Three Species of the Noctuid Moths New to China, and a Newly Recorded Species from Northeast China (Lepidoptera, Noctuidae)

Hui-Lin Han*, Jun-Qing Jiang and Yi Ding
Northeast Forestry University, Harbin, 150040, China

ABSTRACT: Three species: Anorthoa angustipennis (Matsumura), Harutaecographa stenoptera (Staudinger), and Cerastis pallescens (Butler), are recorded for the first time from China, and Nikara castanea (Moore) is newly added to the fauna of Northeast China. The image of adult, genitalia characteristics, and the distributions are given as necessary.

KEY WORDS: Anorthoa, Harutaecographa, Cerastis, New record, China

In China, more than 3,300 species of the family Noctuidae are known to date (Chang, 1991; Chen, 1999; Han et al., 2003, 2005 a-b, 2006 a-b, 2007 a-c; Han and Lu, 2007; Han and Li, 2007 Hua, 2005 Inoue, 1992 Wang, 1993, 1994, 1995 a-b; Wang and Huang, 2005). In this study, we report three species of Noctuidae for the first time from China: Anorthoa angustipennis (Matsumura, 1926), Harutaecographa stenoptera (Staudinger, 1892) and Cerastis pallescens (Butler, 1878), and in addition, Nikara castanea (Moore, 1882) is newly added to the NE Chinese fauna. Among them, two species: angustipennis (Matsumura) and stenoptera (Staudinger) have been previously placed under the genus Orthosia Ochsneheimer, 1816 in before-time, based on the external and genitalia characteristics. They were transferred to the genus Anorthoa Berio, 1980 and Harutaecographa Yoshimoto, 1993 by Ronkay et al. (2001) and Kononenko (2005) respectively. The adults and genitalia characteristics of the species are briefly illustrated, with distributional information are also provided as available.

Materials examined in this study are mainly based on the research on winter Noctuidae. All the material in this study are deposited at Northeast Forestry University (NEFU), Harbin, China.

* Corresponding Author. E-mail: hanhulilin@yahoo.com.cn
Systematic Accounts

Anorthoa angustipennis (Matsumura, 1926)  
(Figs. 1, 5-6)

Monina angustipennis Matsumura, 1926, Insecta matsum.  
1:12, pl. 1: 24 (TL: Japan, Hokkaido [EIHU, Sapporo]).

Monina fluvarinea Matsumura, 1926, Insecta matsum.  
1: 13, pl. 1: 36 (TL: Japan, Hokkaido [EIHU, Sapporo]).

Diagnosis (Fig. 1). Wingspan 38 mm. This species is  
superficially similar to O. incerta (Hufnagel, 1766), but  
can be distinguished by following: forewing with dark  
brown; antemedial and median line very blurred post-  
medial line with slightly ochre; reniform spot with dark  
brown; orbicular spot rather small; hindwing with dark  
brown; discal spot very mistiness.

Male genitalia (Figs. 5-6). Uncus long, gently curved  
inwardly, with triangular tip. Valva asymmetrical, weakly  
sclerotized; sacculus distinctly broad ampulla small and  
slender; harpe hook shape, long; costal processus trifur-  
cate, right clearer than left part. Saccus long v-shaped.  
Aedeagus straight, gradually narrow from towards termi-  
nal. Vesica screw subbasal diverticulum 1 slender and  
expand, with a strongly sclerotized cornus and 12 slender  
cornuti.

Material examined. 3 O°, Heilongjiang Prov., Mt. Maor,  
17 X 2007 (Han HL).

Distribution. China (new record), Korea (Central), Japan,  
Russia (RFE).

Remarks. This species had been removed from Orthosia  
Ochsenheimer, 1816, and placed under the genus Anorthoa  

Harutaeographa stenoptera (Satudinger,  
1892) (Figs. 2, 9)

Taeniocampa stenoptera Staudinger, 1892, in Romanoff,  
Mem. Lepid. 6: 497, pl. 9: 6 (TL: Primorye terr. ["Ussuri"]  
[MNHU, Berlin]).

