

Two Species of Phycitinae (Lepidoptera, Pyralidae) New to Korea

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알락명나방아과의 (나비목, 명나방과) 미기록 2종에 관한 보고

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ABSTRACT: Two species of Phycitinae, *Asclerobia sinensis* (Caradja & Meyrick, 1937) and *Acrobasis malifoliella* Yamanaka, 2003, are reported for the first time from Korea. The adults and genitalia of the species are redescribed and illustrated.

Key words: Pyralidae, Phycitinae, *Asclerobia*, *Acrobasis*, New record, Korea

조 록: 명나방과(나비목)의 2종, *Asclerobia sinensis* (Caradja & Meyrick, 1937) 와 *Acrobasis malifoliella* Yamanaka, 2003는 한국에서 처음으로 보고된다. 본 연구에서는 이들 2종에 대하여 재기재하고 성충 및 생식기의 도해도를 제시하였다.

검색어: 명나방과, 명나방아과, *Asclerobia*, *Acrobasis*, 미기록종, 한국

Phycitinae is one of the largest subfamilies in Pyralidae, with approximately 5000 species recorded in the world (Li and Ren, 2009). In Korean Peninsula, Leech and South (1901) first reported 3 species of the tribe Phycitini, after that, Okamoto (1924), Shibuya (1927), Park and Lee (1958), Park (1976; 1983; 1993), Byun et al. (1997), Choi et al. (1998; 1999), Paek et al. (1999; 2002), Paek and Bae (1999; 2000; 2001a; 2001b) respectively made contribution to the study of Korean Phycitinae. Until now, 76 species has been reported from South Korea (Bae et al., 2008), however, the fauna of Korean Phycitinae is by no means complete.

In the present study, we report two Phycitinae species: *Asclerobia sinensis* (Caradja & Meyrick, 1937), *Acrobasis malifoliella* Yamanaka, 2003, which are newly recorded from Korea. Among them, the genus *Asclerobia* Roesler, 1969 is reported for the

first time from Korean Peninsula.

The morphology of adults and genitalia are redescribed and illustrated, the specimens examined are deposited in Incheon National University, Korea. Abbreviations used herein are as follows: TS- type species; TL- type locality; GW- Gangwon; GG-Gyunggi; GB-Gyungbug.

Systematic account

Genus *Asclerobia* Roesler, 1969

Asclerobia Roesler, 1969, 79(2): 245. TS: *Sclerobia sinensis* Caradja, & Meyrick, 1937.

Asclerobia sinensis (Caradja & Meyrick, 1937) (Figs. 1, 3, 5)

Sclerobia sinensis Caradja & Meyrick, 1937, 50: 148. TL: China.

Asclerobia sinensis (Caradja & Meyrick, 1937): Roesler, 1969, 79: 246.

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Redescription.

Adult (Fig. 1). Wing span 16-21 mm. Frons with yellowish white scales; antenna yellowish brown; labial palpus upturned, 1st segment yellowish white, 2nd segment brown, about 5 times as long as 3rd segment, 3rd segment porrect; maxillary palpus short, about 2/3 length of 2nd segment of labial palpus, and same length as 3rd segment of labial palpus in female; proboscis with fuscous scales at base. Thorax greenish yellow, patagium and tegula yellow. Forewing with ground color pale brownish yellow; antemedial line yellow, broad, convex outwardly from 1/3 of costa, inside with golden tuft of scales; costal area with pale gray scales; distal discoidal spots two, pale fuscous; terminal line gray, interneural spots fuscous; fringe pale grayish yellow. Hindwing with ground color pale gray; fringe pale gray.

Male genitalia (Fig. 3). Uncus triangular, lateral part folded inwardly, rounded at top; gnathos coniform, about 1/2 length of uncus, slightly hooked; valva narrow and pointed at apex, concave at apical part of dorsal line, costa sclerotized, same length

