

***Organopoda carnearia* (Walker) (Lepidoptera: Geometridae), New to Korea**

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ABSTRACT

A sterrhine species, *Organopoda carnearia* (Walker) is reported for the first time from Korea. One male of *O. carnearia* was collected from an island on Dadohae National Park, Jeonnam Province. Diagnosis of the species is provided with brief description of adult including male genitalia.

Key words: *Organopoda*, Geometridae, Sterrhinae, Korea, new record

INTRODUCTION

The genus *Organopoda* Hampson, 1893 was erected with the type species *Anisodes carnearia* Walker and now includes 14 species over the world (Scoble, 1999). Hampson (1895) distinguished the genus from *Anisodes* Guenée, a junior synonym of *Cyclophora* Hübner, by the serrate and fasciculate male antennae. He also described the diagnostic characters of genus: the double areole and greatly modified male hind tibia (Hampson, 1895). Holloway (1997) noted that the genus is similar to *Cyclophora-Perixera* complex in the presence of discal dot on fore and hindwings, especially with an enlarged blackish discal dot on hindwing, the secondary sexual characters such as male hind tibia and the male and female genitalia. However, *Organopoda* can be distinguished by the presence of a yellowish hair pencil on the male hind tibia and the long setose uncus, gnathos with an acute apex, the small valve with strongly modified costa and the slender aedeagus in the male genitalia and the long ductus bursae with a narrow sclerotized ostium bursae and elongate corpus bursae with a sclerotized signum in the female genitalia (Holloway, 1997).

The primary purpose of the present study is to report one species of *Organopoda* for the first time from Korea. One male of *O. carnearia* was collected on the island of Dadohae National Park, Jeonnam province. The moth was examined externally and was dissected for genitalia examination. Nomenclature for adult morphology and genitalia follows Hausmann (2004). The material examined is now preserved in Mokpo National University Insect Collection, Jeonnam,

Korea (M.N.U.I.). Abbreviations used in the text are as follows: TL. Type locality; and [JN] Jeollanam-do (=Jeonnam).

SYSTEMATIC ACCOUNTS

Order Lepidoptera Linnaeus, 1758

Family Geometridae Stephens, 1829

Subfamily Sterrhinae Meyrick, 1892

Genus *Organopoda* Hampson, 1893

Organopoda Hampson, 1893: 147. Type species: *Anisodes carnearia* Walker, 1861.

¹**Organopoda carnearia* (Walker) (Figs. 1, 2)

Anisodes carnearia Walker, 1861: 644. TL: Ceylon.

Organopoda carnearia: Hampson, 1893: 147.

Material examined. [JN] 1♂ Is. Ae-do, JN: Goheung, N 34° 27' 47.3" E 127° 26' 57.1", 26 m a.s.l., 22 Apr. 2009 (S.W. Choi and J.-S. An) (M.N.U.I.).

Diagnosis. This species is distinguished by the dark brownish frons, whitish vertex, fasciculate male antennae, and brownish wing ground color with a large blackish eye-spot shaped discal spot on hindwing. The male genitalia can be distinguished by the long uncus with expanded and hairy apical part, short tegumen and large triangular valva with sclerotized costa and short and apically pointed aedeagus with a tubular vesica.

Description (Fig. 1). Wingspan 28 mm in male. Male antennae fasciculate, frons broad, not projected, covered with dark brownish scales; vertex covered with white scales; labial palpi moderate in length, longer than eye diameter, 2nd segment thick, curved, 3rd segment slender. Legs brownish, hind

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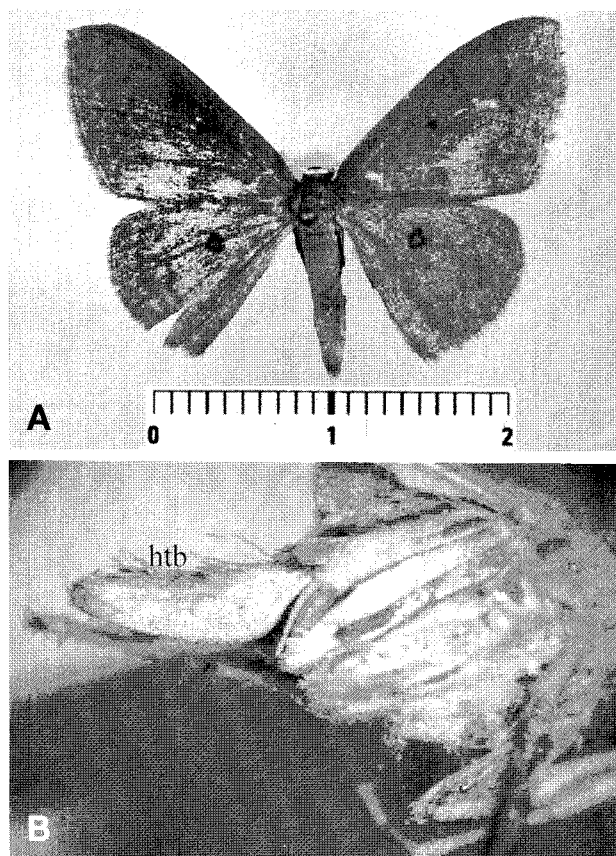


