

Seven Newly Recorded Species of the Tribe Olethreutini (Lepidoptera: Tortricidae) from Korea*

韓國産 산애기잎말이나방族(나비目: 잎말이나방科)의 7未記錄種

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ABSTRACT Seven species of the tribe Olethreutini belonging to the family Tortricidae are reported for the first time from Korea with their brief redescrptions and illustrations: *Apotomis inundana* ([Denis et Schiffermüller]), *Eudemopsis tokui* Kawabe, *Hedya tsushmanensis* Kawabe, *Hedya vicinana* (Ragonot), *Hystrichosolus spathanum* Walsingham, *Olethreutes lacunana* ([Denis et Schiffermüller]), and *Pristerognatha penthiana* (Guenée).

KEY WORDS Olethreutini, Olethreutinae, Tortricidae, Lepidoptera, systematics, Korea

초 록 산애기잎말이나방族(잎말이나방科)중 다음의 우리나라 미기록 7종을 보고한다. 이들의 형태적 특징을 간략히 기술하고 암수생식기의 특징을 도해하였다: *Apotomis inundana*([Denis et Schiffermüller]) 회색무늬애기잎말이나방(新稱), *Eudemopsis tokui* Kawabe 등근점애기잎말이나방(新稱), *Hedya tsushmanensis* Kawabe 흰점애기잎말이나방(新稱), *Hedya vicinana*(Ragonot) 검정큰날개애기잎말이나방(新稱), *Hystrichosolus spathanum* Walsingham 무늬참나무애기잎말이나방(新稱), *Olethreutes lacunana*([Denis et Schiffermüller]) 무궁화애기잎말이나방(新稱), *Pristerognatha penthiana*(Guenée) 봉숭아애기잎말이나방(新稱)

검색어 산애기잎말이나방族, 애기잎말이나방亞科, 잎말이나방科, 나비目, 分類, 韓國

Tribe Olethreutini is one of the most abundant taxa of the family Tortricidae in the Holarctic region. Its taxonomic position has been commonly placed under the subfamily Olethreutinae as a tribal level, but it is often treated as a supertribal rank with Eucosmidii within the subfamily Olethreutinae based on the evolutionally derived characteristics (Kuznetsov, 1987). Moreover the subtribal and generic arrangement in the tribe is still in controversial (Razowski 1983; Kuznetsov 1987). The authors placed it as tribal rank for the time being with 84 known species from Korea (Ent. Soc. Kor. and Kor. Soc. Appl. Ent. 1994). From the result of the study, seven species of the tribe, *Apotomis inundana* ([Denis et Schiffermüller]), *Eudemopsis tokui* Kawabe, *Hedya tsushmanensis* Kawabe, *Hedya vicinana* (Ragonot), *Hystrichosolus spathanum* Walsingham,

Olethreutes lacunana ([Denis et Schiffermüller]), and *Pristerognatha penthiana* (Guenée) are reported for the first time from Korea, with their brief redescrptions and illustrations of both genitalic characteristics and host plants from abroad.

