

# A New Record of the Genus *Stenomacrus* (Hymenoptera: Ichneumonidae: Orthocentrinae) from South Korea

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## 한국산 얼굴긴뺨자루맵시벌속(벌목: 맵시벌과: 긴뺨자루맵시벌아과)의 미기록종 보고

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**ABSTRACT:** *Stenomacrus deletus* (Thomson, 1897), belonging to Orthocentrinae of Ichneumonidae, is newly recognized in South Korea. Most *Stenomacrus* species are known as koinobiont endoparasitoids of dipteran, lepidopteran, and coleopteran hosts. In this study, an additional species is recorded for the first time from South Korea. Diagnoses of genus and an unrecorded species, as well as illustrations of this species are provided.

**Key words:** New record, Parasitoid, *Stenomacrus deletus*, Taxonomy

**조 록:** 한국산 긴뺨자루맵시벌아과의 미기록종인 미소얼굴긴뺨자루맵시벌(신칭)을 확인하고 국내에 처음으로 보고한다. 본 종의 상위분류군인 얼굴긴뺨자루맵시벌속은 농업과 임업 해충인 파리목, 나비목, 딱정벌레목에 내부 기생하는 것으로 알려져 있다. 본 논문에는 미소얼굴긴뺨자루맵시벌의 기재 및 주요 형질 사진을 제공한다.

**검색어:** 미기록종, 기생벌, 미소얼굴긴뺨자루맵시벌, 분류

Orthocentrinae, a subfamily of small-sized parasitoids belonging to the family Ichneumonidae, was first described by Förster (1869). Most orthocentrine species are known to be koinobiont endoparasitoids of dipteran hosts of the superfamily Sciaroidea. South Korean Orthocentrinae are poorly known however recently South Korean species of the genera *Aperileptus* (3 species), *Apoclima* (1 species), *Dialipsis* (1 species), *Eusterinx* (9 species), *Gnathochoris* (5 species), *Orthocentrus* (26 species), *Pantisarthrus* (1 species), *Picrostigeus* (1 species), *Plectiscidea* (3 species), *Proclitus* (1 species), and *Symplecis* (2 species) were

reviewed (Choi et al., 2014; Choi and Lee, 2018, 2020a, 2020b; Humala et al., 2016, 2018, 2020). *Stenomacrus* Förster, 1869 is a large genus comprising 73 valid species worldwide, and mainly reported from Western Palaearctic and Nearctic regions, with only six species have been distributed in the Eastern Palaearctic (Yu et al., 2016). This genus is newly recorded in South Korea for the first time, and *Stenomacrus deletus* (Thomson, 1897) is reported new to the Eastern Palaearctic region.

In this paper, the new record of *Stenomacrus deletus* from South Korean fauna, as well as its diagnosis and photos, are provided.

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## Materials and Methods

Images were captured with an AxioCam MRc5 camera attached to a stereo microscope (Zeiss SteREO Discovery, V20; Carl Zeiss, Göttingen, Germany), processed using the Axio-Vision SE64 software (Carl Zeiss), and optimized with a Delta imaging system (i-solution, IMT i-Solution Inc. Vancouver, Canada). The morphological terminology generally follows that of Gauld (1991). The examined specimen is deposited in the Daegu National University of Education (DNUE), Daegu, South Korea.

