

Three Unknown Species of Noctuidae from Korea (Lepidoptera)

Hui-Lin Han, V. S. Kononenko¹ and Kyu-Tek Park*

Center for Insect Systematics, Kangwon National University, Chuncheon, 200-701, Korea

¹Far Eastern Branch of Russian Academy of Science, Vladivostok, Russia.

한국산 밤나방과(나비목) 3 미기록종에 관한 보고

한휘림 · V. S. Kononenko¹ · 박규택*강원대학교 농업생명과학대학, 춘천 200-701, ¹러시아 과학연구원 극동분소, 블라디보스톡, 러시아

ABSTRACT : Three species of Noctuidae, *Eupsilia boursini* Sugi, *Valeria tricristata* Draudt and *Othosia satoi* Sugi are reported for the first time from Korea. Diagnosis for the species, photographs of adults, and illustrations of the male or female genitalia, are provided.

KEY WORDS : Faunistic data, new records, Xyleninae, Psaphidinae, Hadeninae

초 록 : 밤나방과에 속하는 *Eupsilia boursini* Sugi, *Valeria tricristata* Draudt, *Othosia satoi* Sugi 등 3종이 한국에서 처음으로 보고된다. 새로이 밝혀진 미기록 3종에 대해 성충의 외부형태적 특징과 암수생식기를 간략한 기술과 함께 도해하였다.

검색어 : 곤충상, 미기록종, 밤나방과, Xyleninae, Psaphidinae, Hadeninae

Since the Illustrated Catalogue of Korean Noctuidae was published by Kononenko *et al.* (1998), eighteen species of the family Noctuidae have been added to the fauna of Korea by Sohn and Ronkay (2001), Sohn and Kim (2003), and Sohn *et al.* (2005a, b). Consequently, 979 species of the family Noctuidae sensu lato (except the family Nolidae) were reported from Korea. According to the new classification of the superfamily Noctuoidea by Fibiger and Lafontaine (2005), 639 species of them were included to the family Noctuidae, other 309 species belong to the family Erebidae which were grouped as "quadrid noctuids", and 31 species were removed into the family Nolidae (the subfamily Sarrothripinae and Chloephorinae). In the present study, three species, *Eupsilia boursini* Sugi, 1958, *Valeria tricristata* Draudt, 1934, and *Othosia satoi* Sugi, 1960, are reported for the first time from Korea.

Materials and Methods

Specimens examined were deposited at the Center for Insect Systematics, Kangwon National University, Chuncheon and a part of them at the Gyeonggi-do Forest Environment Research Station, Osan. For the identification, the male or the female genitalia were dissected and illustrated.

Taxonomic Accounts

Eupsilia boursini Sugi, 1958 붉은무지개밤나방 (新稱) (Figs. 1, 8)

Eupsilia boursini Sugi, 1958. Tinea 4 : 205, pl. 31 : 17 ; Sugi, 1982 : 730 ; Kononenko, 2003 : 439. TL : Japan, Honshu [Coll. S. Sugi, Tokyo]

*Corresponding author. E-mail: cispa@kangwon.ac.kr

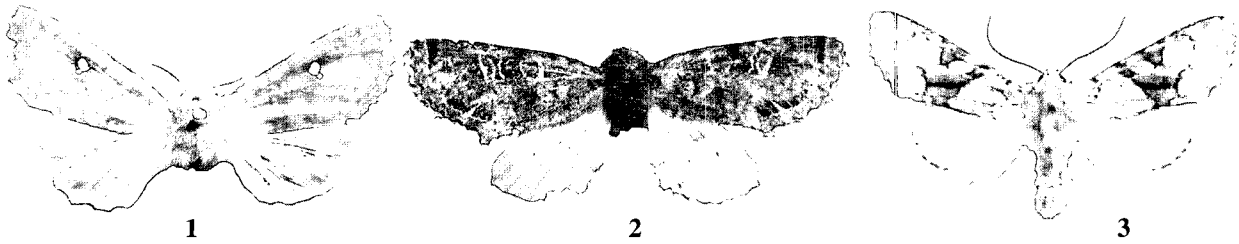


Fig. 1-3. Adults: 1, *Eupsilia boursini* Sugi; 2, *Valeria tricristata* Draudt; 3, *Othosia satoi* Sugi.