LIST OF SPECIES

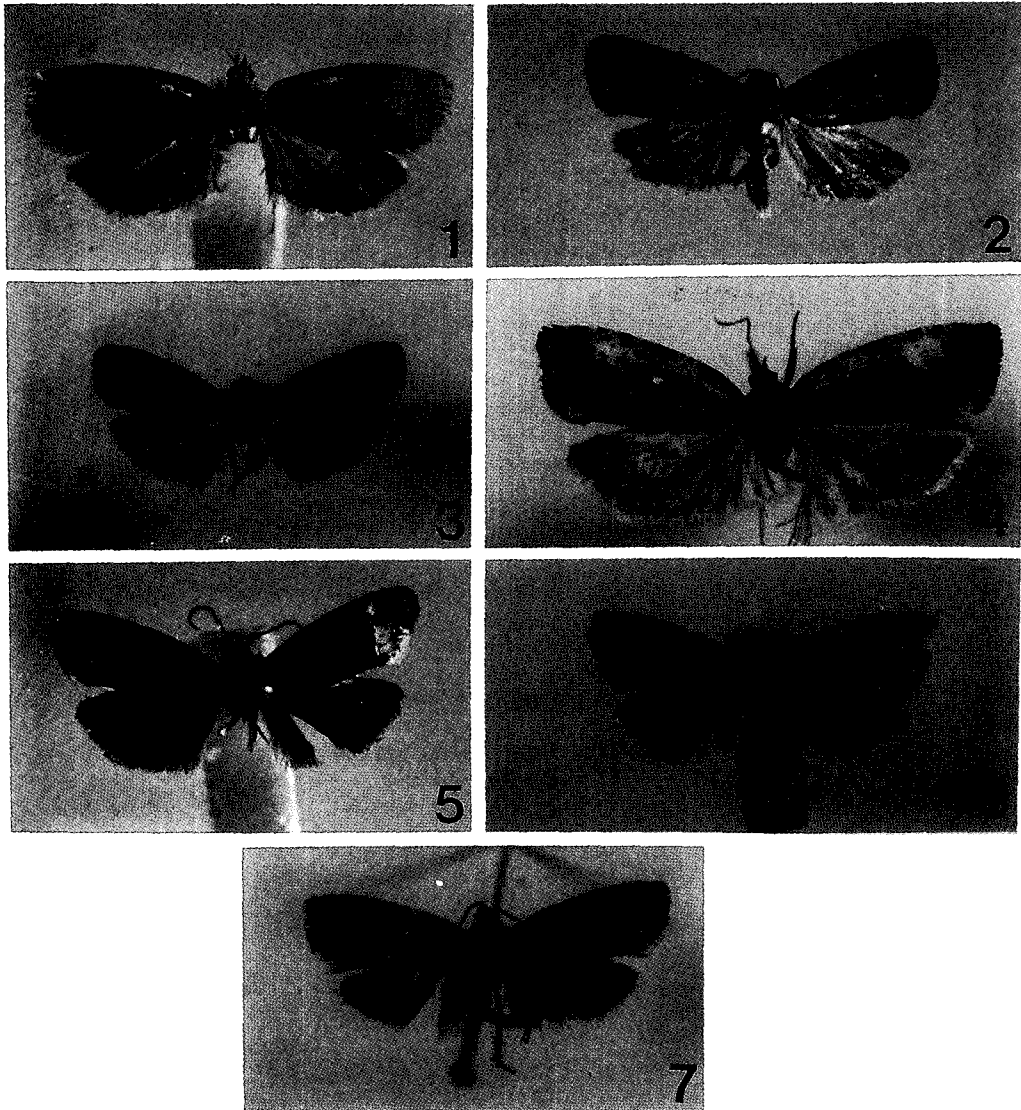
Apotomis inundana ([Denis et Schiffermüller]) 회색 무늬애기잎말이나방(新稱) (Fig. 1)

Apotomis inundana [Denis et Schiffermüller], 1775, Syst. Verz. Schmett. wien. Geg.: 132 (*Tortrix*); Kennel, 1913: 369; Hannemann, 1961: 191; Kuznetsov, 1973: 124; Razowski, 1983: 39, tabl. II: 7, figs. 34, 116; Liu et Bai, 1985: 74, pl. V-12, fig. 124; Kuznetsov, 1987: 595.

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Figs. 1~7. Adults: 1, *Apotomis inundana* ([Denis et Schiffmüller]); 2, *Eudemopsis tokui* Kawabe; 3, *Hedya tsushimanensis* Kawabe; 4, *Hedya vicina* (Ragonot); 5, *Hystrichosolus spathanum* Walsingham; 6, *Olethreutes lacunana* ([Denis et Schiffmüller]); 7, *Pristerognatha penthiana* (Guenée).