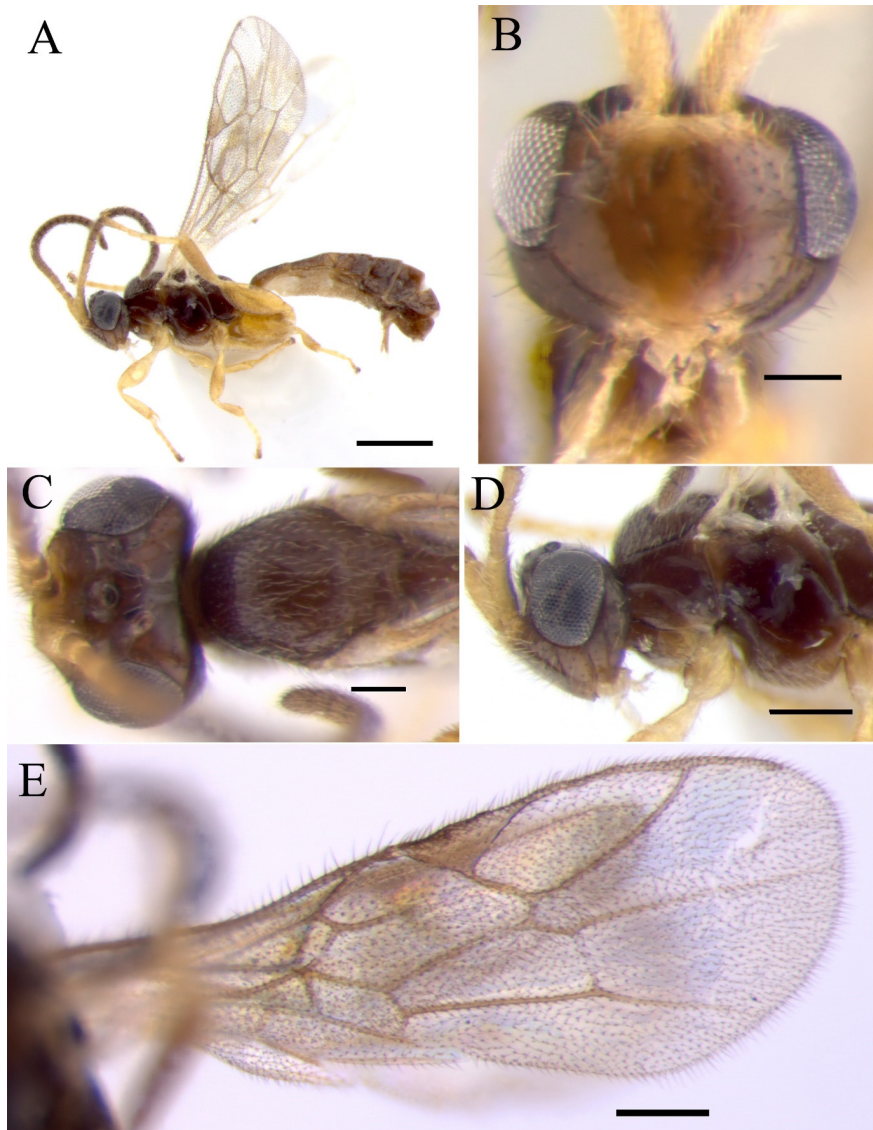
## Systematic Accounts

Family Ichneumonidae Latreille, 1802 맵시벌과

Subfamily Orthocentrinae Förster, 1869 긴뺨자루맵시벌아과

Genus *Stenomacrus* Förster, 1869 얼굴긴뺨자루맵시벌속(신칭)

**Diagnosis.** Clypeus not angulate medially and hardly incurved apically; mandible with small tooth on inner edge; propodeum usually with posterior transverse and median longitudinal carinae (Broad, 2010).



**Fig. 1.** *Stenomacrus deletus* (Thomson, 1897). A, Habitus in lateral view; B, Head in frontal view; C, Head and mesosoma in dorsal view; D, Head and mesosoma in lateral view; E, Wings. Scale bars: A = 0.5 mm, B-C = 0.1 mm, D-E = 0.2 mm.

**Host.** [Diptera] **Sciariidae:** *Bradysia confinis*; [Lepidoptera] **Gracillariidae:** *Cameraria ulmella*; **Lasiocampidae:** *Dendrolimus albolineatus*, *Dendrolimus sibiricus*; **Noctuidae:** *Trichosia sinuata*; [Coleoptera] **Chrysomelidae:** *Psylliodes chrysocephala* (Yu et al., 2016).

**Distribution.** Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Faeroe Islands, Finland, France, Germany, Greece, Greenland, Grenada, Hungary, Ireland, Israel, Jan Mayen Island, Latvia, Lithuania, Madeira Islands, Netherlands, Norway, Poland, Romania, Russia, Reunion, South Korea (new record), Spain, St. Vincent, Sweden, Switzerland, Turkey, U.S.A., Ukraine, United Kingdom (Yu et al., 2016).

*Stenomacrus deletus* (Thomson, 1897) 미소일굴긴 뺨자루맵시벌(신칭) (Fig. 1)

*Orthocentrus deletus* Thomson, 1897: 2442. Lectotype: female; type locality: Sweden; type depository: ZI (Zoologiska Institutionen, Helgonavägen, Lund, Sweden).

**Redescription.** Female. Body 2 mm; fore wing 1.5 mm. Head with long hairs, width 1.56 times as long as height in frontal view. Inner orbits convergent upward (Fig. 1B). Face shiny and sparsely punctate; clypeus small and separated from weak groove, apical margin of clypeus round. Malar space with distinct carina, 5.5 times as long as basal width of mandible (Fig. 1B). Temple shiny, 1.4 times as wide as eye in lateral view. Antenna with 19 flagellomeres and dense hairs; scape long, with maximum length 2.14 times as long as first flagellomere. Pronotum shiny with epomia, sparsely punctate. Mesoscutum with dense hairs; notaulus indistinct (Fig. 1C). Propodeum sparsely punctate; with distinct median longitudinal carinae. Fore wing with closed areolet, second intercubitus trace (Fig. 1E). First metasomal tergite with longitudinal striae in posterior area, 1.3 times as long as second metasomal tergite. Ovipositor sheath short, 0.6 times as long as hind tibia, with long hairs.

**Color.** Generally yellowish brown to brown (Fig. 1A). Face evenly brown, upper margin of face yellow; clypeus yellowish brown; palpi and mandible pale yellow; frons and temple dark brown; antenna yellow to yellowish brown, apical flagellomeres darken. Mesosoma reddish brown to dark brown. Legs yellow.

Metasomal tergites dark brown.

**Material examined.** South Korea: 1 ♀, Gangwon-do, Wonju-si, Heungeop-myeon, Maeji-ri, Yensei Univ., 37°16'54.49"N 127°53'54.54"E, 5-23.ix.2015, H.Y. Han leg. (DNUE).

**Distribution.** South Korea (new record), Bulgaria, Finland, France, Germany, Ireland, Israel, Lithuania, Netherlands, Poland, Spain, Sweden, United Kingdom (Yu et al., 2016).

**Region.** Eastern Palaearctic (new record), Western Palaearctic.

**Remarks.** This species is distributed in the Eastern Palaearctic region and South Korea for the first time here. As Aubert (1981) pointed out, a cubic head, fore wing with closed areolet, thick antennal flagellomeres.

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## Statements for Authorship Position & contribution

Choi, J.K. : Daegu National University of Education, Professor; performed overall procedures of research and wrote the manuscript

All authors read and approved the manuscript.

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