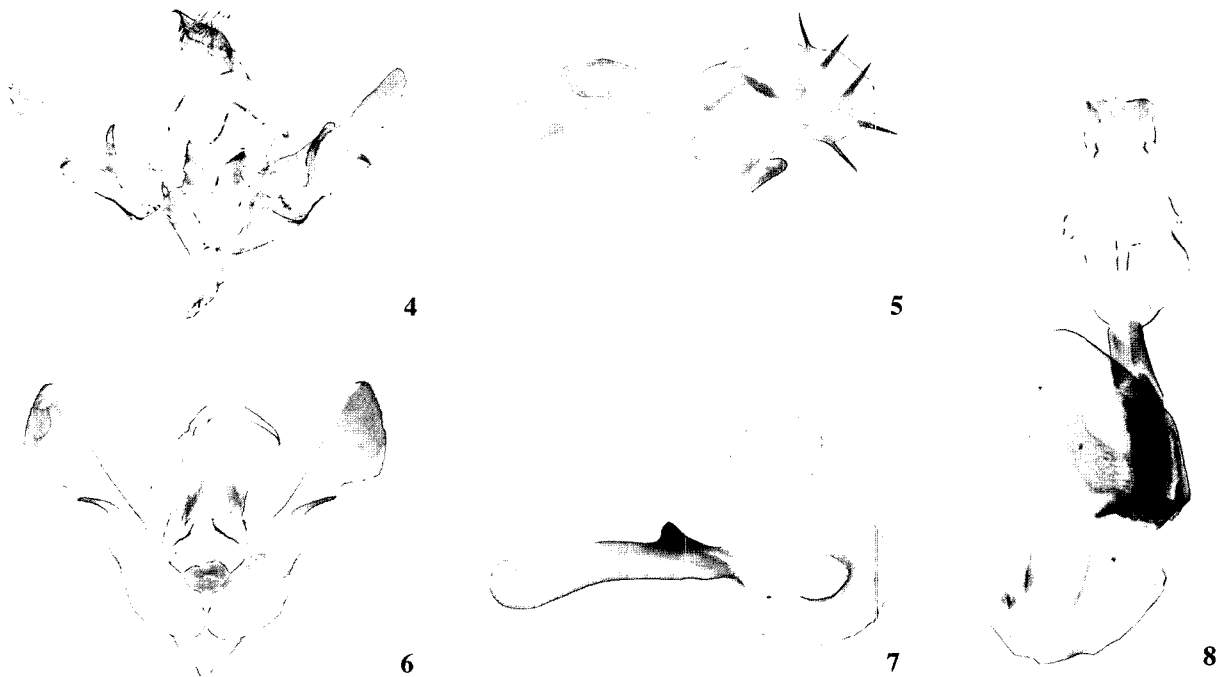


Fig. 4-8. Male and female genitalia: 4-5, *Valeria tricristata* Draudt; 6-7, *Othosia satoi* Sugi; 8, *Eupsilia boursini* Sugi. (Scale: 1mm).

Diagnosis (Fig. 1). Wingspan 34-35 mm. This species is superficially similar to *E. tripunctata* Butler, 1878, but can be distinguished by the smaller sized reddish brown forewing colouration with waved and double antemedian line; postmedian line weaker; subterminal area weak and pale; white ovate reniform spot accompanied with a small bellow. Hindwing dark brown, its discal spot invisible.

Female genitalia (Fig. 8). Apophysis anterioris short, about 1/5 of apophysis posterioris. Lamella antevaginalis cup-shaped. Ductus bursae slender, weakly sclerotized. Bulla seminalis membranous, with wrinkles; corpus bursae pear-shaped; signa consist of four bands with different size.

Material examined. 1 ♀, Sacheon, GN, 20 IX 2003

(Y.D. Kown).

