

# 한국미기록속 및 종인 큰머리긴고목벌레(신칭) (딱정벌레목, 톱가슴긴고목벌레과)에 대한 보고

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## A Newly Recorded Genus and Species in Korea, *Mimemodes emmerichi* Mader, 1937 (Coleoptera: Monotomidae)

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**ABSTRACT :** *Mimemodes* Reitter, 1876 and *Mimemodes emmerichi* Mader, 1937 are reported from Korea for the first time and a historical review of the taxonomic position of this genus is provided. *M. emmerichi* was found on the island of Guleopdo in the West Sea of Korea, bringing the number of species within the Korean Monotomidae to five. In this study, we provide a key to the genera within the Korean Monotomidae, a redescription of *M. emmerichi* Mader, and illustrations of its habitus and aedeagus.

**KEY WORDS :** *Mimemodes emmerichi*, *Mimemodes*, Monotominae, Monotomidae, New to Korea

**초 록 :** 한국미기록속인 큰머리긴고목벌레속(신칭) 및 한국미기록종인 큰머리긴고목벌레(신칭)를 보고 하고, 이들이 배속된 과명에 대한 논란과 변천을 소개하고자 한다. 큰머리긴고목벌레는 일본에서만 알려져 있었으나, 이번 조사를 통해 한국의 서해도서지역에서도 발견되었다. 연구 결과, 한국산 긴고목벌레과는 기존에 알려진 종을 포함하여 총 5종이 기록된다.

**검색어 :** 큰머리긴고목벌레(신칭), 큰머리긴고목벌레속(신칭), 톱가슴긴고목벌레아과, 톱가슴긴고목벌레과, 한국미기록

The genus *Mimemodes* Reitter, 1876 contains nine species in the Palearctic region (Jelínek, 2007) and is also distributed throughout Asia, New Guinea, and Australia (Lawrence and Newton, 1995). One species is reported from Russia (Nikitsky, 1992; Hua, 2002), three species from China (Hua, 2002), and five species from Japan (Nakane 1959; Hisamatsu, 1985). *Mimemodes* is closely related to *Monotoma* Herbst, 1793, and is characterized

as follows: head wider than pronotum; antennae with 10 antennomeres, claviform from 9<sup>th</sup> antennomere; lateral margins round and slightly serrated with long hairs; elytral surface with strong puncture lines; each puncture connected by striae; protrochantin not exposed; tibia thick to apical part; tarsal formula 4-4-3; tarsal claws simple.

Reitter (1876) originally described *Mimemodes* as a

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genus of the family Monotomidae, but later treated Monotomidae as a tribe of the family Nitidulidae Latreille, 1802 (Reitter, 1884). Mader (1937) assigned *Mimemodes* to Cucujidae Latreille, 1802; soon after, Kôno (1940) also assigned the subfamily Monotominae Laporte, 1840, including *Mimemodes*, to Cucujidae. Crowson (1955) then reassigned Monotominae to Rhizophagidae Redtenbacher, 1845. However, Lawrence and Newton (1995) recently proposed that Monotomidae Laporte, 1840 is the more valid name based on a discussion on the priority of scientific names for Coleopteran families.

In Korea, *Monotoma picipes* Herbst, 1793 was reported by Hisamatsu (1985), in addition to three *Rhizophagus* species (Park *et al.*, 2007). Therefore, with the inclusion of *M. emmerichi* Mader, the Korean Monotomidae now includes a total of five species within three genera under two subfamilies.

The two specimens examined in this study are deposited in the collection of the Department of Agricultural Biology at the National Institute of Agricultural Science and Technology (NIAST). The specimens were examined under a stereomicroscope (Leica MS5), and photos of the adult habitus were taken with a digital camera (Nikon D200).

