

## Revision of the Tribe Cnephasiini (Lepidoptera: Tortricidae: Tortricinae) in Korea

韓國產 은빛잎말이나방族의 分類學的 정리

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**ABSTRACT** Nine species belonging to 6 genera of the tribe Cnephasiini, Tortricinae are revised in Korea. Of them a new genus, *Immariana* gen. nov. and 3 species, <*Immariana acutiella* sp. nov., *Kawabeia fuscofasciata* sp. nov., *K. paraignavana* sp. nov.> are described as new to science. Two species, *Kawabeia ignavana* Christoph and *Oporopsamma stenoptera* (Filipjev) are reported for the first time from Korea. A key to the genera of the tribe and all available information on the larval host plants are also given.

**KEY WORDS** Systematics, Lepidoptera, Tortricidae, Tortricinae, Cnephasiini, Korea

**초 록** 韓國產 은빛잎말이나방族은 6屬 9種으로 정리되며 이중 新屬 *Immariana*를記載함과 동시에 3新種; 뽕족날개잎말이(*Immariana acutiella* sp. nov.), 검정무늬잎말이(*Kawabeia fuscofasciata* sp. nov.), 어리무늬잎말이(*Kawabeia paraignavana* sp. nov.)를記載 발표한다. 또한 겨우살이잎말이, *Kawabeia ignavana* Christoph와 꼬마줄무늬잎말이, *Oporopsamma stenoptera* (Filipjev) 등 2種이 우리나라 未記錄種으로 報告된다.

**검색어** 分類, 나비목, 잎말이나방科, 잎말이나방亞科, 은빛잎말이나방族, 韓國

This study was conducted to revise the Korean species of the tribe Cnephasiini belonging to the subfamily Tortricinae. The tribe was often treated as a different status by previous authors (Obraztsov 1955, Razowski 1976). Superficially it is closer to the Archipini than to the Tortricini in the subfamily, but it differs from the Archipini by the presence of intracellular vein on the forewing, and the characters of male and female genitalia as follows: in male, the uncus is usually slender bearing numerous

minute spines basally and rather pointed apically; in female, the signum forms a shape of an elongate band, consisting of numerous spine-like particles; ductus bursae is comparatively short, and the large papillae analis is one of the characteristic structures of the main groups of the Cnephasiini.

In the "Microlepidoptera of Korea", Park (1983) listed only 1 species of this group, *Eana argentana* Clerk, which had previously been known from Korea. *Eana vetulana* Christoph, which also were known from Korea, was excluded in his publication, due to the uncertainty

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of its distribution in Korea. Recently Park and Byun(1989, 1990) added two other species, *Eulia ministrana* (Linnaeus) and *Cnephasia cinereipalpata* Razowski, to the Korean fauna.

In the present paper a total of 9 species belonging to 6 genera including a newly proposed genus of the tribe Cnephsiini are revised. Among them 3 species, *Immariana acutiella* sp. nov., *Kawabeia fuscofasciata* sp. nov., and *K. paraignavana* sp. nov. are described as new to science and two species, *Kawabeia ignavana* (Christoph) and *Oporopsamma stenoptera* (Filipjev) are newly recorded for the first time from Korea. All the types and examined specimens are now preserved in the collection of the Center for Insect Systematics, Kangweon National University, Chuncheon, Korea.

#### Key to the genera of Cnephsiini

1. Forewing with veins  $R_5$  and  $M_1$  stalked .....  
.....*Eulia*  
-Forewing with all veins separated .....2
2. Hindwing  $R_s-M_1$  from one point of median cell .....3  
-Hindwing  $R_s-M_1$  stalked or separate (few species of *Oporopsamma*) .....4
3. Sacculus no hairy termination; transtilla with broad central part; gnathos without developed terminal plate  
.....*Eana*  
-Sacculus provided with free hairy termination; transtilla usually band-like, seldom setose ventrally; gnathos terminating in a plate  
.....*Cnephasia*
4. Gnathos weakly developed or absent .....  
.....*Oporopsamma*  
-Gnathos strong, large, with well developed median plate .....5
5. Valva with strongly expanding basal part of costa; transtilla weakly developed, forming a

- slender rod .....*Tortricoides*  
-Valva moderately slender; transtilla well developed with a broad median part.....6
6. Aedeagus bifurcate; median part of transtilla broadened, not spined; sacculus simple or with hooked termination.....*Kawabeia*  
-Aedeagus simple; median part of transtilla rounded, spinose; sacculus slender with complicatedly rolled termination .....*Immariana*

### SYSTEMATICS

#### Tribe Cnephsiini Obratzov, 1949

##### *Eulia* Hübner [1825]

*Eulia* Hübner, Verz. bek, Schm., 379.

