Four species of the family Noctuidae (Lepidoptera) New to Korea

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ABSTRACT: In the present study, we report four species of Noctuidae are reported for the first time from Korea: Hadennia obliqua (Wileman), Zanclognatha lui Han and Park, Premusia intrahens Walker, and Cucullia hostitis Boursin. The adults and genital characteristics of the species are briefly redescribed with illustrations and their biological and distributional notes are given as necessary.

KEY WORDS: Hermininiinae, Ophiderininae, Cucullininae, Korea

Introduction

Since Kononenko et al. (1998)'s first comprehensive systematic catalogue, a total of 983 species in the family Noctuidae sensu lato (excluding Noliiinae), one of the highly-diversified lepidopterous groups, have been recorded from the Korean peninsula with recent faunistic additions by several researchers (Sohn and Ronkay, 2001; Sohn and Kim, 2003; Sohn and Han, 2005; Sohn et al., 2005a-b; Han et al., 2005). However, the taxonomic resolution of the Korean noctuids is far from maturity, as still leaving many faunistic novelties.

In this article, four species of Noctuidae new to Korea: Hadennia obliqua (Wileman, 1911), Zanclognatha lui Han and Park, 2005, Premusia intrahens Walker, 1858 and Cucullia hostitis Boursin, 1934, are reported. Among them, the genus Premusia Walker, 1858 originally one of the Oriental genera, is first time reported in the Korean fauna and even in Eastern Asia, but assumed to be an occasional migrant or accidentally distributed. The adults and genitalic characteristics of the species are briefly redescribed and illustrated. Their biological and distributional information are also provided as available.

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Materials and Methods

Materials examined in this study are mainly based on the entomological collection at the Center for Insect Systematics, Kangwon National University, Chuncheon (CIS/KWNU), Korea National Arboretum (KNA), Pocheon, and National Institute of Agricultural Sciences and Technology, Rural Development Administration, Suwon (NIAST). We examined all available specimens with dissecting and describing genitalia according to Holloway et al. (1987)'s protocol and terminology.

Systematic Accounts

_Hadennia obliqua_ (Wileman, 1911) 외줄검은마汰 (Fig. 1, 5)


Diagnosis (Fig. 1). Wingspan 26-31 mm. This species is superficially similar to _H. incongruens_ (Butler), but can be distinguished as following: ante-and median line of forewing blurred; postmedial line double, straight, bright gray in outer part; stigma small; hindwing with cleared postmedial line and obscured median line; discal spot small, gray, blurred.

_Male genitalia_ (Fig. 5). Uncus long, gently curved inwardly, with numerous short hairs dorsally at distal 2/3. Valva thickened, relatively straight, roundly at apex; sacculus distinctly broad, strongly sclerotized. Saccus round, thick. Juxta tongue-shaped. Aedeagus slender, straight; vesica with six small diverticula, covered with rather small cornuti.


Distribution. Korea (new record), Japan (Honshu, Shikoku, Kyushu, Ryukyu Islands).

Remark. The species has been known as being endemic to Japan. The present record is the first one from the continental part of East-Asia.

_Zanclognatha lui_ Han and Park, 2005 장백수염 마汰 (Fig. 2, 6)


**Diagnosis** (Fig. 2). Wingspan 28-35mm. This species is superficially similar to *Z. lunalis* (Scopoli) in Korea, but can be distinguished as following: antemedian line of forewing strongly convex before middle; median band well-developed; postmedian line less convex medially; subterminal line without creamy white line outwardly.

**Male genitalia** (Fig. 6). Uncus convex beyond middle dorsally, shorter than that of *lunalis*. Valva trifurcate, asymmetrical; costa almost straight before middle; 1st process of distal part short and acute; 2nd digitate with round apex; 3rd slender, taeniated. Aedeagus almost straight; cornuti consist of 2 series of horn-shaped spines: one raw of 3-4 horns-shaped spines and the other mixed with 3-4 long and 5-6 short horn-shaped spines on spicate surface.


**Distribution.** Korea (new record), China (Jilin: Mt. Changbai).

**Remark.** The species has been known as being endemic to China. The condition of specimen is badly, so holotype image is used in here.

*Premusia intrahens* Walker, 1858 近寄은무늬밥나방(新稱) (Figs. 3, 7)


**Diagnosis** (Fig. 3). Wingspan 36 mm. This species is superficially similar to *Aedia leucomelas* (Linnaeus) in Korea, but can be distinguished as following: forewing yellowish gray, with broadly outer margin; antemedial line blurred, wider; postmedian line black, sharply curved after Cu1-Cu2; costal part of subterminal line presented as dark spot, and other form by blurred stigma; hindwing yellowish gray interiorly, without white apex.

**Female genitalia** (Fig. 7). Apophysis anterioris 2/3 of ductus bursae in length; ostium wide; ductus bursae broad, slightly shriveled at anterior part; corpus bursae pyriform with many wrinkles at caudal 1/3.

**Material examined.** 1 ♂, Osu, Prov. Jeonbuk, 3. vi. 2005-coll. NIAST

**Distribution.** Korea (new record), Thailand, Vietnam, Indonesia (Sumatra, Borneo).

**Remark.** This species distributes in the Asian Tropics. We assume that the species might migrate accidentally to Korea by accident, considering its general distribution in Indo-China region.

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Figs. 5-6. Male genitalia: 5. *Hedennia obliqua* (Wileman); 6. *Zanclognatha lui* Han and Park
Cucullia hostilis Boursin, 1934 큰점골추범나방(新稱) (Figs. 4, 8)

Cucullia hostilis Boursin, 1934. Revue Francaise d’Entomologie. 1: 143. pl. 2. fig. 3 (TL: Vladivostok, Ussuri, Russia [LN, Karlsruhe]).

Diagnosis (Fig. 4). Wingspan 40-42mm. This species is superficially similar to C. maculosa Staudinger, but can be distinguished as following: broader forewing with round apex; antemedial line wider and blurred; post-and median line thinning; basal dash longer; apical and anal dash little and thin.

Female genitalia (Fig. 8). Ductus bursae slender, longer, thin at terminal part, membranous before middle, swollen with well sclerotized zone; corpus bursae egg-shape, broader.


Distribution. Korea (New record), Russia (Ussuria).

Remarks. This is the first record from outside of the type locality. In the present study, female was collected in Gangchon which is close to Chuncheon city, Prov. Kangweon, Korea, the southernmost border of the species.

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Literature Cited


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