Two New Records of the Ichneumonidae (Hymenoptera) Species from Korea

Chang-Jun Kim, Gyu-Won Kang, Jong-Wook Lee*

Department of Life Sciences, Yeungnam University, Gyeongsan 712-749, Korea

*To whom correspondence should be addressed

Tel: 82-53-810-2376, Fax: 82-53-811-2376

E-mail: jwlee1@ynu.ac.kr

(Running title: Rynchobanchus and Theronia from Korea)
ABSTRACT

Previously, 13 species in six genera of the subfamily Banchinae and 29 species in 16 genera of the subfamily Pimplinae were known from Korea. In this paper, two species, *Rynchobanchus minomensis* (Uchida, 1933) and *Theronia laevigata nigra* Uchida, 1928 are new to Korea. Also, the genus *Rynchobanchus* is recorded for the first time in Korea. Only one species of *Theronia, Theronia atalantae* (Poda, 1761), was recorded from Korea by Uchida (1928). New Korean names proposed for these two species are “Eol-gul-ga-si-maep-si-beol” and “Geom-jeong-nap-jak-maep-si-beol” for the *R. minomensis* and *T. laevigata nigra*, respectively. A key to the species of *Theronia*, diagnosis and photographs of diagnostic characters of them are provided.

**Keywords:** *Rynchobanchus, Theronia, Banchinae, Pimplinae, Korea*
INTRODUCTION

The subfamilies, Banchinae Wesmael, 1845 and Pimplinae Wesmael, 1845 are large-sized groups belonging to the Family Ichneumnidae. The Banchinae includes 1,758 species of 65 genera and Pimplinae includes 1,686 species of 78 genera around the world (Yu et al., 2012).

The Genus *Rhynchobanchus* is a small genus with six species in the tribe Banchini (Hymenoptera: Ichneumonidae: Banchinae): *R. bicolor* Kriechbaumer, 1894; *R. flavopictus* Heinrich, 1937; *R. maculicornis* Sheng, Liu & Wang 1995; *R. minomensis* (Uchida, 1933); *R. niger* Sheng, Li & Pang 1997; *R. nigriventris* Meyer, 1927 (Yu et al., 2012). Of these, only the species *R. minomensis* is known to distribute in the Eastern Palaearctic region (China, Japan and Russia), but of which any specimen has not been found in Korea despite of possibility of its Korean occurrence. The genus *Rhynchobanchus* can be easily distinguished from other genera of Banchini by the following combination of characteristics: 1) prepectal carina absent; 2) apical transverse carina of propodeum absent; 3) pleural carina of propodeum absent; 4) apex of scutellum rounded.

The another genus treated herein *Theronia* is a moderate-sized group belonging to the tribe Pimplini (Hymenoptera: Ichneumonidae: Pimplinae) consisting of 39 species. Only one species of this genus, *Theronia atalantae* (Poda, 1761), was recorded from Korea by Uchida (1928). The biology of this genus has been studied well, and most species are specialized endoparasitoid or hyperparasitoid of the Lepidopteran species (Yu et al., 2012). The genus *Theronia* can be easily distinguished from other genera of Pimplini by the following combination of characteristics: 1) epicnemial carina present; 2) mesopleural suture centrally angled; 3) propodeum with strong carinae, and spiracles elongately oval; 4) forewing with 3r-m, enclosing a rhombic areolet.

In the present study two unrecorded species, *Rynchobanchus minomensis* (Uchida, 1933)
and *Theronia laevigata nigra* Uchida, 1928 is reported including a key to the Korean species of *Theronia*.

The morphological terminologies follow those of Townes (1969) and Yu et al. (2012). Photographs were taken using an AxioCam MRc5 camera attached to a stereomicroscope (Stemi SV 11 Apo; Carl Zeiss, Göttingen, Germany), processed using AxioVision40AC software (Carl Zeiss), and optimized with an i-delta imaging system (i-Delta 2.6; iMTechnology, Daejeon, Korea).

All specimens used were deposited at the Yeungnam University, South Korea (YNUE). Abbreviations for the type information, collecting method and the province of collection localities are as follows: TL, type locality; TS, type species; MT, malaise trap; CB, Chungcheongbuk-do; CN, Chungcheongnam-do; DG, Daegu-si; DJ, Daejeon-si; GB, Gyeongsangbuk-do; GG, Gyeonggi-do; GJ, Gwangju-si; GN, Gyeongsangnam-do; GW, Gangwon-do; JB, Jeollabuk-do; JJ, Jeju-do; JN, Jeollanam-do; SU, Seoul-si; US, Ulsan-si.
SYSTEMATIC ACCOUNTS

Order Hymenoptera

Family Ichneumonidae Latreille, 1802

Subfamily Banchinae Wesmael, 1845

1* Genus *Rynchobanchus* Kriechbaumer, 1894


*Acrogoniella* Schulz, 1911: 23.

