

Preliminary Study on the Korean Cochylidae(Lepidoptera) with Ten Unrecorded Species from Korea.

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韓國產 Cochylidae(가는잎말이나방科:新稱)에 關하여

——未記錄 10 種의 발표와 함께——

朴 奎 澤

Abstract

Only two species of the family Cochylidae were previously reported from Korea by foreign entomologists, but this family has not been known in Korea to date. In this paper, I deal with ten species newly recorded from Korea.

Introduction

The Cochylidae is small-size moths, and a homogenous family belonging to the superfamily Tortricidea. The group had been previously treated as a subfamily of the Tortricidae.

The majority of Cochylidae, like most other Lepidoptera, can be readily identified by the shape and colour-pattern of the forewing; the comparatively narrow forewings are more triangular and are folded against the abdomen in a steep ridge-like position when the moth is at rest. The larvae of cochylids are mostly monophagous and almost invariably are internal feeders, living within flowers or seed heads, or boring in stems and roots.

Therefore the Cochylidae is economically an important group of Lepidoptera. This family Cochylidae has not been reported in Korean literature to date,

but two species; *Hysterosia pistrinana*(E.) and *Stenodes jaculana*(Snell.) of the family were previously reported in the foreign literature (Razowski, 1970), with materials collected from Weonsan of North Korea by J.H. Leech in 1886.

In the Palaearctic Region, nearly 300 species of Cochylidae has been known to date and 33 species has been reported from Japan(1972). In the present paper twelve species belonging to 6 genera of the family Cochylidae with ten unrecorded species represented the cochylid fauna of Korea are dealt.

The external morphology and the character of the genitalia were critically examined, but only the male genitalia were illustrated and drawn in order to save the space.

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Genus *Hysterosia* Stephens, 1852

*1. *Hysterosia pistrinana* (Erschoff)

Cochylis (Phtheochroa) pistrinana Erschoff, 1877.

Trudy russk. Ent. Obshch. 12 : 341.

Hysterosia coreana Wals., 1900 : 447.

Phtheochroa albiscutellum Wls., 1900 : 487.

Hysterosia pistrinana; Razowski, 1970 : 106—101.

Notes: Walsingham described *H. coreana* from Korea, which collected in Weonsan of N. Korea by Leech in 1886. but *H. coreana* was treated as junior synonym of *H. pistrinana*. No specimens have been found by me to date, however it is possible to be found in the Republic of Korea.

Distribution: Korea, Japan, China, Siberia, East-Central Asia

Genus *Stenodes* Genee, 1845

*2. *Stenodes jaculana* (Snellen)

Cochylis jaculana Snellen, 1883, Tijd. Ent. 26: 195

Stenodes jaculana; Razowski, 1970 : 131—132.

Notes: This species was also collected in Weonsan of N. Korea by Leech (1886). I have not seen this species in Korea to date.

Distribution: Korea, Japan, China, Ussuri, Amur.

3. *Stenodes uankinensis* (Razowski)

홍갈색 가는 잎말이 나방(新稱)

Stenodes nankinensis Razowski, 1964, Acta. Zool. Crac. 9 : 346. Razowski, 1970 : 142.

A single male specimen(Suweon. 15. VIII. 1975.) examined is closely similar to *S. nankinensis* given by Razowski (1970) in the coloration and the marking of the forewing, and the male genitalia(Fig. 1), but the Korean specimen is slightly different; Valva more elongate, more narrow, hollowed beyond 2/3 of ventral portions; sacculus not very developed and sclerotized. Therefore I tentatively place Korean specimen in *S. nankin-*

ensis in this paper.

Material examined:—Suweon; 1♂, 15. VII. 1975.

Distribution: Korea, China.

