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A New Record of *Hadennia nakatanii* (Lepidoptera, Erebidae) from Korea

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ABSTRACT

One species of the Herminiinae, *Hadennia nakatanii* Owada is newly recorded from Korea. *Hadennia nakatanii* can be distinguished by the light blackish forewing with the relatively thick, transverse medial line, a large light yellowish discal dot, the thick blackish slanted band from the apex to the middle part of the dorsum, and the light blackish hindwing, basally suffused with black and medially broadly suffused with black. The female genitalia can be diagnosed by the simple antrum, the long strongly sclerotized ductus bursae, and the large rectangular corpus bursae with a small uplifted signa patch with minute spicules. We provided the figures of adult and the genitalia with short notes on distribution.

Keywords: Erebidae, Herminiinae, new record, Korea

INTRODUCTION

The Herminiinae, a subfamily of the Erebidae, are defined by several morphological characters: the prespiracular counter-tympanal hood, the divided M4 muscle in the male genitalia, the lack of orbicular stigma of the forewing, the presence of male sexual organs throughout the body such as antennae, labial palps, forelegs, and wings, and three SV setae on the larval segments (Owada, 1987; Kitching and Rawlins, 1999; Holloway, 2008). However, Zahiri et al. (2012) found a close relationship between Aganainae and Herminiinae within Erebidae using one mitochondrial and seven nuclear genes, and the monophyly of the Herminiinae was in doubt.

The adults of the Herminiinae are cryptic and the larvae largely feed on dead or withered foliage within the plant (Holloway, 2008). In Korea, about 63 species in 20 genera of the group are recorded (Kim et al., 2016; Lee et al., 2021). The purpose of the present study is to report one species of the Herminiinae, *Hadennia nakatanii* Owada for the first time in Korea.

MATERIALS AND METHODS

Adult moth was collected at night using a 22-watt UV-light bucket trap with a 12 V battery (BioQuip, USA). The collected adult was preserved in a freezer and mounted for examination. Species identification was mainly based on the external morphology of adults including the genitalia. For genitalia slide preparation, the specimen was prepared by boiling the abdomen in 10% KOH for approximately 15–20 min. The scales and tissues were removed, stained with Chlorazol black, and mounted on slides in Euparal mountant.

The terminology of the adult characteristics, including the female genitalia, refers to Owada (1987). The examined material has been deposited in the National Institute of Biological Research, Incheon, South Korea. Abbreviations are as follows: TS, type species; TL, type locality; GB, Gyeongsangbuk-do.

SYSTEMATIC ACCOUNTS

Order Lepidoptera Linnaeus, 1758
Family Erebidae Leach, 1810
Subfamily Herminiinae Leach, 1815
Genus *Hadennia* Moore, [1885]
Type species: *Bocana hypenalis* Walker, [1859]
= *Wilkara* Swinhoe, 1918 (TS: *Wilkara nigerrima* Swin-

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Fig. 1. Adult of *Hadenia nakatanii* in Korea. Scale bar = 10 mm.

hoe, 1918)

[1]***Hadennia nakatanii* Owada, 1979 (Figs. 1, 2)**

Hadennia nakatanii Owada, 1979: 131. TL: Japan, Wakayama Pref., Higashi-Muro, Mt. Oto-san, Osugi-dani.

Material examined. Korea: 1 female, GB: Mungyung-si, Nongam-myon, 28 Sep 2020, Kim SS.

Diagnosis. Wingspan 27 mm. *Hadennia nakatanii* can be distinguished by the long upturned grayish labial palpi, the light blackish forewing with the relatively thick, transverse medial line, a large light yellowish discal dot, and the thick blackish slanted band from the apex to the middle part of the dorsum, and the light blackish hindwing, basally suffused with black and medially broadly suffused with black. *Hadennia nakatanii* is externally similar to *H. incongruens* but can be easily distinguished by the large light yellowish discal dot of the forewing. The female genitalia can be diagnosed by the almost equal length of anterior and posterior apophyses, the simple antrum, the strongly sclerotized ductus bursae with anteriorly narrowed, and the large rectangular corpus bursae, almost twice the length of ductus bursae, with a small uplifted signa patch with minute spicules. The female genitalia of *H. nakatanii* are similar to those of *H. incongruens* but can be distinguished by the long ductus bursae and the medially located small uplifted signa patch of the corpus bursae.

Distribution. Korea, Japan, and China (Taiwan).

Remarks. The genus is characterized by the wing pattern elements that show the dark brown or black with grayish violet or purple bands on wings, the distally dentate postmedial band and the pale yellow discal dot of the forewing, and the simple valva, the short saccula process with apically rounded, and the finely scobinate vesica of aedeagus (Holloway, 2008). About 20 species are known worldwide, predominantly occurring in Southeast Asia (Holloway, 2008). In Korea, three species of *Hadennia* are known, including *H. nakatanii*.

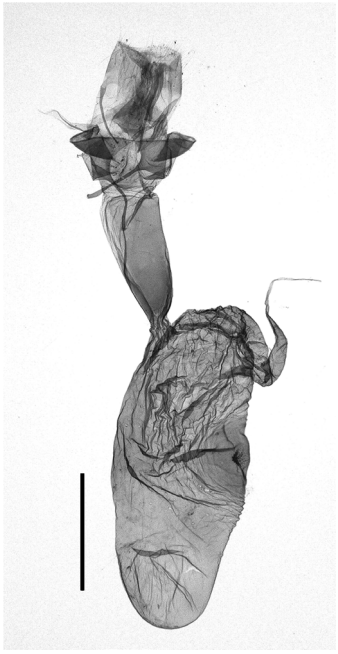

Fig. 2. Female genitalia of *Hadennia nakatanii* in Korea. Scale bar = 1 mm.

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CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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