<Type species : *Phalaena ministrana*  
Linnaeus, 1758 >

Syn. *Lophodorus* Stephens, 1829.

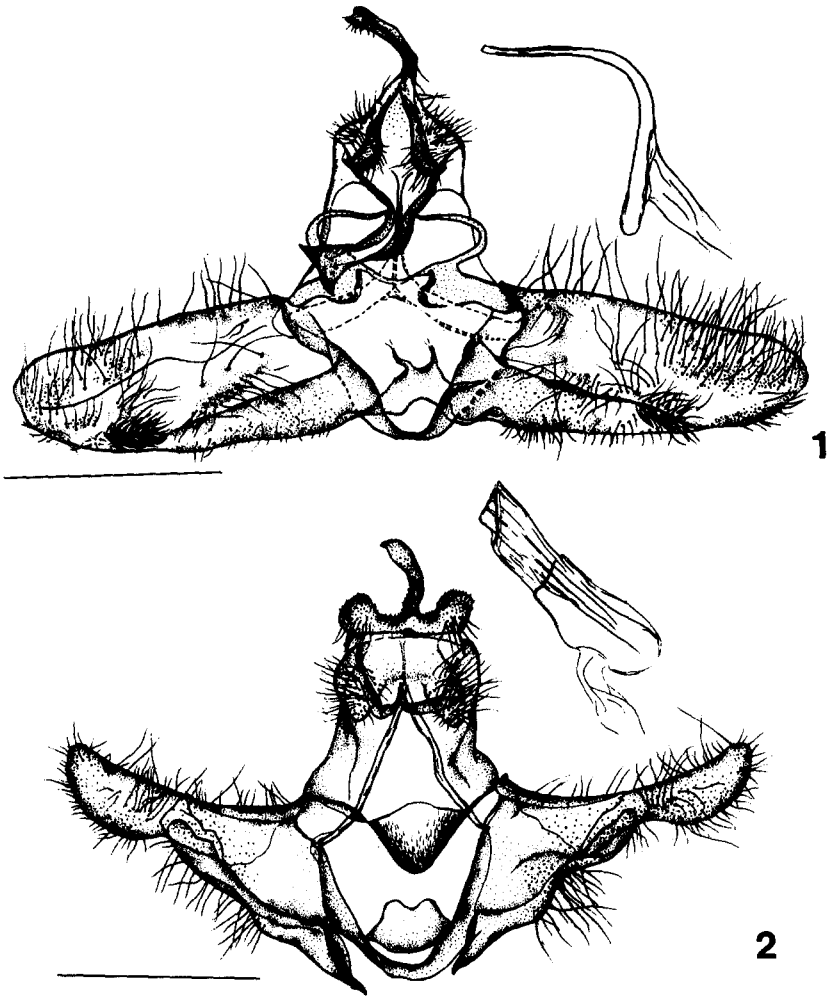
##### *Eulia ministrana* (Linnaeus)

민무늬잎말이 (Fig. 1)

*Phalaena ministrana* (Linnaeus), 1758, Syst. Nat. ed.,: 531.

*Eulia ministrana*: Inoue, 1954, Check List Lep. Japan, 1: 82; Hannemann, 1961, Tier. Deut., 48(1): 35; Obratzov, 1965, Tijd. Ent., 108(1): 3; Razowski, 1965, Acta Zool. Cracov., 10(3): 222; Yasuda, 1975, Bull. Univ. Osaka Pref., (B)24: 150, figs. 127, 128, 456, 457; Bradely et al., 1973, Brit. Tort. Moths.,: 146, Pl. 35: 5-7; Kuznetsov, 1973, Ent. Obozr., 56: 71; Kawabe, 1982, Moths of Japan, 1: 77, 2: 162, Pls. 18: 1,2; Razowski, 1987, Acta Zool. Cracov., 30(11): 205, figs. 354, 355, 684, 685; Liu, 1983, Icon. Heter. Sin., 1:34; Park & Byun, 1989, Korean J. Ent., 19(4): 327, fig. 15.