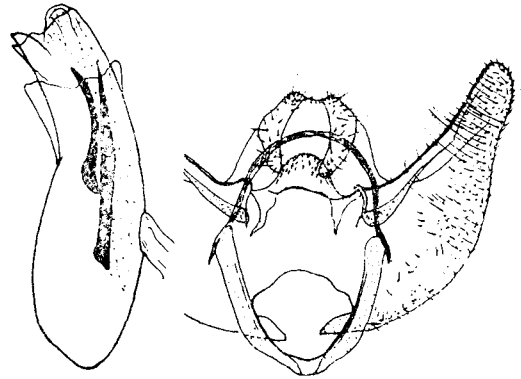


Fig. 1. *S. nankinensis* Razowski

Genus *Phalonidia* LeMarchand, 1933

4. *Phalonidia curvistrigana* (Stainton)

검무늬 가는 잎말이 나방(新稱)

Eupoecilia curvistrigana Stainton, 1859, Manual. 2 : 272.

Phalonia curvistrigana; Kennel, 1913 : 268.

Phalonidia curvistrigana; Razowski, 1970 : 204—205.

Male genitalia (Fig. 2) : Socii short, middle part of transtilla slender. Valva broad before the half, then narrow terminally, with ventral portions strongly concaved; sacculus well developed and.

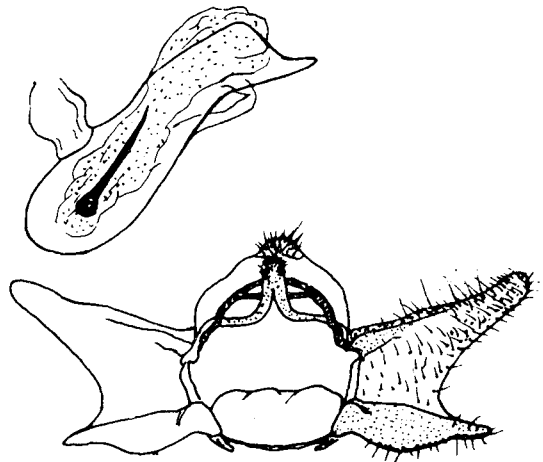


Fig. 2. *P. curvistrigana* (Stainton)

* =Previously recorded species from Korea

sclerotized, the middle of outer margin broad, with sharp free terminal. Juxta broad. Aedeagus large with broad coecum penis and sharp terminal ventrally; cornutus shorter than the half of aedeagus.

Material examined:—Muju (Mt. Deugyoo); 1♂, 13. VIII. 1975.

Distribution: Korea, Japan, Ussuri, Central and North Europe.

5. *Phalonia vectisana* (Hump. & West., 1845).

자두 가는 잎말이 나방(新稱)

Cochylis vectisana Hump. & West., 1845, Brit. Moths 2 : 176.

Tortrix griseana Haworth (1811) (nec Hubner, 1799), Lep. Brit. : 402.

Cochylis geyeriana Herrich-Schaffer, 1851 : 189.

Phalonia vectisana; Razowski, 1970 : 23—224.

Male genitalia (Fig. 3) : Socii large, broadened up to 2/3 of dorsal margin, then slightly curved, narrow terminally with round apex. Valva long, broad nearly up to the middle, then narrow and little curved upwards. Vinculum slender. Middle part of transtilla slender with small pointed hook terminally. Aedeagus long, curved; cornutus shorter than the half of aedeagus.

Material examined: —Suweon; 2♂, 1♀, 12. VII. 1974, 1♂, 23. VII. 1974, 1♂, 1♀, 17. VI. 1975 (from soybean), 5♂, 3♀, 13—28. VIII. 1975, 1♂, 1♀, 9. X. 1975. Muji (Mt. Deugyoo); 1♂, 13. VIII. 1975. Gwangju (Gyeonggi); 1♂, 1. VII. 1974 (from leaves of plum).

Notes: The larvae of this species feeds on the

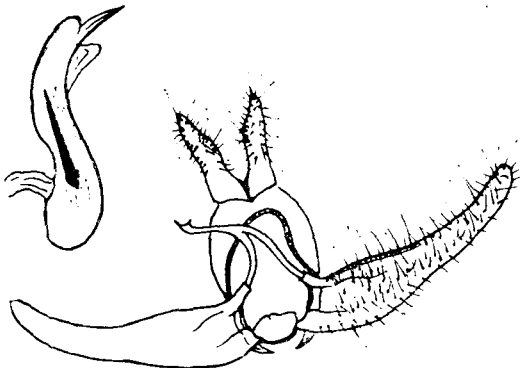


Fig. 3. *P. vectisana* H. & W.

leaves of soybean and plum trees were collected in early June and July. The moths appear from June to September.