Wing expanse, 20-22 mm.

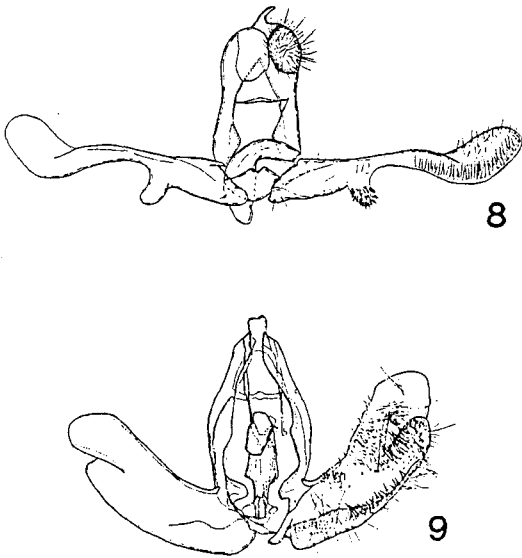
Male genitalia (Fig. 8). Uncus short, sharpened at top. Socius round, broad. Transtillae slender, band-shaped. Valva narrow, long with a broad and short protrusion at medio-ventrally, bearing spines on its marginal area, gently curved at near subapex; sacculus semi-triangular, thin. Aedeagus moderate, curved at middle.

Female genitalia (Fig. 13). Papillae anales moderate. Ostium bursae broad, Ductus bursae as long as 1.5

times of corpus bursae, strigulated from entrance to middle. Corpus bursae large, ovate with two small signa on middle.

Material examined. 1♂, Ch'unch'ŏn, Kangwon-do, 12. VIII. 1991 (K. T. Park); 1♂, Pongmyŏngri near Hongch'ŏn, Kangwon-do, 23. VII. 1992 (K. T. Park et B. K. Byun)-gen, sl. no. 3697; 1♀, Hwach'ŏn, Kangwon-do, 2. VII. 1985 (K. T. Park)-gen. sl. no. 1441.

Distribution. Korea (Kangwon-do), China, Russia



Figs. 8~9. male genitalia: 8, *Apotomis inundana* ([Denis et Schiffmüller]); 9, *Eudemopsis tokui* Kawabe.

(Primorye, Amur), Europe.

Host plant. *Populus tremula* L. in Europe (Hannemann, 1961).

Eudemopsis tokui Kawabe 등근점애기잎말이나방 (新稱) (Fig. 2)

Eudemopsis tokui Kawabe, 1974, Kontyu 42: 389; Kawabe, 1982, 1: 94, 2: 167, pl. 22: 21.

Wing expanse 20.5-21.5 mm in male.

Male genitalia (Fig. 9). Uncus very short, somewhat broad, concaved at middle of top. Tegumen moderate, slightly narrower to the top. Socii slender, long, gradually thin towards terminally. Valva broad, expanded, concaved subterminally at ventral margin, a patch of short spines on base of costa; sacculus thickened, long enough to reach towards subapex with numerous short spines inwardly. Aedeagus moderate, narrowed at base.

Material examined. 6♂, Sōngpanak, Cheju-do, 3. VII. 1994 (B. K. Byun)-gen. sl. no. 3687.

Distribution. Korea (Cheju-do), Japan.

Hedya tsushmanensis Kawabe 흰점애기잎말이나방 (新稱) (Fig. 3)

Hedya tsushmanensis Kawabe, 1978, Tinea 10: 173;

Kawabe, 1982, 1: 102, 2: 169, pl. 23: 34.

Wing expanse 21 mm in both sexes.

