

Avitta puncta (Lepidoptera: Noctuidae), New to Korea

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ABSTRACT

A noctuid species, *Avitta puncta* Wileman is reported for the first time from Korea. One male of *A. puncta* was collected from Island Gageo-do, which located at the most southwestern part of the Korean Peninsula. Diagnosis of the species is provided with brief description of adult including male genitalia.

Keywords: *Avitta*, Catocalinae, Noctuidae, Korea, new record

INTRODUCTION

The genus *Avitta* Walker, 1858 was erected with the type species *Avitta subsignans* Walker, 1858 and now includes about 40 species over the world (Poole, 1989; Beccaloni et al., 2003). Warren (1913) described the general morphology of the genus *Avitta*: male antennae long, shortly ciliated, frons smooth, labial palpi obliquely upturned with long 2nd and 3rd segments, and forewing elongate with blunt apex. Holloway (1984) defined the monophyly of the genus based on the phylogenetic analysis and he (2005) provided the general morphology of the Malesian species of the genus including the male and female genitalia: male antennae sparsely ciliate to weakly fasciculate, the male femora tufted with scales, the forewing reniform relatively large and open-centered, often forming a letter 'B' and the rest with a series of fine, irregular, darker fasciae, the forewing stigmata prominent, and the hindwings with a discal spot on the underside; the abdominal eighth sternite distally bidentate and the eighth tergite with short, robust, well separated apodemes. In the male genitalia the uncus moderate, apically hooked without scaphium, the tegumen slightly longer than the vinculum, the valves tongue-like distally and a massive, free process at the base of the costa with additional processes from the interior of the sacculus, the juxta broad and spined distally, the aedeagus vesica simple to bilobed, unornamented. In the female genitalia, the ostium with finely scobinate areas, the ductus bursae relatively short and flimsy, and the corpus bursae elongate, narrow, with some fine scobination where it joins the ductus bursae, and the ductus seminalis arising from the base of the ductus bursae close to the ostium bursae.

Holloway et al. (2001) and Holloway (2005) noted that this

genus is similar to its allied genera (e.g. *Ophyx* Guenée, *Anomis* Hübner, *Chrysopera* Hampson) in the external appearances, but can be distinguished by the genitalia.

The biology of the genus is not well known, but the type species, *A. subsignans* was reared with the host plants in the Menispermaceae: *Cyclea* and *Stephania* (Holloway, 2005). The larva of *A. subsignans* is elongate, reduced prolegs on A3, black head, brownish white body with brownish white lines from head to body, a dark yellowish green dorsal band, and a series of similar bands down each side. It pupates on the ground in a silken cell that incorporates detritus (Holloway, 2005).

The primary purpose of the present study is to report one species of *Avitta* for the first time from Korea. One male of *A. puncta* was collected on the island of South sea, Is. Gageo-do, Sinan-gun, Jeonnam province. Moth was examined externally and was dissected for genitalia examination. Nomenclature for adult morphology and genitalia follows Holloway (2005). The material examined is now preserved in Mokpo National University, Jeonnam, Korea (M.N.U.). Abbreviations used in the text are as follows: TL. Type locality; and [JN] Jeollanam-do (=Jeonnam).

SYSTEMATIC ACCOUNTS

Order Lepidoptera Linnaeus, 1758
Family Noctuidae, Latreille, 1809
Subfamily Catocalinae Boisduval, 1829
Genus *Avitta* Walker, 1858

***Avitta* Walker, 1858:** 147. Type species: *Avitta subsignans* Walker, 1858.

=*Asta* Walker, 1863, Journ. Linn. Syst. Zool. 7: 170. Type species: *Asta quadrilinea* Walker, 1863.

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=*Oroba* Walker, 1863, Journ. Linn. Syst. Zool. 7: 81. Type species: *Oroba surrigens* Walker, 1863.

=*Pantura* Moore, 1885, Lep. Ceyl. 3: 247. Type species: *Bocana ophiusalis* Walker, 1858.

=*Imleanga* Lucas, 1901, Pr. Roy. Soc. Queen. 12: 83. Type species: *Imleanga fluviatilis* Lucas, 1901.

¹**Avitta puncta* Wileman (Figs. 1, 2)

Avitta puncta Wileman, 1911: 251, pl. 30, fig. 2. TL: Satsuma, Ibusuki [JAPAN].



Fig. 1. Adult of *Avitta puncta* Wileman.