Distribution: Korea, Japan, China, Europe.

6. *Phalonia minimana* (Cradja).

미니 가는 잎말이 나방(新稱)

Cochylis minimana Caradja, 1916, Dt. Ent. Z. Iris 30 : 52.

Phalonia walsinghamana Meyrick, 1928 : 489.

—Razowski, 1970 : 226—227.

Male genitalia (Fig. 4) : Tegumen moderate; socii large with broad base, with risings in the middle of dorsal parts, then slender terminally. Vinculum slender. Valva long, curved upwards, with ventral portions weakly sclerotized; sacculus not very developed, not long. Middle part of transtilla long narrow. Aedeagus rather slender, with short coecum penis and pointed ventrally; cornutus longer than the half of aedeagus.

Material examined:—Suweon; 1♂, 12. VII. 1974, 2♀, 24. VII. 1974, 1♀, 2. VIII. 1974, 3♂, 18. VIII. 1975, 3♀, 28. VIII. 1975.

Distribution: Korea, Japan, Ussuri, Europe, England.

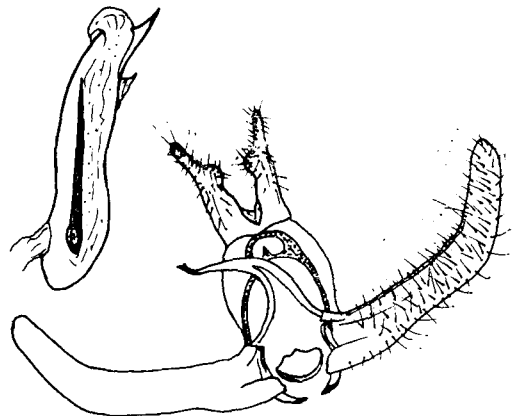


Fig. 4. *P. minimana* (Caradja)

Genus *Eupoecilia* Stephens, 1829

7. *Eupoecilia citrinana* (Razowski)

진노랑 가는 잎말이 나방(新稱)

Eupoecilia citrinana Razowski, 1960, Polskie Pismo ent., 30 : 401.—Razowski, 1970 : 281.

Male genitalia (Fig. 5) : Socii comparatively simple,

with broad basal part and narrow arms. Middle part of transtilla short. Valva broad, elongate, with round dorsal portions; sacculus developed, weakly sclerotized. Aedeagus large, with single long cornutus and numerous tiny thorns in vesica.

Material examined:—Suweon; 1♂, 10. IX. 1974. Muju (Mt. Deugyoo); 2♂, 13. VIII. 1975. Distribution: Korea, Manchuria, Ussuri, East-siberia.

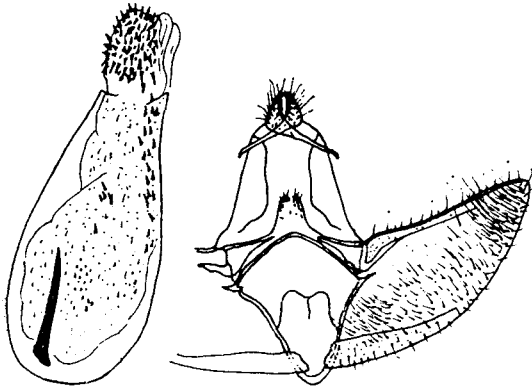


Fig. 5. *E. citrinana* Razowski

8. *Eupoecilia* sp.

Mr. P.E.S. Whalley collected a single male specimen in Suweon during his visit our institute from May to July in 1974. This specimen, which is deposited in B.M. (Nat. Hist.), is externally very closed to *E. ambiguella*, but I have no chance to examine the genitalia of this specimen.