### Taxonomic Accounts

#### Family Monotomidae Laporte, 1840 툽가슴긴고목벌레과

#### Subfamily Monotominae Laporte, 1840 툽가슴긴고목벌레아과

#### Key to the genera of the Korean Monotomidae

1. Lateral margins of pronotum simple; protrochanin exposed. .... Rhizophaginae·*Rhizophagus* Herbst
- Lateral margins of pronotum serrated; protrochantin not exposed. .... Monotominae ... 2
2. Width of head relatively narrower than pronotum; elytral surface with strong puncture lines, without striole; distal part of tibia narrow to apical part. .... *Monotoma* Herbst
- Width of head relatively wider than pronotum; elytral surface with strong puncture lines; each puncture

of puncture lines connected by striole; tibia wider to apical part. .... *Mimemodes* Reitter

#### Genus *Mimemodes* Reitter 큰머리긴고목벌레속 (신칭) Type species: *Bactridium monstrosum* Reitter, 1874

*Mimemodes* Reitter, 1876: 296; Reitter, 1884: 272; Reitter, 1885: 176; Nakane, 1956: 1; Hisamatsu, 1985: 171; Nikitsky, 1992: 222; Jelínek, 2007: 493.

**Remarks.** Members of this genus are often found in tunnels made in rotten wood by members of Scolytinae Latreille, 1804, and they prey upon other insects (Arnett, 1963). Kishi (1970) showed that a Japanese species, *Mimemodes japonicus* Reitter, 1874, preys upon the eggs of Scolytinae.

#### *Mimemodes emmerichi* Mader 큰머리긴고목벌레 (신칭)

*Mimemodes emmerichi* Mader, 1937: 179; Nakane, 1956: 1; Hisamatsu, 1985: 171; Nikitsky, 1992: 223; Jelínek, 2007: 493.

**Redescription.** Body brown. Head dusky brown; antennae dark brown, but last three antennomeres yellowish brown; elytra yellowish brown, but lateral and apical margins dark brown; propygidium dusky brown; pygidium yellowish brown; legs yellowish brown, but basal half of tibia brown.

Head (fig. 1-E) triangular and flat with strong punctures; width of head 1.18 times wider than pronotum. Antennae (fig. 1-B) with 10 antennomeres and claviform from 9<sup>th</sup> antennomere; antennae relatively short, nearly reaching at anterior margin of pronotum, ratio of each antennomere, 13 : 5 : 8 : 3 : 3 : 4 : 4 : 5 : 4 : 11. Eyes relatively small, ratio of eye diameter and inter-ocular space, 13 : 44. Mandible expose to anterior; last maxillary and labial palpomere subquadrate; gular sutures separate.

Pronotum quadrate; anterior and posterior edge of pronotum with short hairs; lateral margins round with slightly serration with long hairs; anterior part of median surface slightly depressed with triangular, posterior part with sickle shaped depression; width of pronotum 1.06 times

