

A Newly Recorded Genus and Species in Korea, *Malthacus angusticollis* (Motschulsky) (Cantharidae, Coleoptera)

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Both the genus *Malthacus* Kirby and *M. angusticollis* (Motschulsky) are reported for the first time in Korea. Five North Korean specimens of *M. angusticollis* were loaned from Hungarian Natural History Museum, Budapest, Hungary and Sungshin Women's University, Seoul, Korea. Here we provide a key to the genus of the Podabrini in Korea and a diagnosis and taxonomic account of the genus *Malthacus* and *M. angusticollis*.

Key words: *Malthacus angusticollis*, *Malthacus*, Podabrini, Cantharidae, New to Korea, Taxonomy

Introduction

The genus *Malthacus* Kirby, 1837 belongs to the tribe Podabrini LeConte, 1881, the subfamily Cantharinae Imhoff, 1856. Kirby (1837) established this genus as a subgenus of *Telephorus* Schaeffer, 1766 (= *Cantharis* Linnaeus, 1758) based on the shape of last palpomere and pronotum. Motschulsky (1859) considered that the phylogenetic position of *Malthacus* might be located between *Podabrus* Westwood, 1838 and *Rhaxonycha* Motschulsky, 1860 [1859]. However, this genus was not accepted as valid genus by other authors and treated as junior synonym of the genus *Podabrus* (LeConte, 1851; Delkeskamp, 1939; 1977; see Takahashi, 2007). In recent, Takahashi (2007) dealt with a good genus based on the type species, *Malthacus puncticollis* Kirby, 1837. In his paper, stating that *M. puncticollis* resembles type species,

D. flavimanus Motschulsky, 1860 of the genus *Dichelotarsus* Motschulsky, 1860 [1859] in the configuration of male genitalia, he synonymized *Dichelotarsus* as *Malthacus*. And he asserts that the members of *Dichelotarsus* should be transferred to the genus *Malthacus*.

Up to date, this genus has been reported as 12 species in the world (Takahashi, 2007), which were distributed in Europe, Asia and North America (Delkeskamp, 1977; Kazantsev and Brancucci, 2007; Takahashi, 2007). In this study, we found *M. angusticollis* (Motschulsky, 1860), new to Korea. This species was distributed in Russia, Mongolia and Japan (Delkeskamp, 1977; Kazantsev and Brancucci, 2007). And through this work, this species is confirmed from Province Hamgyeongbuk-do (HB) and Hamgyeongnam-do (HN) in North Korea for the first time.

We used five specimens of *M. angusticollis* for this work. Among them, three specimens were loaned from Hungarian Natural History Museum (HNHM, Budapest, Hungary), and two were provided from Sungshin Women's University (SWU, Seoul, Korea). Descriptions and illustrations were conducted using a stereomicroscope (MS 5, Leica, Wetzlar, Germany). Body photos were taken using a digital camera (D70S, Nikon, Tokyo, Japan).

Taxonomy

Subfamily Cantharinae Imhoff (Korean name: byeongdae-beol-le-a-gua)

Tribe Podabrini LeConte (Korean name: mok-ga-neunbyeong-dae-beol-le-jok)

Key to the genera of the tribe Podabrini in Korea

1. Body size smaller than 9 mm 2
- Body size exceeds 10 mm..... 3
2. Body color mainly pale yellow; tarsal claws of fore and mid legs bifid, but hind with blunt tooth in male; dorsal plate of male genitalia with distinct processes; coxite of female genitalia relatively broad and short. *Asiopodabrus*

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- Body color mainly black; tarsal claws of fore legs bifid, but mid and hind with blunt tooth in male; dorsal plate of male genitalia entirely sclerotized, posterior margin of dorsal plate slightly emarginated; coxite of female genitalia relatively slender and long..... *Malthacus*
3. Legs entirely black; all tarsal claws bifid in male, but female with blunt tooth.....*Podabrus*
- Legs dusky brown or dusky black; tarsal claws of fore legs with blunt tooth in both sexes.....*Hatchiana*

Genus *Malthacus* Kirby (Korean name: geom-jeong-mok-ga-neun-byeong-dae-beol-le-sok)

Telephorus (*Malthacus*) Kirby, 1837:247 (*Type species*. *Telephorus* (*Malthacus*) *puncticollis* Kirby, 1837).

Malthacus: Motschulsky, 1859:402; Takahashi, 2007:243.

Dichelotarsus Motschulsky, 1860 [1859]:400 (*Type species*. *Dichelotarsus flavimanus* Motschulsky, 1860); Kazantsev, 1992:267.

Podabrus (*Anolisus*) Mulsant, 1862:139 (*Type species*. *Cantharis lapponicus* Gyllenhal, 1810).

Diagnosis. Body long and slender. Head prognathus. Antennae filiform; second antennomere more or less shorter than third antennomere. Gular sutures converged. Last maxillary and labial palpomere hatchet-shaped. Pronotum convexed and quadrated. Elytra completely covered abdomen. Last segment of sternum and aedeagus symmetry. Leg long and slender; fore tarsal claws bifid, and mid and hind tarsal claws with basal tooth in male; all tarsal claws with basal tooth in female. Male genitalia elongate; dorsal plate entirely sclerotized; ventral processes thick and short; posterior margin of dorsal plate slightly emarginated; inner side of dorsal plate with long hairs; laterophyses invisible.