Wing span. 18-25 mm in male.



Figs. 1-2. Male genitalia: 1. *Eulia ministrana* (Linnaeus)-gen. slide no. 2113; 2. *Eana vetulana* (Christoph)-gen. slide no. 2592(scale bars: 1mm).

**Male genitalia**(Fig. 1). Uncus long, expanded terminally. Socii drooped. Gnathos with large terminal plate. Valva broad, elongate, costa nearly straight; sacculus broad at base. Transtilla slender, with a couple of long, curved lateral processes. Aedeagus very thin, long curved at middle; no cornuti.

**Female.** Unknown.

**Material examined.** GW: 1♂, Mt. Seolak-san, 26.V.1983, S.S. Kim; 1♂, Yangyang, 15.V. 1987, K.T. Park; 2♂, Mt. Odae-san, 23.V.1989,

K.T. Park & B.K. Byun; 7♂, Mt. Odae-san, 26.VI.1989, K.T. Park & B.K. Byun. GG: 1♂, Yongin, 21.V.1989, S.B. Ahn.

**Distribution.** Korea, Japan, China, USSR (Siberia), Europe, N. America.

**Host plants.** *Corylus* sp., *Betula* sp., *Fraxinus* sp., *Sorbus* sp., *Prunus* sp., *Vaccinium* sp., *Epilobium* sp., *Rubus* sp., *Rosa* sp., *Fagua* sp., *Quercus* sp., and *Tilia* sp. have been known from England (Bradely, 1973).

**Remarks.** Taxonomic status of the genus

*Eulia* is still in doubtful. Many species described under this generic name by Meyrick (1931) or listed by Obraztsov (1956) have been removed to other genera belonging to Archipini. Razowski (1965) and Yasuda (1975) placed the genus *Eulia* in Cnephasiini, but Razowski (1987) removed the genus *Eulia* to the tribe Archipini. Kuznetsov and Stekonikov (1977) erected the subtribe Euliae for *Eulia* and *Pseudagyrotoza*, belonging to the Cochylini on the basis of shared archaic male genitalia musculature. Powell (1986) erected the Euliini for *Eulia* and its related genera. Some recent authors (Brown 1990, Horak & Brown 1991) follow his suggestion, but we tentatively place this genus in the tribe Cnephasiini. There are some variations in the ground color of the forewing of this species, some are rather pale brown at the basal area and near the termen of the forewing.

***Eana* Billberg, 1820**

*Eana* Billberg, 1820, Enum. Insect.,: 90.

<Type species: *Tortrix penziana* Thunberg  
& Becklin >

Syn. *Nephodesm* Hübner, [1825], Verz.  
bekannter Schmett.,: 390.

***Eana argentana* (Clerk, 1759)**

은빛잎말이

*Phalaena argentana* Clerk, 1759, Icon. Ins., 1: 11.  
*Tortrix argentana*: Meyrick, 1895, Hand. Brit.  
Lepid.,: 542; Walsingham, 1900, Ann. Mag.  
Nat. Hist., 7(5): 460.

*Cnephasia argentana*: Inoue, 1954, Check List  
Lepid. Japan, 1: 82. (misspelling as *Cnephasis*);  
Zool. Soc. Kor., 1968, Nom. Anim.  
Korea, 2: 47.

*Ablabia argentana*: Barrett, 1905, Lep. Brit. Isl.,

X: 253.

*Eana argentana*: Obraztsov, 1956, Tijd. Ent., 99  
(3): 120; Hannemann, 1961, Tier. Deut., 48  
(1): 44; Razowski, 1965, Acta Zool. Cracov.,  
10(3): 304; Bradely et al., 1973, Brit. Tort.  
Moths., 163, Pl. 37: 10; Kuznetsov, 1973,  
Ent. Obozr., 56: 94; Yasuda, 1975, Bull.  
Univ. Osaka Pref., (B)27: 152; Kuznetsov,  
1975, Ins. Mongolia, 3: 415; Park & Park,  
1976, Res. Rep. O.R.D. Korea, 18: 88; Park,  
1983, Flora & Fauna Kor., 27: 644; Park,  
1983, Ins. Kor., 3: 18; Bland, 1986, Ent.  
Gaz., 37: 9; Razowski, 1987, Acta Zool.  
Cracov., 30(11): 197, figs. 326-328, 675.

