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First record of *Eubroncus* Yoshimoto, Kozlov and Trjapitzin (Hymenoptera: Chalcidoidea: Mymaridae) from South Korea

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한국산 미기록속 *Eubroncus* Yoshimoto, Kozlov and Trjapitzin (벌목: 좀벌상과: 총채벌과)에 대한 보고

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ABSTRACT: *Eubroncus* Yoshimoto, Kozlov and Trjapitzin, 1972 belonging to Mymaridae is newly recognized in South Korea based on *E. prodigiosus* (Yoshimoto, Kozlov and Trjapitzin, 1972). A diagnosis and photographs of the diagnostic characters are provided.

Key words: *Eubroncus prodigiosus*, Mymaridae, New record, South Korea, Taxonomy

초 록: 한국산 총채벌과의 미기록종인 긴턱총채벌(*Eubroncus prodigiosus* (Yoshimoto, Kozlov and Trjapitzin, 1972)) (신칭)을 확인하고, 그에 따라 미기록속인 긴턱총채벌속(*Eubroncus* Yoshimoto, Kozlov and Trjapitzin, 1972) (신칭)을 처음으로 보고한다. 식별형질의 기재와 주요 형질에 대한 사진을 함께 제공한다.

검색어: 긴턱총채벌, 총채벌과, 미기록종, 한국, 분류

A family Mymaridae is commonly known as fairyflies or fairy wasps, and consisting of 1,424 species in 103 genera worldwide (Aguiar et al., 2013). They are common chalcid wasps, but are difficult to recognize because of their extremely small body size (average ca. 0.5 to 1.0 mm) (Gibson, 1997).

Eubroncus Yoshimoto, Kozlov and Trjapitzin, 1972 is a small genus of Mymaridae with only seven species in the worldwide: two from the Eastern Palearctic and five from Oriental regions (Yoshimoto et al., 1972; Hayat and Khan, 2009; Jin and Li, 2014; Palanivel and Manickavasagam, 2015). However, Triapitsyn and Berezovskiy (2002) briefly mentioned that additional specimens were exist, and still remained undescribed from the Australian and Afrotropical regions.

In the present study, *Eubroncus* is newly recognized from South Korea based on *E. prodigiosus*. A diagnosis and photographs of the diagnostic characters are provided.

Materials and Methods

The terminology used in the present study follows that of Gibson (1997). A female specimen was slide-mounted in Canada balsam using a method described by Noyes (1982) with some modifications. The images were captured with a Leica DFC 495 camera on a Leica M205A Stereozoom stereomicroscope (Leica, Microsystems, Solms, Germany) or

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with a Jenoptik ProgRes C14 Plus camera (Jenoptik Corporation, Jena, Germany) on an Olympus BX53 microscope (Olympus, Tokyo, Japan). The multi-stacked pictures were produced using the LAS software (version 4.1.0., Leica Microsystems, Switzerland). The figure plates were prepared in Adobe Photoshop CS6 (Adobe Systems Incorporated, San Jose, United States of America).

All examined specimens have been deposited in the Yeungnam University (YNU), Gyeongsan, South Korea and the Korea National Arboretum (KNA), Pocheon, South Korea.

Systematic accounts

Genus *Eubroncus* Yoshimoto, Kozlov and Trjapitzin, 1972 긴턱총채벌속 (신칭)

Eubroncus Yoshimoto, Kozlov and Trjapitzin, 1972: 879. Type species: *Eubroncus orientalis* Yoshimoto, Kozlov and Trjapitzin, 1972, by original designation.

Stomarotrum Yoshimoto, Kozlov and Trjapitzin, 1972: 879. Type species: *Stomarotrum prodigiosum* Yoshimoto, Kozlov and Trjapitzin, 1972, by original designation. Synonymized by Triapitsyn and Huber 2000: 603.

Diagnosis. Head strongly angular in lateral view, with acute angle between face and vertex (Fig. 1D); antenna with short funicle segments (Fig. 1A); mandibles extremely long and narrow, as long as or slightly longer than height of head, with a strong apical tooth and a row of denticles on the ventral margin (Fig. 1C); fore leg with distinctly comb-like protibial spur at the inner margin; male flagellum 11-segmented (Fig. 2).