Genus *Aethes* Billberg, 1820

9. *Aethes hoenei* (Razowski)

두줄 가는 앞말이 나방(新稱)

Aethes hoenei Razowski, 1964, Acta. Zool. Gracvaco 9 : 347—1970 : 307.

Korean specimen is same as *A. hoenei* given by Razowski (1970) in the coloration and the marking of the forewing. The male genitalia (Fig. 6) is also very closed to *A. hoenei*, but the aedeagus is somewhat different from it as shown in Fig. 6; no small thorns in aedeagus and cornutus is moderate, not very thin. Unfortunately, I have no chance to compare Korean specimen with the type of *A. hoenei*. Therefore I tentatively place

Korean specimen in *A. hoenei* in the present paper.

Material examined:—Suweon; 1♂, 15. VIII. 1975. Weonju (Mt. Chiak); 3♂, 30. V. 1974.

Distribution: Korea, China.

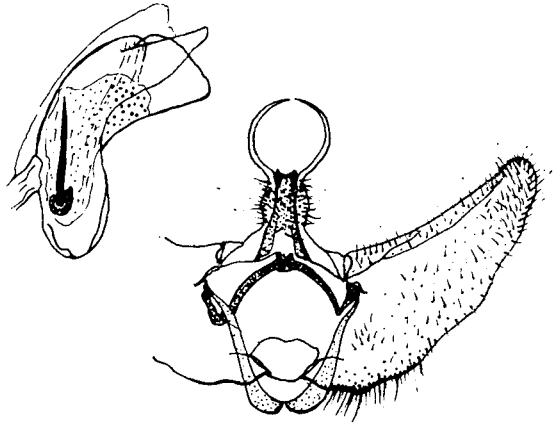


Fig. 6. *A. hoenei* Razowski

Genus *Cochylidia* Obraztsov, 1956

10. *Cochylidia contumescens* (Meyrick)

큰횡줄 가는 앞말이 나방(新稱)

Phalonia contumescens Meyrick, 1931, Exot. Microlep. 4 : 157.

Cochylidia contumescens; Razowski, 1970 : 376—377.

Male genitalia (Fig. 7). Tegumen large, dilated apically; socii small. Valva elongate with broad, rounded terminally, and concaved costal portions; sacculus very narrow with dilated basal part. Middle part of transtilla slender.

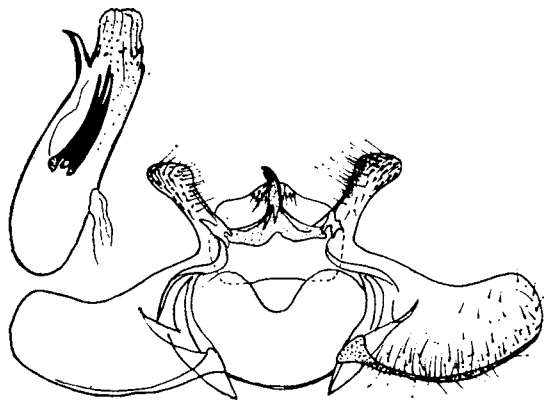


Fig. 7. *C. contumescens* (Meyrick)

Juxta very large, strongly concaved in the middle.
Aedeagus moderate, with long coecum penis and pointed terminally; 3 strong curved cornuti in Vesica

Material examined:—Suweon; 1 ♂, 14. V. 1974, 1 ♂, 2. VII. 1974, 1 ♂, 12. IX. 1974.

Notes: The type of this species, from Sapporo of Japan, is a female. The male genitalia of Korean specimen is nearly same as *C. contumescens* given by Razowski (1970).

Distribution: Korea, Japan.

11. *Cochylidia subroseana* (Haworth)

황줄 가는 일말이 나방(新稱)

Tortrix subroseana H. (1811), Lep. Brit., p. 402.

Cochylis phaleratana Herrich-Scheffer, 1851 : 189.

Cochylis flammeolana Tengström, 1848 : 161.

Cochylidia subroseana; Razowski, 1968 : 5, 1970 : 379.

Male genitalia (Fig. 8): Tegumen somewhat round distally; socii small. Valva slightly concaved costal portions, with nearly straight ventro-caudal portions; Sacculus not developed. Middle part of transtilla curved, strongly dentated.