2* *Rynchobanchus minomensis* (Uchida, 1933) (Fig. 1)

*Exetastes minomensis* Uchida, 1933: 74. Type: ♀, TL: Mino in Osaka (Sapporo, Japan).


Korean name: 1*얼굴가시맵시벌속(신칭); 2*얼굴가시맵시벌(신칭)

**Diagnosis.** Body 10.9–16.0 mm long, forewing length 10.6–14.6 mm long. Body black. Palpi, around the compound eye, scutellum, postscutellum, tegula, small subtegular spot, apical parts of fore and mid femur, fore and mid tibia, fore tarsus yellow; ventral part of antenna, teeth of mandible, anterolateral part of mesoscutum, mid and hind dorsal part of femur, mid apical part of tibia, hind tibia, mid and hind tarsus, first metasomal tergite in its posterior one-fifth, 2nd to 8th metasomal tergites yellowish to reddish brown. Clypeus densely punctate with a apicomedian notch. Upper tooth of mandible much wider than lower tooth. Face densely punctate with a projecting small horn between the antennal sockets (Fig. 1E). Distance from the posterior edge of a lateral ocellus to the occipital carina shorter than its maximum diameter. Antenna with 49–56 flagellomeres. Mesosoma entirely densely punctuate (Fig. 1F, G). Notauli very weakly visible. Scutellum strongly convex (Fig. 1F).
Propodeum short, not convex and without carinae. Tarsal claws pectinate in its basal three-fourths (Fig. 1D). Nervulus 7.0 times as long as basal vein and 0.8 times ramulus (Fig. 1B).

**Host records.** Unknown.

**Distribution.** Korea (new record), China, Japan and Far Eastern Russia.

**Subfamily Pimplinae Wesmael, 1845**

\*Genus *Theronia* Holmgren, 1859

*Theronia* Holmgren, 1859: 123.


*Poecilopimpla* Cameron, 1903: 141. TS: *Poecilopimpla lucida* Cameron.

*Erythrotheronia* Cameron, 1905: 134. TS: *Erythrotheronia flavolineata* Cameron.


**Key to the species of *Theronia* from Korea**

1. Body reddish brown with black marks. Notaulices shorter, present in approximately apical one-third of the mesoscutum. Lateral carinae of Areola parallel .............................

            ........................................... *Theronia atalantae gestator* (Thunberg, 1824)

- Body predominantly black. Notaulices longer, present in apical half of the mesoscutum.

          Lateral carinae of Areola divergent ..................... 4* *Theronia laevigata nigra* Uchida, 1928

**Theronia laevigata nigra** Uchida, 1928 (Fig. 2)

*Theronia laevigata* var. *nigra* Uchida, 1928: 39.

---

Korean name: 3*담흑납작맵시벌속(신칭); 4*검정납작맵시벌(신칭)

Diagnosis. Body 7.3–14.5 mm long, forewing length 6.5–12.9 mm long. Body largely black, except for the following smaller parts are reddish brown. Apical part of mandible (except teeth) and lower part of clypeus brown to reddish brown; dorsal basal margin of mid and hind
coxa, ovipositor reddish brown. Clypeus basally slightly convex with irregular several hairs and apically strongly concave with a median notch (Fig. 2D). Face slightly convex medially, with numerous long hairs. Antenna with 36–37 flagellomeres. Mesoscutum with dense short hairs. Scutellum slightly convex, apically some punctures with dense long hairs. Propodeal spiracle elongate, 3 times as long as its maximum width. Fore wing vein 2rs-m 0.4 times as long as 3rs-m. Ovipositor straight, 0.7 times as long as hind tibia, lower valves with nine slanting ridges at the tip (Fig. 2B).


Distribution. Korea (new record), Japan and Russia.
ACKNOWLEDGMENTS

This study was supported by the project of the survey of Korean indigenous species of the National Institute of Biological Resources (NIBR) under the Ministry of Environment, Korea.
REFERENCES


Fig. 1. *Rynchobanchus minomensis* (Uchida, 1933), female. A, Lateral habitus; B, Fore wing; C, Petiole in lateral; D, Tarsal claw; E, Head in anterior; F, Mesosoma in lateral; G, Mesosoma in dorsal. Scale bars: A, B=2 mm, C, E, F, G=0.5 mm, D=0.1 mm.
**Fig. 2.** *Theronia laevigata nigra* Uchida, 1928, female. A, Lateral habitus; B, Ovipositor; C, Mesoscutum in dorsal; D, Head in anterior; E, Mesosoma in lateral; F, Forewing. Scale bars: A, F=2 mm, E=1 mm, C, D=0.5 mm, B=0.1 mm.