as width of pterostigma; r short; 1-M and SR1 nearly straight; cu-a widened; first subdiscal cell closed and transverse; CU1b short; apical of M+CU1 unsclerotized, hind wing m-cu absent. Legs (Fig. 1H): Length of femur, tibia of hind leg 1.30 and 1.42 times as long as length of propodeum and with setae. Metasoma (Fig. 1G, I): Length of metasoma 2.80 times as long as length of first tergite and 1.10 times as long as length of mesosoma, first tergite granulate generally, second and third tergites smooth and with setae partially, length of ovipositor 2.50 times as long as length of first tergite.

Colour (Fig. 1A)**.** Generally Black excepting wing and leg; antenna, clypeus, malar space and mandible, dark brown; leg, yellowish-brown; pterostigma and veins, light-brown.

Distribution. South Korea (new, Jeonbuk Prov.), China (Shandong, Hunan).

Biology. Unknown.

Specimens examined. 5♀ (KSNU), South Korea: Kunsan National University, Miryong-dong, Gunsan, Jeonbuk, 35°56′43.3″N, 126°40′54.5″E, 12–18 Jun 2015, Kim Hyojoong leg.

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CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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