Remarks. It is known that this genus is a root group of tribe Podabrini and very similar to *Asiopodabrus* Wittmer, 1982 (Kazantsev, 1992; Takahashi, 2007). Kazantsev (1992) treated *Asiopodabrus* as a subgenus of *Dichelotarsus* (synonymized as *Malthacus* by Takahashi (2007)) using the absence of laterophyses in male genitalia, reaccessing *Dichelotarsus*, taxonomically. But, Takahashi (2002) stated that some members of *Asiopodabrus* have laterophyses on male genitalia, and *Malthacus* was distinguished from *Asiopodabrus* by the conformation of the male genitalia and the shape of coxite of the female genitalia.

Distribution. Europe, Asia (New to Korea), North America.

***Malthacus angusticollis* (Motschulsky) (Korean name: geom-jeong-mok-ga-neun-byeong-dae-beol-le) (Fig. 1)**
Dichelotarsus angusticollis Motschulsky, 1860:117.

Redescription. Body length: 8.5~9.5 mm. Male (Fig.

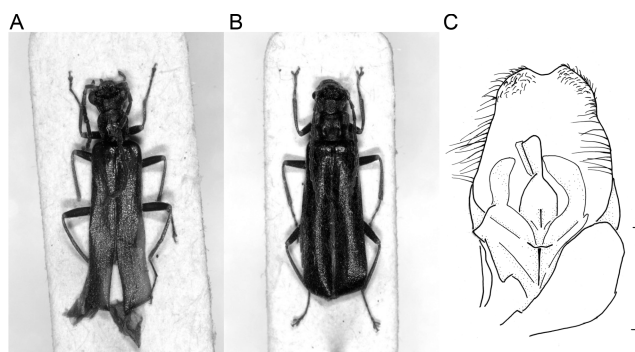


Fig. 1. Adult body and male genitalia of *Malthacus angusticollis* (Motschulsky). A. Male habitus; B. Female habitus; C. Ventral view of male genitalia (Scale bar = 0.50 mm).

1A). Body mostly black; head, pronotum and scutellum black; eye reddish brown; antennae dark brown, but first two antennomeres dusky brown; elytra brown; legs brown, but tarsi dark brown.

Head flat, covered with thin and minute punctures and provided with distinctly triangulated depression behind antennal sockets. Eye relatively large, ratio of an eye to interocular space 8:27. Antennae relatively long, nearly reaching to two third of elytra, approximate ratio of each antennomere, 17:8:12:14:15:16:18:17:16:16:18. Last maxillary and labial palpomere hatchet-shaped.

Pronotum quadrate, covered with rough punctures; pronotum 1.10 times wider than long; median area strongly convex, but postero-central region triangulately depressed; lateral margins sinuated, with round anterior angles and sharp posterior angles; posterior margin 1.19 times wider than anterior. Scutellum triangular, with round apex.

Elytra parallel side, ratio of width at elytral shoulder to length of elytra 21:72; dorsal surface closely and rugosely punctuate. Legs long and slender; tarsal claws bifid in fore legs, blunt toothed in mid and hind legs.

Genitalia (Fig. 1C) elongate; dorsal plate widely expand at the middle part, but slightly narrow to posterior; posterior margin of dorsal plate round, but slightly emarginated at middle area; distal margin of dorsal plate with long hairs; ventral processes thick and short; apex of ventral processes round.

Female (Fig. 1B). Body color dusky than in the male; body somewhat longer and wider than that in the male; eye relatively smaller than that in the male, ratio of an eye to interocular space 8:33; antennae relatively shorter than that in the male, nearly reaching 1/3 of elytra, approximate ratio of each antennomere, 19:10:12:16:14:14:14:14:14:13:17; each tarsal claw of all legs provided with blunt basal tooth.

Materials Examined. HB: 1♂, 2000 m, NW of Samjiyon, 31km on Mt. Baekdusan road, 28. VI. 1988, O. Merkl & Gy. Szél (HNHM); 2♀, Waterfall Jangbaekpokpo, Mt. Baekdusan, 7. VII. 2005, Kim, Ah-young (SWU). HN: 2♀, 1000 m, River Dumangang, Mupo, 29. VI. 1988, O. Merkl & Gy. Szél (HNHM).

Diagnosis. This species is easily distinguished from other *Malthacus* species by the shape of pronotum and anterior tarsal claws. Pronotum is longer than wide, strongly narrowed at base. And the anterior tarsal claws are clearly split at apex (Kazantsev, 1992; 1998).

Remarks. This species was collected in HB and HN of North Korea adjacent to Russia. But we could not examine in South Korea. We consider that this species might live in the cold area of Far East Asia. So, we think that *M. angusticollis* might inhabit in northern part of Province Gangwon-do, South Korea.

Distribution. Korea (HB, HN), Japan, Russia (East Siberia, Far East), Mongolia.

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