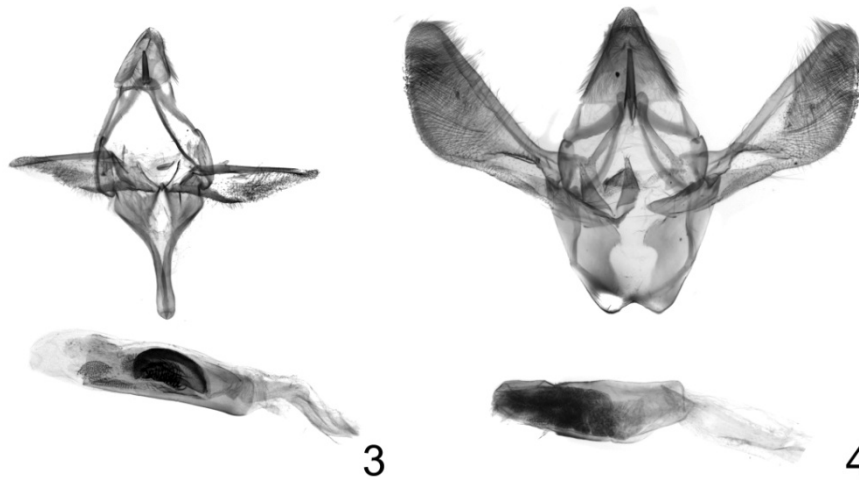
as valva, sacculus about 1/2 length of valva; harpe small, triangular; juxta V-shaped; vinculum rod-shaped, broad at base, as long as valva, saccus rounded; aedeagus cylindrical, longer than valva, cornutus crescent, with sclerotized wrinkles.

Female genitalia (Fig. 5). Apophyses posteriores about 2 times as long as apophyses anteriores; antrum square-shaped, lateral part slightly convex; ductus bursae as long as apophyses anteriores; corpus bursae oval, about 1.3 times as long as ductus bursae, signum band-shaped, formed by numerous minute spines, appendix bursae with some sclerites; ductus seminalis from appendix bursae.

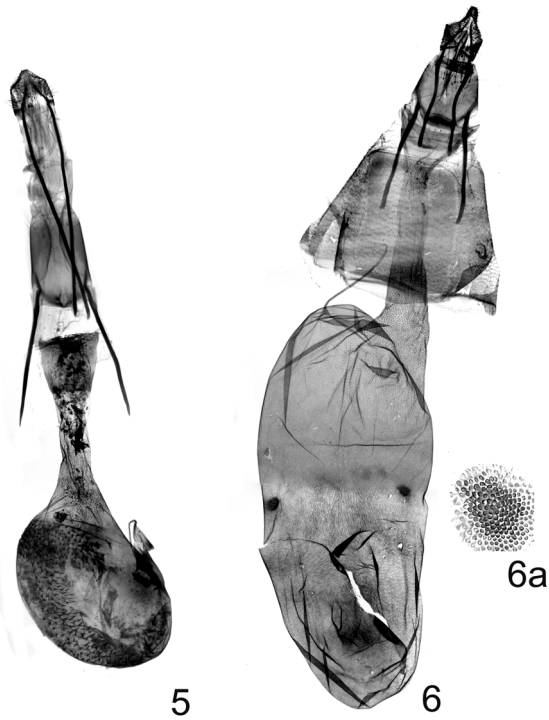
Material examined. 1♂, Korea, Hongneung(s), 3. VI. 1998 (Byun. B.K.), Slide No. UIK3401; 1♂, Korea, Hongneung(s), 10. VI. 1998 (Byun. B.K.), Slide No. UIK3403; 1♂, Korea, Hongneung(s), 24. VI. 1998 (Byun. B.K.), Slide No. UIK3402; 1♀, Korea, Hongneung(S), 17. VI. 1998 (Byun. B.K.), Slide No. UIK3462; 1♀, Korea, GB, Sangju-gun, Mt. Sokri, 17.VI. 1998 (Paek. Ahn & Kim), Slide No. UIK3463.



Figs. 1-2. Adult. 1. *Asclerobia sinensis* (Caradja & Meyrick, 1937); 2. *Acrobasis malifoliella* Yamanaka, 2003.



Figs. 3-4. Male genitalia. 3. *Asclerobia sinensis* (Caradja & Meyrick, 1937); 4. *Acrobasis malifoliella* Yamanaka, 2003.



Figs. 5-6. Female genitalia. 5. *Asclerobia sinensis* (Caradja & Meyrick, 1937); 6. *Acrobasis malifoliella* Yamanaka, 2003; 6a. Signum enlarged of *A. malifoliella* Yamanaka, 2003.

Distribution. Korea, China.

Remarks. The genus *Asclerobia* was established by Roesler in 1969 with the type species *Sclerobia sinensis* Caradja, & Meyrick, 1937, and only 3 species has been reported in the world until now. This is the first time to report this genus from Korea.

Genus *Acrobasis* Zeller, 1839

Acrobasis Zeller, 1839: 176. TS: *Tinea consociella* Hübner, [1813].

Mineola Hulst, 1890, 17: 114. TS: *Myelois indigenella* Zeller, 1848.