Distribution. Australian, Afrotropical, Eastern Palaearctic and Oriental regions (Triapitsyn and Berezovskiy, 2002).

***Eubroncus prodigiosus* (Yoshimoto, Kozlov and Trjapitzin, 1972) 긴턱총채벌 (신칭)** (Figs. 1A-G, 2)

Stomarotrum prodigiosum Yoshimoto, Kozlov and Trjapitzin,

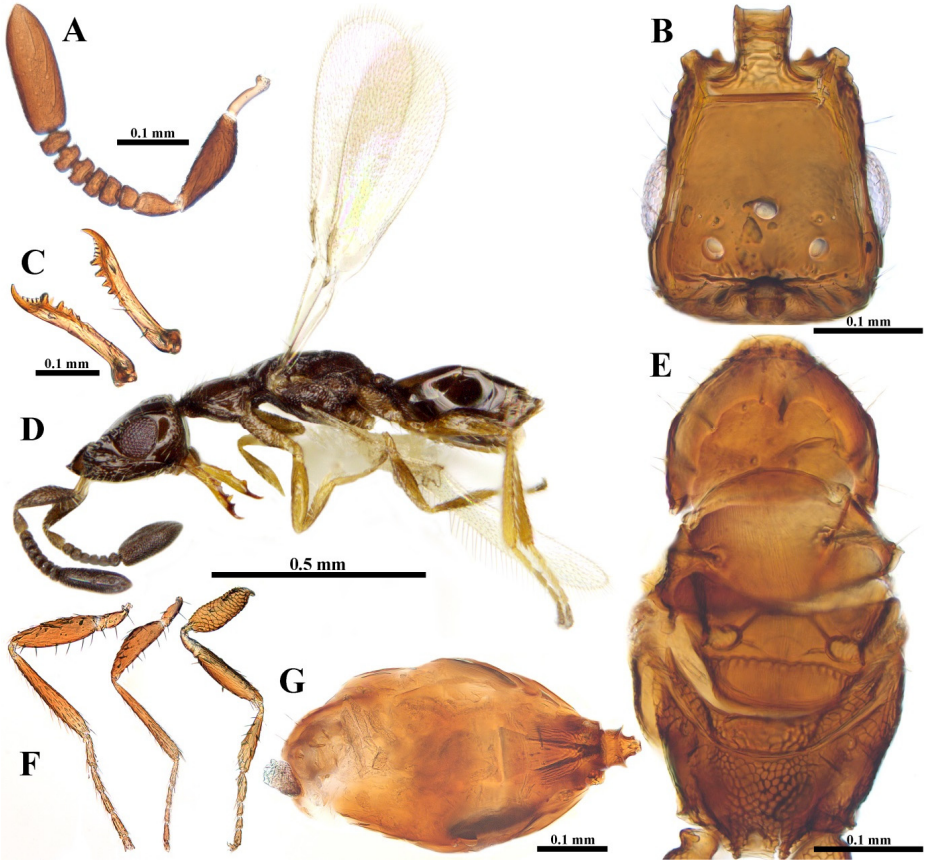

Fig. 1. *Eubroncus prodigiosus* (Yoshimoto, Kozlov and Trjapitzin, 1972), female. A: Antenna; B: Head in dorsal view; C: Mandibles; D: Habitus in lateral view; E: Mesosoma in dorsal view; F: Legs; G: Metasoma in dorsal view.

1972: 882.

Eubroncus prodigiosus: Triapitsyn and Huber, 2000: 613; Triapitsyn and Berezovskiy, 2002: 11.

Diagnosis.

Female. Body length 0.95-1.26 mm, fore wing length 0.91-1.03 mm. Body dark brown, except radicle, mandibles, legs yellowish brown to brown. Head in lateral view strongly triangular, in dorsal view 1.25 times as long as wide (Fig. 1B) and, in frontal view 1.33 times as long as high; eyes nearly circular (Fig. 1D), 1.2 times as long as wide; mandibles slightly longer than height of the head in lateral view (Fig. 1B); scape 3.0 times as long as wide; all funicle segments short and transverse; clava 2.6 times as long as wide (Fig. 1A). Mesosoma slightly longer than length of metasoma and slightly more than 2.0 times as long as and slightly longer than mesoscutum (Fig. 1E); median length of propodeum 0.95 times length of mesoscutum and 0.85 times length of scutellum. Fore wing 3.7 times as long as wide. Metacoxa distinctly reticulate (Fig. 1F); protibial spur comb-like. Petiole as long as wide, with short spine like projection from each side antero-laterally (Fig. 1G). Tergite I smooth, occupying half length of gaster, with ridges and carinae near the base (Fig. 1G); ovipositor short, not exserted at apex.