Distribution. Korea (new record), Japan (Honshu, Hokkaido), Russia (RFE- Primorye territory).

Remarks. The species belongs to the subfamily Xyleninae and it is also distributed in middle part of Japan and Russia Far East (RFE). The locality, Sacheon in Korea is probably the southernmost limit of its distribution.

***Valeria tricristata* Draudt, 1934 그물무늬밤나방 (新稱) (Figs. 2, 4-5)**

Valeria tricristata Draudt, 1934. in Seitz, 1934e: 141, pl. 17; Chen, 1982: 316; Chen, 1999: 57. TL: China,

Nanking [MNHU, Berlin].

Valeroides tricristata: Hua, 2005: 252.

Diagnosis (Fig. 2). Wingspan 34-35 mm. This species is superficially similar to *V. mienshani* Draudt, 1950, which is also distributed in China, but can be distinguished as follow: forewing narrower; ground color dark brown, mixed with pale greenish scales; antemedian and subterminal line pale gray; stigmata paler, inner part similar to ground color; anal dash triangle with whitish gray; outer margin weakly serrated. Hindwing pale gray, translucent with luster; discal spot dark, weakly diffused.

Male genitalia (Figs. 4-5). Uncus short, broad, strong with pointed apex. Vinculum V-shaped. Valva long, narrowed toward apex with large cavity at basal 3/5; apex round; sacculus shorttriangular; harpe digitate, as long as 1/4 of valva, slightly curved. Aedeagus cylindrical, as long as valva; carina weakly sclerotized; vesica large, with a band of fine tooth-cornuti at base, with five strong spine-like cornuti, and with a strong lump cornutus.

Material examined. 1 ♂, Guongju, CN, 11 IV 2002 (Y.D. Kwon).

Distribution. Korea (new record), China (Jiangsu, Hunan, Jiangxi).

Remarks. The species belongs to the subfamily Psaphidinae and it is one of Palaearctic species also occur in the central China. The locality of Guongju area is probably the northernmost of its distribution.

***Othosia satoi* Sugi, 1960 증앙띠밤나방 (新稱)
(Figs. 3, 6-7)**

Othosia satoi Sugi, 1960. *Tinea* 5: 328. TL: Japan, Honshu [coll. S. Sugi, Tokyo].

Diagnosis (Fig. 3). Wingspan 35-36 mm. This species is superficially similar to *O. carnipennis* (Butler, 1878), but can be distinguished as follows: forewing narrowed toward apex ground color pale grayish; subbasal line dark, convex; antemedian line oblique; median shades consist of atriangular one at costal margin and lower one trapezoidal; postmedian line distinct serrated. Hindwing pale grayish, almost white.

Male genitalia (Figs. 6-7). Uncus slender, waved, hook-shaped with pointed apex. Valva long, with large triangular-cucullus; sacculus swollen; harpe sclerotized, and curved. Aedeagus cylindrical, almost straight, with heavily sclerotized, short, cone-shaped process preapically; vesica curved, with a large membranous saccate at base.

Material examined. 1 ♂, Campus of Kangwon National University, Chuncheon, 3 V 2005 (H.L. Han).

Distribution. Korea (new record), Japan (Hokkaido, Honshu).

Remarks. The species belongs to the subfamily Had-eninae and it is also recorded in Japan and Russia Far East. According to Sugi (1982), it is usually appeared in April in Honshu and its larva found from May to June in Hokkaido. Moth was collected at the early of May in Chuncheon, Korea. Therefore, it is considered that the species probably overwinters as pupa or adult stage.

Acknowledgements

We wish to express our heartfelt thanks Dr. L. Ronkay, Department of Zoology, Hungarian National History Museum, Budapest, for his help in identify the species. We also thank Dr. Young-Dae Kwon, Gyeonggi-do Forest Environment Research Institute, Osan, for the loan of specimens. The study was partly supported in finance by the Research Institute. of Agriculture Science, Kangwon National University.

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(Received for publication 29 August 2005;
accepted 17 September 2005)