This species was first cited by Inoue (1954) as it to be distributed in Korea and then several previous authors (Zool. Soc. Kor. 1968, Park 1983) followed him, but no specimen has been found in S. Korea to date. This species probably only occurs in the northern part of Korean Peninsula, if it does, considering its distributional range.

**Distribution.** Korea, Japan, USSR, Caucasus, India, Kashmir, Asia Minor, Europe, N. America, Africa.

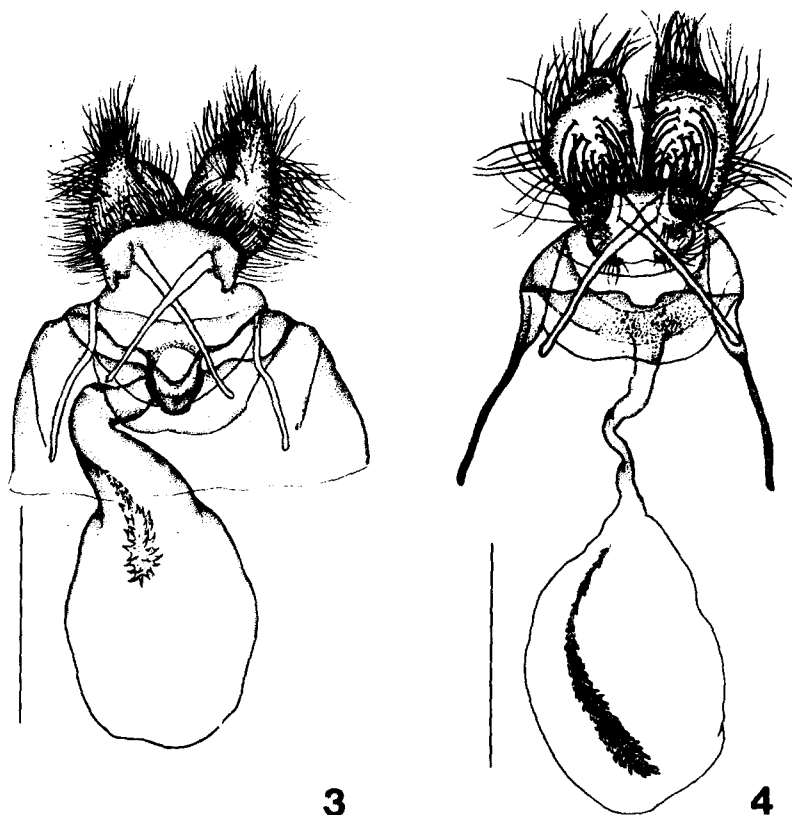
**Host plants.** *Poa pratensis* Linnaeus (Gramineae) and *Larix leptolepis* Gorden (Pinaceae) were known from Japan (Yasuda, 1975).

**Remarks.** Obraztsov (1962) divided the genus *Eana* into 3 subgenera viz., *Eana*, *Subeana* and *Ablabia*, based on male genital characters. However, the authors tentatively place Korean species in the nominate genus, based on the previous publications.

***Eana vetulana* (Christoph)**

썩잎말이 (Figs. 2, 3)

*Sciaphila vetulana* Christoph, 1881, Bull. Soc.  
imp. nat. Moscou, 56: 12, Pl. 1, fig. 10.



Figs. 3-4. Female genitalia: 3. *Eana vetulana* (Christoph)-gen. slide no. 2594; 4. *Cnephasia cinereipalpana* Razowski-gen. slide no. 2461 (scale bars: 1mm).

*Tortrix vetulana*: Walsingham, 1900, Ann. Mag. nat. Hist., 7(5): 459.