Seneca Hulst, 1890, 17: 115. TS: *Cateremna tumidulella* Ragonot, 1887.

Conobathra Meyrick, 1886: 271. TS: *Conobathra automorpha* Meyrick, 1886.

Trachycera Ragonot, 1893, 7: 2. TS: *Rhodophaea pallicornella* Ragonot, 1887.

Numonia Ragonot, 1893, 7: 4. TS: *Numonia cymindella* Ragonot, 1893.

Acrocaula Hulst, 1900, 32: 169. TS: *Acrocaula comacornella* Hulst, 1900.

Hylopylora Meyrick, 1933, 4: 391. TS: *Hylopylora craterantis* Meyrick, 1933.

Rhodophaeopsis Amsel, 1950, 1: 238. TS: *Rhodophaeopsis iranalis* Amsel, 1950.

Catacrobasis Gozmány, 1958, 50: 224. TS: *Tinea obtusella* Hübner, 1796.

Cyphita Roesler, 1971, 81: 188. TS: *Myelois rufofusellus* Caradja, 1931.

***Acrobasis malifoliella* Yamanaka, 2003 (Figs. 2, 4, 6)**

Acrobasis malifoliella Yamanaka, 2003, 17(4): 165. TL: Japan.

Redescription.

Adult (Fig. 2). Wingspan 18-22 mm. Frons covered with grayish brown scales; antenna fuscous; labial palpus upturned, over vertex, 1st segment grayish white, 2nd and 3rd segments grayish brown, the 2nd about 1.5 times as long as 3rd segment; maxillary palpus grayish brown, about 1/2 length of 2nd segment of labial palpus, proboscis with grayish brown scales at base. Thorax, patagium and tegula brownish gray. Forewing with ground color fuscous; basal area pale grayish brown; antemedial

line grayish white, outside with a black band, and a reddish brown wedge shaped mark on the outside of black band, the mark with a short and white band outwardly; postmedial line grayish white, sinus, bordered with black lines on both sides; median area mixed with grayish white scales at inner side of anterior of postmedial line, distal discoidal spots fuscous and separated; terminal line gray, interneural spots fuscous; fringe grayish brown. Hindwing with ground color brownish gray, fringe grayish brown.

Male genitalia (Fig. 4). Uncus triangular, rounded at top; gnathos rod-shaped, rather slim, about 2/3 length of uncus, slightly hooked at tip; trantilla shallow concave at top; valva narrow at base, costa well developed, slightly curved at 2/3 of anterior part, sacculus wide at base, slim at tip, about 2/3 length of valva, harpe trianglur in shape, and near inner base of valva; vinculum U-shaped, about same length as valva, saccus concave; juxta V-shaped, lateral lobes about 4/5 length of gnathos; aedeagus cylindrical, about same length as valva, with sclerotized wrinkles and granulates inside, cornutus absent.

Female genitalia (Fig. 6). Apophyses posteriores about same length as apophyses anteriores; antrum sclerotized and lip-shaped, with width about 3 times as long as length; ductus bursae membranous, rather short, about 1/2 length of corpus bursae, anterior part wider than posterior part, and scobinate inside; corpus bursae elongated, with two signa near middle of bursae, rounded signa formed by several minute sclerites; ductus seminalis from posterior part of corpus bursae.

Material examined. 1 ♂, 1 ♀, Korea, GG, Yeoncheon-gun, Mt. Godae, 11. VII. 2000 (Paek, Kim, Kim & Ko), Slide No. UIK 3457, UIK3434; 1 ♀, 1 ♂, Korea, GW, Hwacheon-gun, Mt. Bokju, 13. VII. 2000 (Paek, Kim, Kim & Ko), Slide No. UIK3435, UIK-3458; 1 ♀, Korea, GW, Yanggu-gun, Mt. Daewoo, 11. VII. 2000 (Paek, Kim & Yu), Slide No. UIK3455; 1 ♂, Korea, GW, Hongcheon-gun, Mt. Odae, 22. VII. 2000 (Bae, Lee & Lee), Slide No. UIK3456.

Distribution. Korea, China, Japan.

Remarks. This species is similar to the species *A. bifidella* (Leech, 1889), but it can be distinguished from the latter by the following characteristics: the antemedial line is almost vertical, outside with black band and reddish brown mark, a short and white band on the outside of the reddish brown mark, corpus bursae with two signa in female genitalia; as for the *A. bifidella*,

the antemedial line is oblique outwardly, inside with a grayish brown mark, and only one signum in female genitalia.

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