Material examined. [JN] 1♂ Is. Gageo-do, JN: Sinan, N 34° 04'20'' E 125° 06'50'', 446m a.s.l., 16 Aug. 2009 (S.W. Choi) (M.N.U.).

Diagnosis. This species is distinguished by the prominent frons with densely covered by long black hairs, the long labial palpi with hairy 2nd segment and slender upturned 3rd segment, the dark brown forewing with large black discoidal dot and five dentate parallel lines and blackish hindwing. The male genitalia can be distinguished by the hooked uncus with scaphium, the distally largely expanded and hairy valva with a patch of long spinular hairs at distal part of sacculus and slender aedeagus with a tubular vesica.

Description (Fig. 1). Wingspan 36 mm. Male antennae filiform; frons distinct densely covered with long dark brownish hairs; vertex with long dark brown hairs; labial palpi long in length, 2nd segment thick, densely covered with long hairs, 3rd segment slender without long hairs, as long as 2nd segment, upturned. Legs dark brownish, with hairy femur and ochreous tibial joints. Forewing ground color dark brown; basal line blackish, dentate, medially inward; central fascia two distinct black dentate lines, discal spot large blackish; postmedial line double parallel blackish, dentate lines. Hindwing ground color black; basal line light blackish; underside with a large discal spot and postmedial line.

Male abdomen and genitalia (Fig. 2A-2C). Abdominal segment A8 broad with a bidentate process on sternum (Fig. 2A). Uncus long, hooked, apically hairy; scaphium well developed; tegument long, triangular; juxta sclerotized, round-

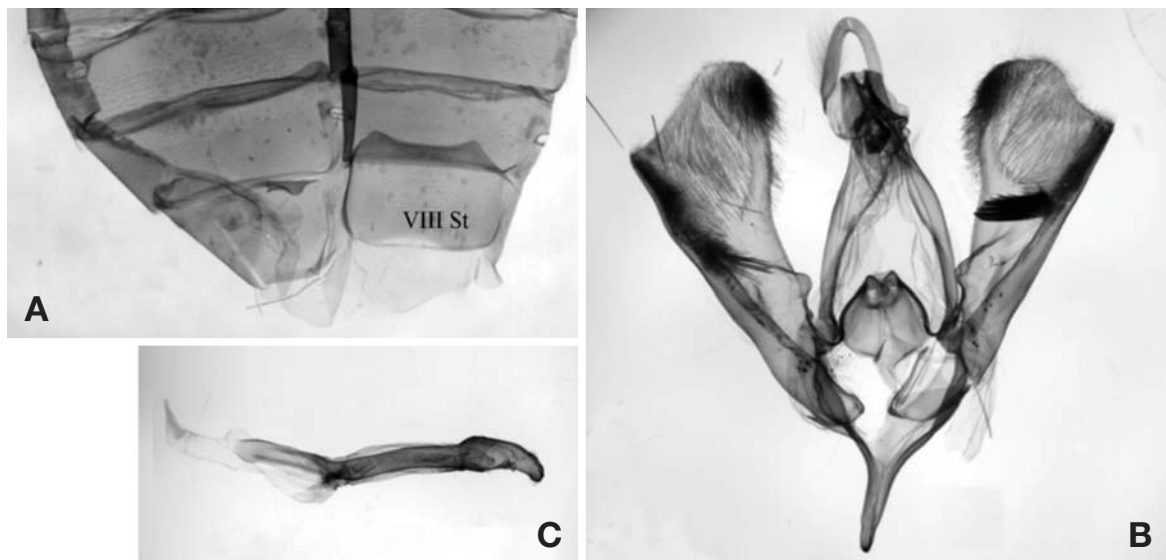


Fig. 2. Male abdomen and genitalia of *Avitta puncta* Wileman. A, Male abdomen, VIII st. eighth sternite; B, genital capsule; C, aedeagus with everted vesica.

¹*남방점밤나방 (신칭)

ed. Valva triangular; costa simple, distally expanded, hairy, basally with a hump-shaped process; sacculus sclerotized, slender, distally with a patch of long spinular hairs. Saccus strongly pointed (Fig. 2B). Aedeagus slender (Fig. 2C); vesica basally sclerotized with a parallel lines, the rest of vesica membranous, tubular; cornutus absent.

Distribution. Japan, Taiwan, Korea.

Note. The occurrence of *Avitta puncta* in Korea could be in doubt since this report was based on a single male. However, the wide distribution pattern from Taiwan to southwestern islands of Japan including Tsushima indicated the possible settlement of the species in Korea.

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