Fig. 1. Adult of *Organopoda carnearia* (Walker). A, Adult; B, Legs. htb, Hind tibia.

tibia modified into a large hair pouch (Fig. 1B). Forewing ground color brown; basal line light blackish, slanted; discal spot blackish; postmedial line blackish, dentate, undulating; subtermen with a light blackish line along postmedian; fringes with dark reddish hairs; large anterior and small posterior areoles. Hindwing ground color brown; basal line light blackish; discal spot large blackish eye-spot shaped; postmedial line blackish, dentate, undulating; subtermen with a light blackish undulating line; fringes with dark reddish hairs. *Male genitalia* (Fig. 2A, B). Abdominal segment A8 simple, broad without modification. Uncus long, the same as the length of vinculum and tegument, apical half expanded and hairy; vinculum short, triangular; gnathos well developed, long, digitate; transtilla simple, membranous; juxta sclerotized, U-shaped. Valva triangular, distoventrally slightly expanded; costa sclerotized, basally inwardly bent, ventral margin with minute spines and hairs, distally with a sharp point; sacculus sclerotized, dorsal margin flat with minute spines. Saccus broadly rounded. Aedeagus slender, distally sclerotized with strongly pointed apex; vesica membranous, tubular; cornutus absent.

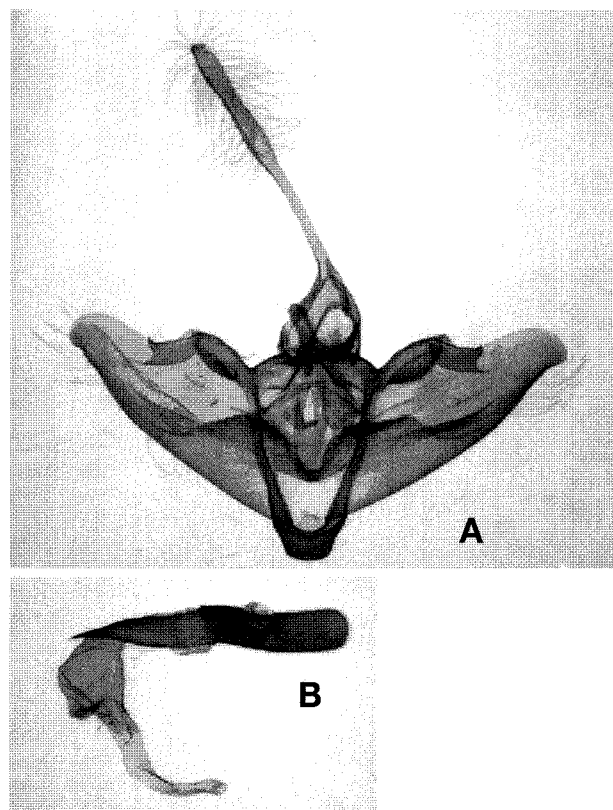


Fig. 2. Male genitalia of *Organopoda carnearia*. A, Male genital capsule; B, aedeagus with everted vesica.

Biology. The larva is slender, a uniform emerald green except for whitish edging laterally in the thoracic area and feeds on *Machilus* (Lauraceae) (Sugi, 1987; Holloway, 1997). Nakamura (1994) noted that cremaster has a strong, bifurcate terminal pair with two pairs of smaller hooks.

Distribution. Southeast Asia, China (South), Taiwan, Japan, Korea.

Note. The occurrence of *O. carnearia* in Korea could be in doubt since this report was based on a single male. However, the commonness of its host plant, *Machilus* spp. and its wide distribution pattern from Southeast Asia to Japan indicated the possible occurrence of the species in the southern part of Korea.

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