Male. Body length 1.07-1.12 mm, fore wing length 0.99-1.03 mm. Similar to female, slightly lighter head and body color than female (Fig. 2); flagellar segments slightly longer than its width; fore wing 3.5 times as long as wide.

Material examined (7♀♀3♂♂). South Korea: 1♂, Gyeongsangbuk-do, Cheongdo-gun, Gakbuk-myeon, Namsan-3ri, 35°41'N, 128°35'E, 27.V-9.VI.2013 (Malaise trap), J.W. Lee leg. (YNU); 2♀♀, *ditto*, 27.III-10.V.2015 (Malaise trap), J.W. Lee leg. (YNU); 1♀, Gangwon-do, Bukbang-myeon, Gangwon Prov. Environment Research Park, 37°45'15.6″N, 127°51'01.7″E, 30.III-15.IV.2012 (Malaise trap), S.J. Jang leg. (YNU); 1♀, *ditto*, 1-16.V.2013 (Malaise trap), S.J. Jang leg. (YNU); 1♀1♂, Gangwon-do, Yanggu-gun, National DMZ Native Botanic Garden, 30.VI-15.VII.2014 (Malaise trap), I.K. Kim leg. (KNA); 1♀1♂, *ditto*, 15-30.VII.2014 (Malaise trap), I.K. Kim leg. (KNA); 1♀, *ditto*, 18.VIII-1.IX.2014 (Malaise trap), I.K. Kim leg. (KNA).

Distribution. South Korea (Gyeongbuk, Gangwon; new record), Japan (Fukuoka), Russia (Far East).

Hosts. Unknown.

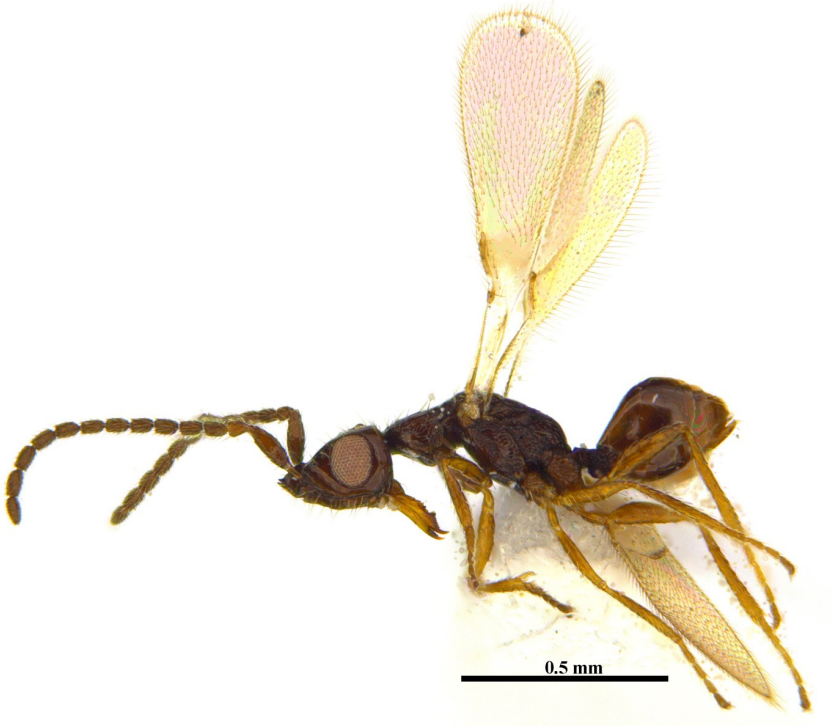

Fig. 2. *Eubroncus prodigiosus* (Yoshimoto, Kozlov and Trjapitzin, 1972), male. Habitus in lateral view.

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