

Taxonomic Notes on *Carabus dargei* (Coleoptera, Carabidae) of Northern Jiangxi, China

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Abstract *Carabus dargei* DEUVE is transferred from the subgenus *Apotomopterus* to *Isiocarabus*¹⁾ on the basis of the genitalic characters.

Carabus dargei is a medium- or rather small-sized carabid beetle recently described by DEUVE (1987, p. 386) from Mt. Lu Shan, situated at the northern end of Jiangxi Sheng, Southeast China. In the original description, it was placed in the subgenus *Apotomopterus*. However, my recent examination of detailed structure of the genital organ has proved that this species does not agree with the subgeneric characters of *Apotomopterus* but has all the diagnostic features of *Isiocarabus*. It is therefore transferred to the latter subgenus.

Before going further, I wish to thank Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his kindness in reading the manuscript of this paper. I am indebted to Dr. Hisatoshi KEZUKA, Tokyo, who gave me permission to examine valuable specimens in his collection, and to Mr. Kunio KUME, Tokyo, who kindly submitted the specimens to me for study. I am also grateful to Dr. Thierry DEUVE of the Muséum National d'Histoire Naturelle, Paris, for his kindness in providing with reprinted papers.

Carabus (Isiocarabus) dargei DEUVE, 1987

(Figs. 1–2)

Carabus (Apotomopterus) dargei DEUVE, 1987, *Nouv. Rev. Ent.*, (n.s.), **4**, p. 386; type locality: Chine, Jiangxi, Lu Shan, 1,000 mètres.

Male genitalia. Aedeagus a little shorter than half the elytral length; apical lobe feebly protrudent and subangulate on the ventral margin near the base; ostium lobe absent at the membraneous preostium; endophallus rather narrow and elongate, with a copulatory piece situated a little before the middle on the dorsal wall; viewed dorsally, copulatory piece tongue-shaped, widest at the base, almost parallel-sided in the median portion, and gently rounded at the apex; viewed laterally, copulatory piece thickened and rather sharply curved ventrad at the base, then gradually narrowed to

1) SENSU KWON & LEE (1984, p. 39). BREUNING (1932) included *Isiocarabus* in the subgenus *Apotomopterus* as one of the sections, but here I treat the former as a distinct subgenus phylogenetically different from the latter because of the peculiarity in the endophallic structure.

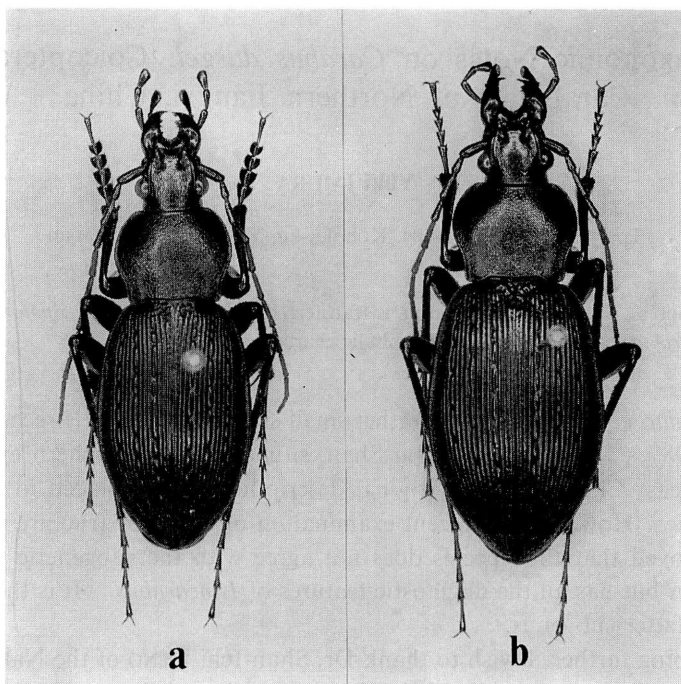


Fig. 1. *Carabus (Isiocarabus) dargei* DEUVE, from Mt. Lu Shan, northern Jiangxi, Southeast China; a, ♂; b, ♀.

the apex, directed towards the dorsal base of endophallus; basal sclerite situated a little to the left of the median line of dorsal wall of endophallus, reduced to a small patch and a few accessory spots indicated by assemblage of pigmented granules, with the surface sparsely scattered with minute hairs; lobe at the side of basal sclerite well developed to form a subtriangular membraneous projection; basal lobes well developed on both sides, the left one being larger than the right.

Female genitalia. Bursa copulatrix well developed, extending dorso-antieriad, and gradually narrowed to the apex in dorsal view; outer plate of ligular apophysis barrel-shaped, about 1.6 times as long as wide, not so strongly sclerotized, with marked pigmentation along the longitudinal mid-line; vertical plate rather high and not strongly pigmented; inner plate almost round in shape, only a little wider than long, widest a little before the middle, cup-like, with the surface smooth; vaginal appendix recognizable though atrophic; epivaginal sclerite very small, with subtriangular basal pigmentation and moderately developed vertical plate.