*Cnephasia vetulana*: Inoue, 1954, Check List Lep. Japan, 1: 82. (misspelling as *Cnephasis*): Zool. Soc. Kor., 1968, Nom. Anim. Korea, 2: 47.; Obratsov, 1956, Tijd, Ent., 99 (3): 112.

*Eana vetulana*: Razowski, 1965, Acta Zool. Cracov., 10(3): 324, Pl. 25: 56, figs. 140-143, 144; Kuznetsov, 1973, Ent. Obozr., 56: 95; Kawabe, 1982, Moths of Japan, 2: 162.

**Wing span.** 21-25 mm. Forewing slightly broadend from base to the termen in male, but rather uniform in female; termen strongly oblique; ground colour orange grey with two

small black dots at 1/3 and 2/3 on the forewing in male but nearly atrophied in female.

**Male genitalia** (Fig. 2). Lateral lobes of uncus fairly short, round apically; central lobe more or less slender with acute tip. Socii broad with dense long hairs laterally, expanding anteriorly. Gnathos weakly sclerotized. Transtilla subtriangular at middle, with narrow band-shaped lateral arms. Valva elongate, costa well sclerotized, reaching to 2/3. Aedeagus strong, pointed apically.

**Female genitalia** (Fig. 3). Lamella postvaginalis with widened lateral portion. Lamella antevaginalis forming a large widened plate. Ostium large, cup-shaped, heavily sclerotized anteriorly. Ductus bursae very short, wide. Corpus

bursae large, ovate; signum rather short, broadened anteriorly, bearing numerous short spines.

**Material examined.** GW: 1♂, 1♀, Mt. Samag-san, 13.VI.1990, B.K. Byun; 1♂, same locality, 13.VI.1990, K.T. Park; 1♂, same locality, 22.V.1990, K.T. Park; 1♂, Chuncheon, 8.VI.1990, K.T. Park; 1♂, 1♀, Chuncheon, 29.V.1989, K.T. Park.

**Distribution.** Korea, Japan, Eastern Asia (Southern Ussuri, Amur).

**Remarks.** This species was reported for the first time from Korea by Walsingham (1900), but no further specimen was found in Korea. During the study of this group, both sexes of this species were fortunately collected from this country.

#### *Cnephasia* Curtis, 1826

*Cnephasia* Curtis, 1826, Brit. Ent., 3: 100.

<Type species: *Olethreutes pascuana*  
Hübner, 1822>

#### *Cnephasia cinereipalpata* Razowski

얼룩회색잎말이 (Fig. 4)

*Cnephasia cinereipalpata* Razowski, 1958, Acta Zool. Cracov., 2(25): 581, Pl. 56: 27, 28, Pl. 62: 57; Razowski, 1965, Ibid., 10(3): 255; Yasuda, 1975, Bull. Univ. Osaka Pref., (B) 27: 151, figs. 129, 130, 456, 617; Kawabe, 1982, Moths of Japan, 1: 77, 2: 162, Pl. 18: 3; Park & Byun, 1990, Kor. J. Appl. Ent., 29(2): 117, fig. 15.

**Wing span.** 19-21mm in female. Ground colour more or less pale grey; post basal blotch dark brown, prominent in middle posteriorly; median fascia from middle of costa to 2/3 of dorsum. Hindwing grey; cilia light brown.

**Male.** Unknown.

**Female genitalia** (Fig. 4). Sterigma large, emarginated at middle; antrum weakly sclerotized; ductus bursae as long as the length of corpus bursae; corpus bursae large, ovate; signum very long, almost 4/5 as long as length of corpus bursa, bearing numerous dent-like particles.

**Material examined.** GG; 1♀, Gwanglung, 27.VI.1986, K.T. Park & U. Park; 2♀, Same locality, 14.V.1986, K.T. Park; 2♀, Same locality, 3.VI.1988, K.T. Park; 2♀, Mt. Yumyong-san, 17.VI.1990, B.K. Byun. GW: 1♂, Hongcheon Exp. Forest, 10.VI.1988, K.T. Park.