Male genitalia (Fig. 10). Tegumen slender, strongly concaved at top. Socius narrow, long with numerous long hairs. Valva long, expanded with rounded termination, strongly emarginated inwardly at middle with a sharp protrusion at medioventral margin and a bundle of long hairs before the protrusion, with numerous strong setae along the ventral margin on middle to near subapex with a row of spines on it outwardly; sacculus strong, reaching to 1/4 of ventral margin, deeply concaved basally with numerous moderate hairs on the top inwardly, a bundle of long hairs on ventral edge. Aedeagus fairly short, stout, rather broad at base.

Female genitalia (Fig. 14). Papillae anales moderate. Apophyses anteriores and posteriores thin. Ostium bursae cup-shaped with rather narrow to the ductus bursae. Ductus bursae shorter than corpus bursae with sclerotized area except opening and distal parts. Corpus bursae large with two different sized, horn-shaped signa.

Material examined. 1♂, Wonchangri, near Ch'unch'ōn, Kangwon-do, 6. IX. 1990 (S. W. Cho); 1♀, Ch'unch'ōn, GW, 15. VI. 1992 (K. T. Park)-gen. sl. no. 3628(male), 3815(female).

Distribution. Korea (Kangwon-do), Japan.

Remarks. The species has been known endemic of Japan (Is. Daema) until this report (Kawabe, 1982).

Hedya vicinana (Ragonot) 검정큰날개애기잎말이나방 (新稱) (Fig. 4)

Conchylis vicinana Ragonot, 1894, Anns. Soc. ent. Fr. 63: 200; Kennel, 1908-1921: 366; Kuznetsov, 1974: 1916; Kawabe, 1982, 1: 101, 2: 168, pl. 23: 28-31.

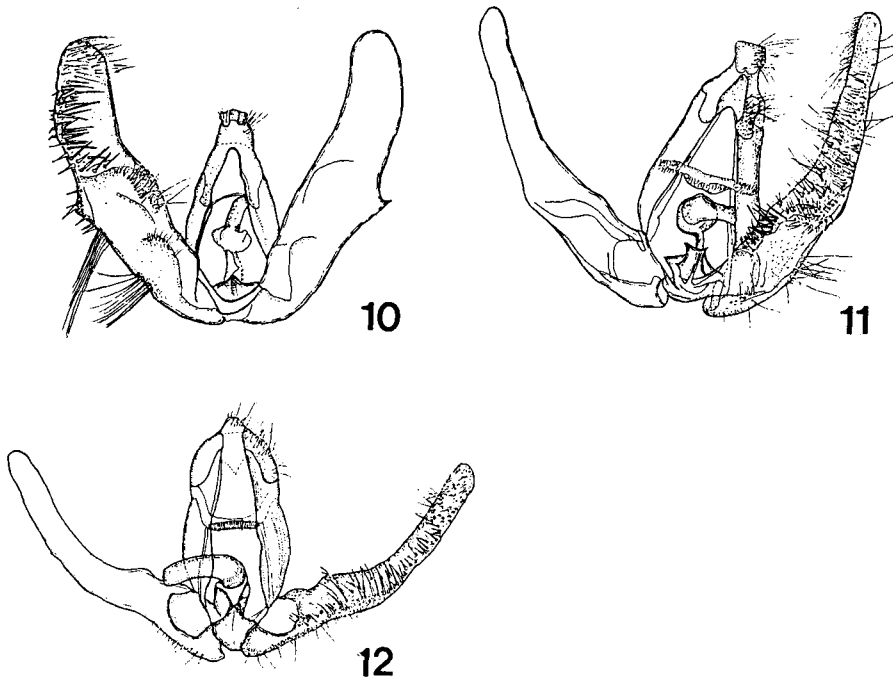
Wing expanse 23 mm.

Material examined. 1? (abdomen missing), Mt. Sōrak-san, Kangwon-do, 22. VI. 1973 (S. M. Lee).

Distribution. Korea(Kangwon-do), Japan, China(East north), Russian Far East (Amur).

Host plant. *Salix* spp. in Japan (Kawabe, 1982).