Specimens examined. 1 ♂, 1 ♀, Mt. Lu Shan, ca. 1,000 m alt., Jiangxi, China, 23~27-V-1986, in coll. H. KEZUKA; 7 ♂♂, 8 ♀♀, same locality, X-1987, in coll. Y. IMURA.

Notes. In addition to the above genitalic characters, some external features such as the absence of gular setae and the presence of hairless ventral depressions on seg-

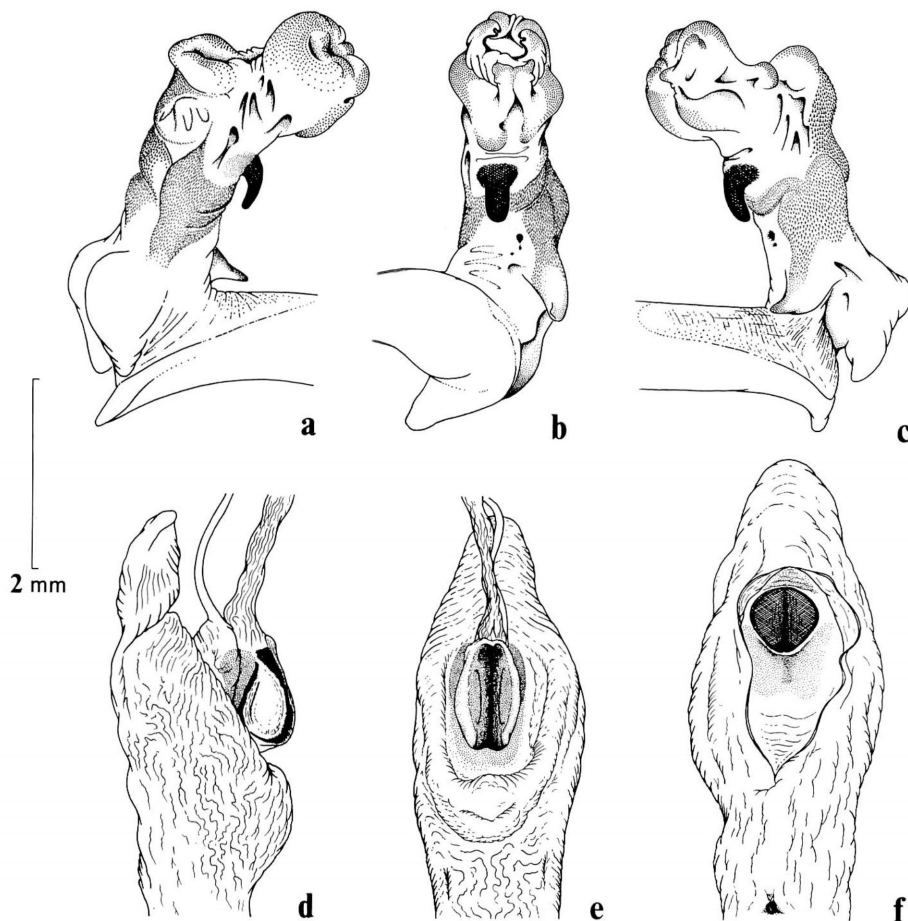


Fig. 2. Genital organ of *Carabus (Isiocarabus) dargei* DEUVE, from Mt. Lu Shan, northern Jiangxi, Southeast China. — a-c, Endophallus; a, right lateral view; b, dorsal view; c, left lateral view. — d-f, Female genitalia; d, right lateral view; e, ventral view; f, dorsal view (dorsal wall of vagina is partly removed to show inner plate of ligular apophysis).

ments 5-7 of male antennae also support the fact that this species is a member of *Isiocarabus*. Though our knowledge is still very poor about this Oriental subgenus, the present species is probably most closely allied to *C. (I.) orphniopterus* HAUSER occurring in Zhejiang Sheng and Fojian Sheng, so far as I have examined.

All the specimens collected in October, 1987, are more or less teneral, which seems to suggest that one of the emergence periods of this beetle is in this season.

要 約

井村有希: *Carabus dargei* の分類学的位置. — *Carabus dargei* は最近, 中国江西省北部の廬山

から記載された，中ないしやや小型のオサムシである。原記載において，その所属はトゲオサムシ亜属 *Apotomopterus* に置かれたが，交尾器の基本形態は *Isiocarabus* のそれに一致している。したがって本稿では，本種の所属を前者から後者へ移し，その根拠となる ♂♀ 交尾器の図示と記載を行なった。本種が *Isiocarabus* の一員であることは，咽頭剛毛を欠く点，♂ 触角第 5~7 節の腹側に無毛凹陥部を有する点などからもあきらかである。

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