**Distribution.** Korea, Japan, USSR (Maritime Territory), China (Manchuria), East Asia.

**Host plants.** *Malus pumila* Mill., *Rubus* sp., *Fragaria ananassa* L. (Rosaceae); *Vaccinium vitis-idaea* L., *Artemisia montana* Pampan, *A. princeps* Pampan, *Erigeron annuus* L., *Cirsium* spp., *Solidago virga-aurea* L. (Compositae); *Paseolus* sp., *Trifolium repens* L., *Medicago sativa* L. (Leguminosae); *Mentha arvensis* L. (Labiatae); *Nicotiana tabacum* L. (Solanaceae); *Populus sieboldi* Miq. (Salicaceae); *Chenopodium album* L. (Chenopodiaceae); *Rumex obtusifolius* Linn. (Polygonaceae); *Heracleum moellendorffii* Hance (Umbelliferae) and *Diospyros kaki* Thumb. have been known from Japan (Yasuda, 1975).

#### *Kawabeia* Obratzsov, 1965

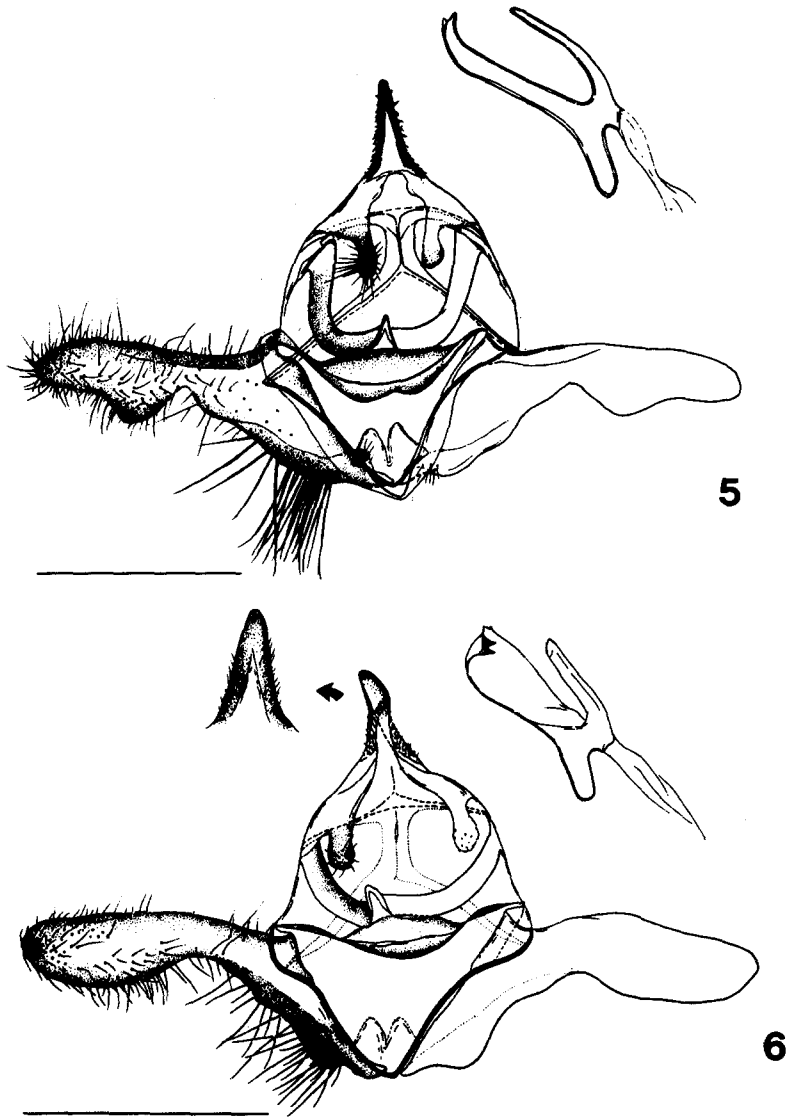
*Kawabeia* Obratzsov, 1965, Tijd. Ent., 108: 29.

<Type species: *Cheimatophila ignavana*  
Christoph>

Syn. *Kawabea* Razowski, 1965, Acta Zool. Cracov., 10(3): 293.

#### *Kawabeia ignavana* (Christoph)

겨울살이잎말이(新稱)(Fig. 5)



Figs. 5-6. Male genitalia: 5. *Kawabeia ignavana* (Christoph)-gen. slide no. 2608; 6. *K. paraignavana* sp. nov.-gen. slide no. 2108(scale bars: 1mm).