Hystrichosolus spathanum Walsingham 무늬참나무애기잎말이나방 (新稱) (Fig. 5)



Figs. 10~12. Male genitalia: 10, *Hedyia tsushmanensis* Kawabe; 11, *Hystrichosolus spathanum* Walsingham; 12, *Prist-erognatha penthiana* (Guenée).

Hystrichosolus spathanum Walsingham, 1900, 6(7): 336.

Wing expanse 19-20 mm in male, 23 mm in female.

Male genitalia (Fig. 11). Uncus weakly sclerotized, broad at base, shortly concaved at top. Socii short, elongated. Transtillae band-like form with numerous minute spines on lateral portion, rather broad at middle. Valva expanded become slender towards termination, strongly concaved at basal 1/3 with strong setae on the marginal area; sacculus narrow short, subtriangular in shape with deeply rounded concavity on upperside. Aedeagus rather short, quite broad basally.

Female genitalia (Fig. 15). Apophyses anteriores thin and short nearly as same as the length and shape of posteriores. Ostium bursae strongly sclerotized, with a long rounded opening, bearing small sclerites on each lateral portion. Ductus bursae as long as 2 times of corpus bursae with sclerotized part from entrance to 1/3 of it. Corpus bursae ovate with 2 short signa surrounded with circular patch.

Material examined. 1♂, 1♀, Sŏnhŏl, Cheju-do, 11.

VIII. 1993 (K. T. Park et B. K. Byun); 1?, same locality, 1. VIII. 1993 (B. K. Byun); 1♂, 4♀, Temple Kwanŏmsa, Cheju-do, 24. VIII. 1992 (K. T. Park et B. K. Byun)-gen. sl. no. 3804(male), 3683(female).

Distribution. Korea(Cheju-do), Japan.

Host plants. *Quercus glaucea* Thunb. (Kawabe, 1982).

Remarks. The species has been known as endemic species of Japan until this report Bivoltine (Kawabe, 1982).

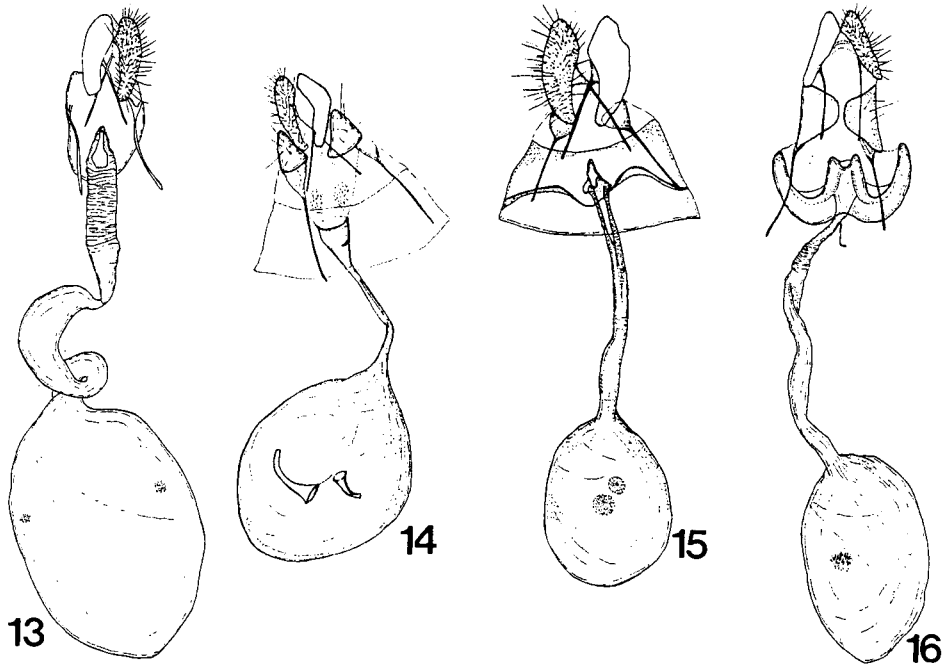
Olethreutes lacunana ([Denis et Schiffermüller]) 무궁화에기잎말이나방(新稱) (Fig. 6)

Tortrix lacunana [Denis et Schiffermüller], 1775: 318; Hannemann, 1961: 212, fig. 438; Kawabe, 1982, 1: 107, 2: 170, pl. 24: 10; Kuznetsov, 1987: 634, fig. 389-1.