Aedeagus large, with anterior portion broad, slender posteriorly; cornuti 8—14 large thorns and numerous small thorns in vesica

Material examined:—Suweon; 1 ♀, 22. V. 1974, 2 ♂, 12. VII. 1974, 1 ♂, 23. VII. 1974, 1 ♂, 12. IX. 1974. Muju (Mt. Deugyoo); 2 ♂, 1 ♀, 13. VIII. 1975. Isl. Heuksan; 1 ♂, 27. VI. 1974, 1 ♂ 3. VII. 1974.

Distribution: Korea, Japan, Manchuria, Europe.

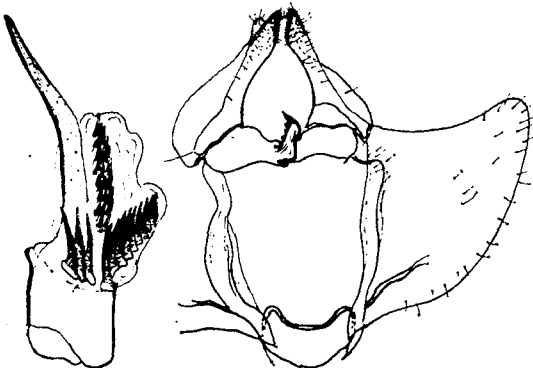


Fig. 8. *C. subroseana* (Haworth)

12. *Cochylidia richteriana* (F. von R.)

갈색 가는 일말이 나방(新稱)

Cochylis richteriana F. von R., 1837, Abbild. Bericht. Erganz. Schmett-Kunde, p. 92.

Cochylis olindiana Snellen, 1883 : 194.

Cochylis ineptana Kennel, 1900 : 233.

Phalonia xanthodryas Meyrick, 1936 : 155.

Cochylidia richteriana; Razowski, 1968 : 5 1970 : 382.

Male genitalia (Fig. 9); Tegumen protruded apically; socii large, rounded. Valva broad, elongate terminally, with concaved costal portions and slanting ventro-caudal portions; sacculus not developed. Middle part of transtilla long, narrow. Aedeagus with anterior portion broadened, thin posteriorly with short coecum penis; cornuti 15—20 large thorns and a group of small numerous thorns. Material examined:—Suweon; 2 ♂, 16. V. 1974, 15. VII. 1975.

Distribution: Korea, Japan, Amur, China, Europe.

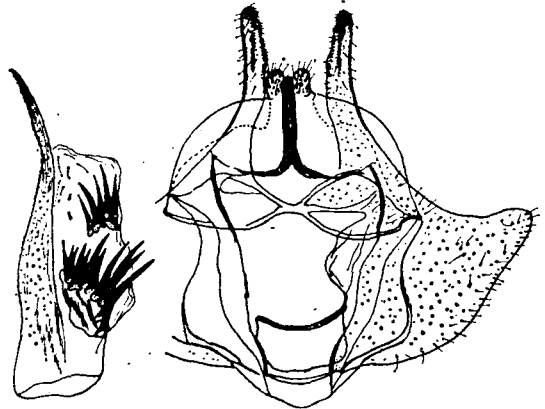


Fig. 9. *C. richteriana* (F. von R.)

적 요

Cochylidae(가는일말이나방과: 新稱)은 일말이나방上科(Tortricoidea)에 속하며 우리나라에서는 오늘날까지 알려지지 않았던 소형의 나방 그룹이다. 그러나 이미 1886년에 영국 곤충학자 J.H. Leech의 한반도 채집시에 2종(種)이 채집되어 외국 문헌상에는 기록되어 오고 있다.

이 과(科)에 속하는 종(種)들은 대개가 작물의 꽃, 싹, 줄기 등 비교적 연약한 조직의 내부를 갉아 피해를 주며 전세계적으로 분포하는 작물의 주요 해충들이다.

필자는 현재까지 채집된 재료중에서 금번에 분류 동정된 한국 미기록 10종을 발표한다.

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