*Cheimatophila ignavana* Christoph, 1881, Bull. Soc. imp. Nat. Moscou, 56(fasc. 1): 73.

*Tortricodes ignavana*: Kennel, 1910, Pal. Tort.,: 225, Pl. 11: 16; Obratsov, 1956, Tijd, Ent., 99(3): 118; Kawabe, 1963, Tinea, 6(1/2): 5, figs. 1, 2, Pl. 3: 5, 9-11.

*Kawabea ignavana*: Razowski, 1965, Acta Zool.

Cracov., 10(3): 294, figs. 109, 110, 111; Kuznetsov, 1973, Ent. Obozr., 56: 94; Yasuda, 1975, Bull. Univ. Osaka Pref., (B): 27:153, figs. 132, 459, 618.

*Kawabeia ignavana*: Kawabe, 1982, Moths of Japan, 1: 78, 2: 162, Pl. 18: 7, 8; Razowski, 1987, Acta Zool. Cracov., 30(11): 196, figs.

317-319, 672.

**Wing span.** 28-32 mm. Costa of forewing nearly straight but curved beyond 3/4; ground colour pale greyish brown with a distinct reuniform spot at the end of cell.

**Male genitalia** (Fig. 5). Uncus rather slender, narrower toward apex, minutely spined along lateral margin. Socii short, drooping, round terminally. Gnathos with strong lateral arms. Juxta divided into two lateral subtriangular plates. Valva elongate, more or less sclerotized, ventral margin of terminal portion slightly concaved; sacculus short, less than half of valva. Transtilla much broadened. Aedeagus bifurcate, slender; dorsal arm with two terminal dentates, longer than ventral arm.

**Female.** Unknown.

**Material examined.** 3♂, Cheongryang-ri, Seoul, 19-21. III.1985, K.J. Won.

**Distribution.** Korea (new record), Japan, USSR (Amur, Central Siberia).

***Kawabeia paraignavana* sp. nov.**

어리무늬잎말이 (新稱) (Fig. 6)

**Wing span.** 21 mm in male. Forewing moderate, not very elongate as much as in preceding species; costa slightly expanded outwardly to middle; termen more or less oblique; ground colour pale greyish brown, with indistinct grey median fascia. Hindwing grey.

**Male genitalia** (Fig. 4). Uncus rather short, broadened basally, with obtuse tip, tapering posteriorly. Socii moderate, round anteriorly, Gnathos arms rather broad, median termination well developed. Valva elongate, costa slightly curved near middle, then nearly straight; ventral margin smoothly emarginate beyond middle; terminal portion without emargination

ventrally; sacculus weakly developed, reaching to before middle of ventral margin, slightly protruded near base. Transtilla broadened at middle. Aedeagus bifurcate; dorsal arm with two small sclerotized lobes at caudal portion, ventral arm slender, 2/3 as long as dorsal part.

**Material examined.** Holotype: Male, Gwanglung, Gyonggi Prov., 12.IX.1986, K.J. Won, gen. slide no. 2108.

**Distribution.** Korea (Central).

**Remarks.** This new species is very similar to *K. ignavana* Christoph, but easily distinguished by the shape of uncus, valva and aedeagus of male genitalia as follows: Uncus broader; ventral margin of caudal portion of valva not emarginated, with a small protrusion ventrally near base of sacculus in male genitalia; dorsal arm of aedeagus much broader than that of *K. ignavana*.