Loxoterma lacunata: Razowski, 1983: 67, tabl. V-6, figs. 55, 137.

Sericoris herbana Guenée, 1845: 137

Sericoris roana De Graaf, 1861, Tijds. Ent. 4: 168,



Figs. 13~16. Female genitalia: 13, *Apotomis inundana* ([Denis et Schiffermüller]); 14, *Hedyia tsushimanensis* Kawabe; 15, *Hystrichosolus spathantum* Walsingham; 16, *Olethreutes lacunata* ([Denis et Schiffermüller]).

tabl. 12: 2.

Wing expanse 18 mm in female.

Female genitalia (Fig. 16). Papillae anales slender. Ostium bursae strongly sclerotized, large with well sclerotized with long expanded part laterally showing Mexican hat-shaped in outline. Ductus bursae over 2 times as long as corpus bursae; ductus seminalis started from just after ostium bursae. Corpus bursae semiovate with a small stellate signum on middle.

Material examined. 1♀, Mt. Odae-san, Kangwon-do, 26. VI. 1989 (K. T. Park et B. K. Byun)-gen. sl. no. 2711.

Distribution. Korea (Kangwon-do), Japan, Russia, China, Mongolia, England, Europe.

Host plant. *Urtica thunbergiana* S. et Z., *Hibiscus syriacus* L., and *Mentha haplocalyx* B. in Japan (Kawabe, 1982). *Mentha* sp., *Chrysanthemum* sp., *Fragaria* sp., *Urtica* sp., *Salix* sp., *Betula* sp., and *Larix* sp. in Poland (Razowski, 1983). *Anthriscus* sp., *Betula* sp., *Caltha* sp., *Chenopodium* sp., *Cirsium* sp., *Comaricum* sp., *Inula* sp., *Lamium* sp., *Lysimachia* sp., *Matricaria* sp., *Mentha* sp., *Rubus* sp., *Salix* sp., and *Ur-*

tica sp. in Germany (Hannemann 1961)

Pristerognatha penthiana (Guenée) 봉숭아애기잎말이나방(新稱) (Fig. 7)

Sericoris penthiana Guenée, 1845, Eur. Microlepid. Index. meth.: 45.

Pristerognatha penthiana: Kennel, 1913: 391; Swatschek, 1958: 200; Bradely *et al.*, 1979: 35; Kawabe, 1982, 1: 111, 2: 171, pl. 24: 45-46; Razowski, 1983: 89, tabl. VIII: 3, figs. 73, 154; Kuznetsov, 1973: 612, fig. 379: 1.

Sericoris postremana Lienig, 1846: 231.

Wing expanse 18 mm in male.

Male genitalia (Fig. 12). Tegumen round, moderate. Socius small, elongated. Ganthos curved, bow-shaped, with fasciculated minute spines on middle portion. Valva slender with a deep round concavity at base, slightly curved at middle with strong setae from basal 1/4 to apex. Sacculus small, subtriangular in shape.

Material examined. 1♂, Ch'unch'on, Kangwon-do, 15. VI. 1992 (K. T. Park et B. K. Byun)-gen. sl. no. 3753.

Distribution. Korea (Kangwon-do), Japan, Russia, Europe, N. America.

Host plant. The larva of the species bore into the stem of *Impatiens* sp. in Japan (Kawabe 1982). *Impatiens noli-tangera* L. in Poland (Razowski 1983).

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