

First Record of the Genus *Parechthistatus* Breuning (Coleoptera: Cerambycidae: Lamiinae) in Korea

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한국산 미기록속 *Parechthistatus* Breuning (딱정벌레목: 하늘소과: 목하늘소아과)에 대한 보고

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ABSTRACT: A genus *Parechthistatus* Breuning belongs to the subfamily Lamiinae (Coleoptera: Cerambycidae) is reported in Korea for the first time, with a species of *Parechthistatus gibber* (Bates). Morphological information was provided, along with photographs of the adult and larval specimens.

Key words: Cerambycidae, Lamiinae, *Parechthistatus*, New record, Korea

초록: 한반도 하늘소과의 미기록 *Parechthistatus*속을 처음 확인하고, *Parechthistatus gibber* (Bates)의 한반도 분포를 보고한다. 성충 및 유충의 사진 및 서식처 등 형태학적 정보와 생태학적 정보를 함께 제공한다.

검색어: 하늘소과, 목하늘소아과, *Parechthistatus*, 미기록속, 한국

The subfamily Lamiinae include members of flat faced longhorn beetles that are both xylophagous and phytophagous (Özdikmen and Çaglar, 2004). Globally more than 20,854 lamiid species under 2,962 genera are known (Roguet, 2015). Among the lamiine tribes, the tribe Phrissomini Thomson (currently positioned to the tribe Lamiini) was categorized by Ohbayashi and Niisato (2007) to flightless groups with vestigial hindwings including three genera, *Hayashiechthistatus* (1 species), *Parechthistatus* (1 species), and *Mesechthistatus* (4 species) in Japan. Until now, the genus *Parechthistatus* contains three species, *P. chinensis* (Breuning, 1942) (China-Shanxi,

Henan), *P. gibber* (Bates, 1873) (Japan) and *P. sanzhiensis* Hua, 1992 (China-Yunnan) (Roguet, 2015).

On March of 2015, several destroyed fragments of a cerambycid in the rotten broad-leaved tree were found in the Yeoseo-do, an island of southern part of the Korean peninsula. After cleaning and reconstructing, we easily came to conclusion that the beetle is *Parechthistatus gibber* (Bates) owing to unusual appearance of elytra. On June of 2015, one of the authors, J.W. Seo, collected one more complete adult specimen in the same island. This discovery is very interesting from the geographical speciation viewpoint, since this species are diversified with ten subspecies from Japanese territory. The morphological and habitat information of this species are provided with diagnosis and photographs.

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Materials and Methods

Voucher specimens for this study are deposited in the Insect Collection of Seoul National University and Sunchon National University. The following abbreviations are used in this paper: JN, Jellanam-do Province, Korea; SCNU, Sunchon National University, Suncheon, Korea; SNU, Seoul National University, Seoul, Korea.

Results and Discussion

Taxonomic accounts

Tribe Lamiini Latreille, 1825

Genus *Parechthistatus* Breuning, 1942 도깨비하늘소속(신칭)

Parechthistatus Breuning, 1942: 131. Type species: *Echthistatus gibber* Bates, 1873.

Diagnosis. The genus can be distinguished by absence of larger granules and presence of rows of smaller granules on basal part of elytra; elytra highly elevated; hindwings vestigial.

Distribution. South Korea [new record - *P. gibber* (Bates, 1873)], Japan [*P. gibber* (Bates, 1873)] and China (*P. chinenses* Breuning, 1942 and *P. sangzhiensis* Hua, 1992) (Hubweber et al., 2010).

Parechthistatus gibber (Bates, 1873) 도깨비하늘소(신칭) (Fig. 1-4)

Echthistatus gibber Bates, 1873: 308. Type locality: Japan (Maiyasan and Kawatchi).

Diagnosis. Body length 13.5 mm (excluding antenna). Antennae about twice as long as body length in male. Body covered with reddish brown pubescence. Elytra with humeri more or less protruded, with ill-developed projection, and with apical parts strongly extended posteriorly and their apices with short spines.

Specimen examined. [SCNU] 1♂, JN Yeoseo-ri, Cheongsan-myeon, Wando-gun, on 22.VI.2015, in leaf litters, J.W. Seo.; [SNU] 1♂, *ditto*, on 29.VI.2015, W. Choi; 1 larva (fig. 2), *ditto*,



Fig. 1. The adult habitus of *Parechthistatus gibber* (♂). Scale bar: 10 mm.



Fig. 2. The larval habitus of *Parechthistatus gibber*. Scale bar: 10 mm.

on 29.VI.2015, S.H. Lee; [Private Collection] 1♂, (destroyed and damaged with fungi; fig. 3) *ditto*, 15.III.2015, in the rotten broad-leaved tree (fig. 4), H.K. Jang.

Distribution. South Korea (new record), Japan (Honshu, Oki Is., Shikoku, Kyushu, Tsushima).



Fig. 3. Destroyed fragments (♂) of *Parechthistatus gibber* collected at Is. Yeoseo-do, JN in the early spring of 2015 (reconstructed by H.K. Jang).



Fig. 4. Habitat of *Parechthistatus gibber* which is living in the rotten broad-leaved tree at Is. Yeoseo-do, JN in the early spring of 2015.

Biology. A specimen was collected in leaf litters with dead woods. According to Ohbayashi and Niisato (2007), adults occur from June to September in Japan. Their hosts are known to be dead broad-leaf trees such as *Mallotus japonicas* (L.f.) Müll. Arg. (Euphorbiaceae), *Fagus crenata* Blume, *Quercus serrata* Murray (Fagaceae), *Symplocos coreana* (H. Lév.) Ohwi (Symplocaceae) in Japan.

Remarks. This species are divided into ten subspecies based on geographical variations, but these variations are not in accordance with result using mitochondrial DNA (Nakamine and Takeda, 2008). Although this species resembles a subspecies, *P. gibber tsushimanus* Ohbayashi, 1961 from Tsushima, Japan, we do not identify this specimen to subspecies level without

collecting more specimens from various region of the Korean peninsula.

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