Diagnosis (Fig. 2). Wingspan 35-36 mm. This species is  
superficially similar to O. odiosa (Butler, 1878), but  
can be distinguished by following: rather small size;  
antemedial line blurred and slender; median and post-  
medial line slightly white with dark black encircle hind-  
wing with greyish brown; discal spot illegibility.

Female genitalia (Fig. 9). Papillae anales short. Ape-
physes posteiorsand anteiors slender and long, terminal part of anteiors rounded swollen. Ductus bursae short, slender, about 1/5 length of corpus bursae. Bulla extended, short, with roundedly compact ball. Corpus bursae abnor-

mity, bottom part bowls shaped.

**Material examined.** 1♀, Liaoning Prov., Fengcheng, 15 IV 2007 (Han HL); 2♀, Heilongjiang Prov., Mt. Maor, 17 X 2007 (Han HL).

**Distribution.** China (new record), Korea (South), Russia (RFE).

**Remarks.** This species had been removed from *Orthosia* Ochsenheimer, 1816, and placed under the genus *Harutaeographa* Yoshimoto, 1993 by Kononenko (2005).

**Cerastis pallescens** (Butler, 1878) (Figs. 3, 10)

*Taeniocampa lata* Staudinger, 1892, in Romanoff, Mem. Lepid. 6: 496, pl. 9: 5 (TL: RFE, Primorye terr., Askold Isl. [MNHU, Berlin]).

**Diagnosis** (Fig. 3). Wingspan 35 mm. This species is superficially similar to *C. violetta* (Boursin, 1955), but can be distinguished by following: rather brown ground color around basal and antemediai areas with bright grey; antemediai,median and postmedial lined dark brown and blurred; orbicular spot round with a black band at inner part; reniform spot distinct subterminal part dark brown at nearby cost margin. Hindwing with greyish brown; discal spot indistinct; terminal line ochre.

**Female genitalia** (Fig. 10). Papillae anales long. Apophyses posteiors long, and anteiors short. Ostium membranous antrum broad, compressed. Ductus bursae short, broad, about 1/3 length of corpus bursae bottom part with compact tuber. Bulla extend, long, gradually swollen, and encircled the corpus bursae. Corpus bursae pear shaped, bottom part round.

**Material examined.** 1♀, Heilongjiang Prov., Mt. Maor, 17 X 2007 (Han HL).

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**Figs. 5-10.** Genitalia; 5-8, male. 5-6, *Anorthoa angustipennis* (Matsamura) 7-8, *Nikara castanea* (Moore) female. 9. *Harutaeographa stenoptera* (Staudinger) 10. *Cerastis pallescens* (Butler, 1878). <Scale bars: 3 mm>
Distribution. China (new record), Korea (Central), Japan, Russia (RFE).

Nikara castanea (Moore, 1882) (Figs. 4, 7-8)

Nikara castanea Moore, 1882, Lep. Atk. p. 126, pl. 4, fig. 24 (TL: India, Darjiling [MNHU]).

Redescription (Fig. 4). Wingspan 32-34 mm. Head, thorax deep brown, abdomen grayish brown. Forewing greyish brown; basal, antemedial, median and postmedian areas with dark brown; antemedial and postmedianial blackish brown with patina sheen; reniform spot indistinct, slightly with patina sheen subterminal and terminal areas grey, with small sheen; hindwing with greyish brown; discal spot indistinct.

Male genitalis (Figs. 7-8). Uncus long, gently curved inwardly, with pointed tip. Valva simple with numerous hairs; sacculus thin; sacculus processes small triangle, weakly sclerotized; costal margin distinct, and thick. Juxta curve moon-shaped. Aedoeagus curved, gradually narrow at middle part. Vesica swollen, with a strongly sclerotized cornuti band from middle part to terminal subbasal diverticulum I short and ball expand.

Material examined. 4♂, Liaoning Prov., Mt. Qianshan, 10-12 VIII 2007 (Han HL).

Distribution. China (new record from NE Chinese fauna, Sichuan), Sikkim, India.

Remarks. This species is always recognized to distribute in Himalayan region, which is founded for first time in Prov. Liaoning, NE. Chinese fauna, and had been founded a male in N. Korea by L. Ronkay (Kononenko and Han, 2007), so that it is not a Himalayan connatural species.

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