

Short communication

# A New Record of Species of the *Microplitis* (Hymenoptera: Braconidae: Microgastrinae) in Korea

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#### ABSTRACT

The genus *Microplitis* (Braconidae: Microgastrinae) is reported for the first time from Korea. The *Microplitis* has often quite small hypopygium, very short ovipositor and rugose propodeum with large aleola. The genus contains 190 described species, among them 19 species were recorded in Korea. *Microplitis varicolor* was established by Viereck in 1917. The species is found as new to Korea in this study. *Microplitis varicolor* is endoparasitoid, especially attacking species of Noctuidae (Insecta: Lepidoptera) including pests of leguminous crop. In this study, diagnosis, photographs and host lists are included.

Keywords: Braconidae, Microplitis, new record, natural enemy, parasitoid wasp

### INTRODUCTION

The subfamily Microgastrinae (Hymenonoptera: Braconidae) is one of the large subfamilies in the Braconidae. With more than 2,000 species were described from the world (Yu et al., 2016). The subfamily is easily distinguished by the characteristics wing venation and the number of flagellomeres (Shaw and Huddleston, 1991).

The genus *Microplitis* of Microgastrinae is a moderate group, including 190 described species in the world (Yu et al., 2016), and among them approximately 19 species were recorded in Korea (Yu et al., 2016). Some *Microplitis* species have relatively large body compared with the other microgastrine wasps. Most species are solitary endoparasitoids, attacking macrolepidopterans (Shaw and Huddleston, 1991). *Microplitis* are identified by the following features: fore wing with second vein (r-m) and large propodeal areola present, roughly sculpturing of propodeum.

In this study, *Microplitis varicolor* Viereck, 1917 is reported for the first time from Korea. We provided diagnosis, photographs and host lists.

All examined materials for this study are deposited in National Institute of Biological Recources (NIBR), Incheon, Korea and Kunsan National University (KNU), Gunsan, Korea. The specimens were photographed with Leica microscope LAS v4.7 (Leica, Germany). Terminology of taxonomic characters followed Sharkey (1997) and Austin and Dangerfield (1992). Abbreviations used in this study are as follows: MLT, malaise trap; KNU, Kunsan National University; HK, Hyojoong Kim.

#### SYSTEMATIC ACCOUNTS

Order Hymenoptera Famaily Braconidae Nees, 1811 Subfamily Microgastrinae Förster, 1862 Genus *Microplitis* Förster, 1862

*Microplitis varicolor* Viereck, 1917 (Fig. 1A–E) *Microplitis varicolor* Viereck, 1917: 203.

Material examined. Korea:  $21 \Leftrightarrow \Leftrightarrow$  (KNU), Jeonbuk: Gunsan, Miryong-dong, KNU, 10–26 Jul 2013 (MLT), HK;  $1 \Leftrightarrow$ , Gunsan, Miryong-dong, KNU, 2 Oct 2013, HK;  $5 \Leftrightarrow \Leftrightarrow$ , Gunsan, Miryong-dong, KNU, 22 Sep 2014, HK;  $6 \Leftrightarrow \Leftrightarrow$ , Gunsan, Miryong-dong, KNU, 29 Sep 2014, HK;  $6 \Leftrightarrow \Leftrightarrow$ , Gunsan, Miryong-dong, KNU, 19–25 Aug 2014 (MLT), HK;  $1 \Leftrightarrow$ ,

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**Fig. 1.** *Microplitis varicolor.* A, Habitus, female; B, Propodeum; C, Wings; D, Head; E, antenna. Scale bars: A, C=1 mm, B, D=0.1 mm, E=0.5 mm.

Gunsan, Miryong-dong, KNU, 9–16 Sep 2015 (MLT), HK, (NIBR); 1♀, Gunsan, Miryong-dong, KNU, 22 Sep 2014, HK.

**Diagnosis.** *Color.* antennae dark (Fig. 1E), the scape and pedicel paler; legs nearly yellow, except extreme base of black posterior coxae, and the posterior tarsi, which are dusky, except the second and third tergites; abdomen wholly black. *Morphology.* Body. length 2.8 mm (Fig. 1A). Head. face and vertex closely punctate and dull with setae (Fig. 1D). Thorax. mesonotum closely punctate; mesoscutum only a little shining on scutellum angles; whole thorax rather with setae; propodeum rugose (Fig. 1B). Abdomen. abdomen shorter than thorax, slender at base, broad on the third tergite; first dorsal abdominal plate slender, narrowing strongly to apex, where it is much narrower than at base, roughly punctate and rugulose, which is elevated and highly polished.

**Distribution.** Korea (new record), Bulgaria, Canada, China, Finland, Germany, Japan, Norway, Russia, USA.

Host. (host species [host plant]) Erebidae: *Hypena scabra* [*Medicago sativa*] (Marsh, 1979); Noctuidae: *Leucania lati*-

uscula (Marsh, 1979); Peridroma saucia (Crumb, 1929); Protorthodes smithii (Graham, 1965); Pseudaletia unipuncta [Medicago sativa] (Marsh, 1979); Pseudoplusia includens [Glycine max] (McCutcheon and Turnipseed, 1981); Syngrapha epigaea (Graham, 1965).

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