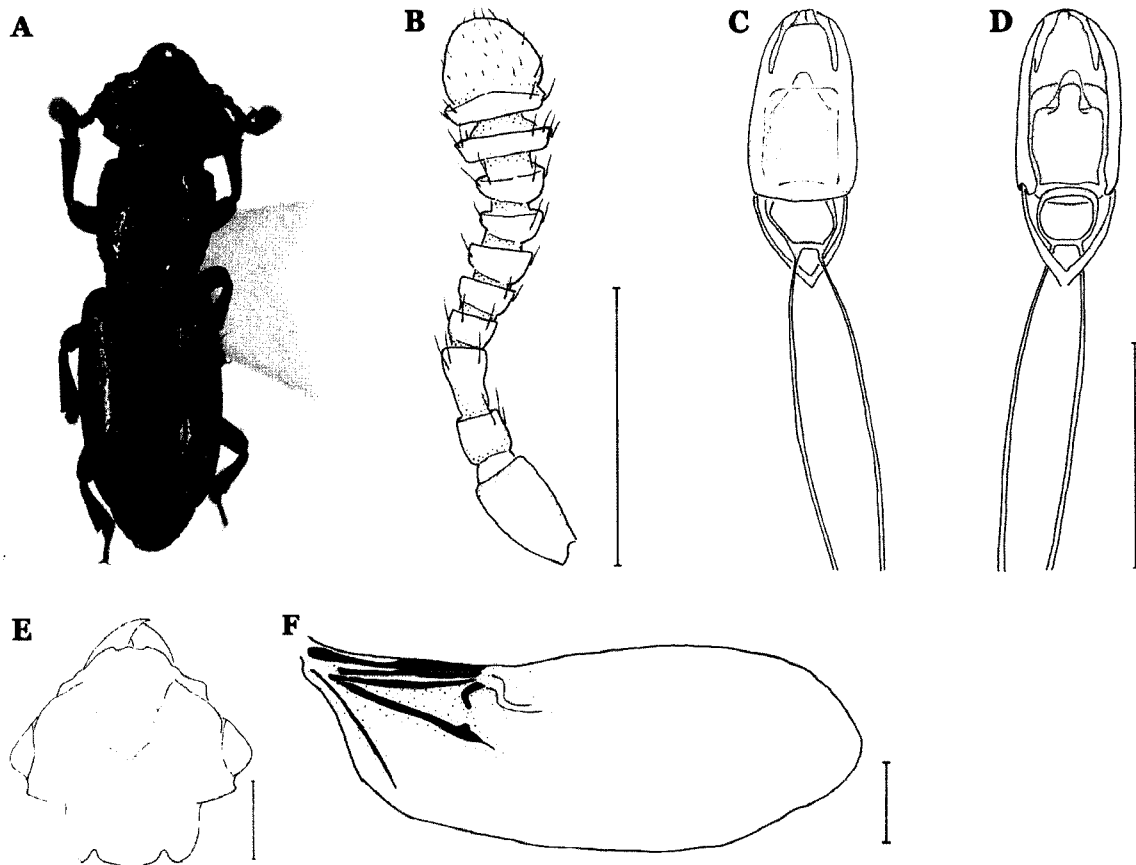


Fig. 1. Adult male of *Mimemodes emmerichi* Reitter from Korea. A. Adult Habitus; B. Antenna; C. Aedeagus (dorsal view); D. Aedeagus (ventral view); E. Head; F. Hind wing (Scale bar: 0.50 mm).

wider than length; anterior width 1.79 times long than posterior width. Scutellum quadrate.

Elytra quadrate with blunt end; elytral surface with strong puncture lines; each punctures of puncture lines connected by striole. Venation of hind wing (fig. 1-F) reduced to 1/3 of basal part; costa and subcosta fused from basal part; media divide at apical part; radial median cross vein not connected with media; jugal bar completed.

Propygidium and pygidium exposed to posterior of elytra; propygidium with closed strong punctures; pygidium with minute punctures.

Legs relatively short; protrochantin not exposed; tibia thick to apical part; tarsal formula 4-4-3; fore and mid 3<sup>rd</sup> tarsomere and hind 2<sup>nd</sup> tarsomere lamellate; tarsal claws simple.

Aedeagus (fig. 1-C, D) quadrate and bent downward; dorsal plate completely covered median lobe; dorsal plate divided three part at apex; apex of median lobe round; ventral plate quadrate with basoprocess.

*Materials Examined.* 2♂, Guleop-ri, Deokjeok-myeon, Ongjin-gun, Incheon, 27-28. VIII. 2007, IS Yoo.

*Distribution.* Korea (New record), Japan.

*Remarks.* This species is very similar to *Mimemodes cribratus* (Reitter, 1889) but is distinguishable by the following characters: body larger (4.5 mm); scutellum quadrate; elytral intervals broader and slightly convex (Nakane, 1956; Hisamatsu, 1985).

Encountering this species in fields is unusual because of their ecological characteristics (Nakane, 1956; Kishi, 1970). This species is occasionally found near dead individuals of *Melolontha japonica* Burmeister, 1855 (Nakane, 1956).

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