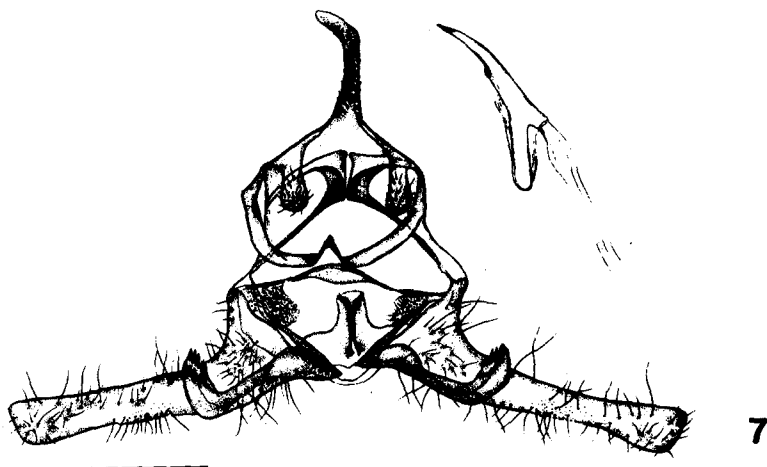
***Kawabeia fuscofasciata* sp. nov.**

검정무늬잎말이 (新稱) (Figs. 7, 9)

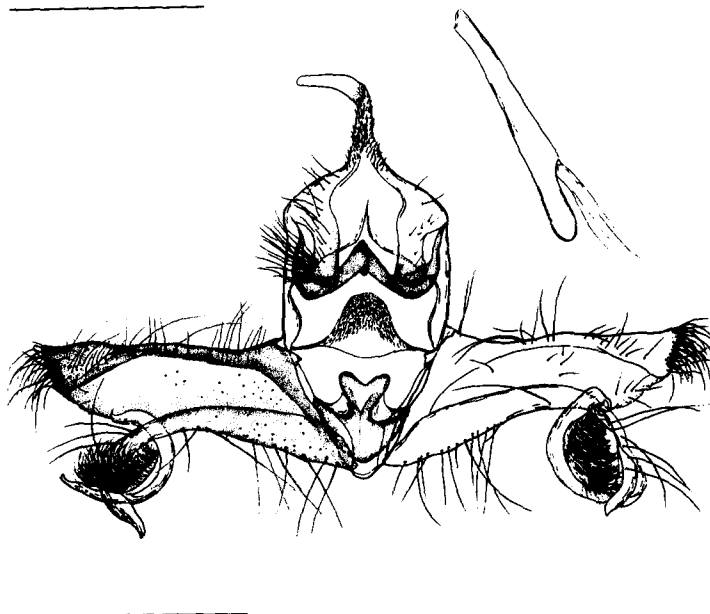
**Wing span.** 24-27 mm. Forewing expanded posteriorly; costa slightly expanded outwardly before middle, but nearly straight in female; termen strongly oblique in male, but moderate in female; ground colour pale grey; markings irregular, dark grey, more distinct in female; basal patch more or less broad, covered about 1/4; a slender pale grey fascia positioned obliquely, ended at the lower margin of cell, followed by median fascia; median fascia starting from near 1/3 of costa obliquely extended to middle of cell, then broadly expanded to end of cell and before tornus, followed by a large elliptical pale grey patch upper tornus; apical spot not well defined, extended to beyond tornus. Hindwing pale grey, cilia white.

**Male genitalia** (Fig. 7). Uncus long, rather





7



8

Figs. 7-8. Male genitalia: 7. *Kawabeia fuscifasciata* sp. nov.-gen. slide no. 2246; 8. *Immariana acutiella* sp. nov. gen. slide no. 2159 (scale bars: 1mm).

broad, obtuse apically. Tegumen broadly developed. Socii large, round anteriorly. Gnathos with narrow, slender arms; median termination well developed. Transtilla moderately broadened at middle. Valva very slender, strongly expanded at base; sacculus upturned terminally beyond costa, with irregularly dentated termination, reaching to before middle of the ventral margin of valva. Aedeagus slender, dorsal arm

not strongly curved, with a protrusion near 2/3 ventrally; ventral arm atrophied.

**Female genitalia** (Fig. 9). Sterigma membranous, broadened laterally, with semicircular ventral plate beyond ostium bursae posteriorly. Ostium well sclerotized, caudal margin emarginate triangularly. Antrum very short, with sclerotized plates laterally. Ductus bursae and corpus bursae was missed during dissecting

process.

**Material examined.** Holotype: Male, Gwanglung, Gyonggi Prov. 8.XI.1985, K.J. Won, gen. slide. no. 2107. Paratypes: 1♂, same locality and date as holotype, gen. slide no. 2246 (male); 1♀, Gwanglung, 8.XI.1986, K.J. Won, gen. slide no. 2109 (female).

**Distribution.** Korea (Central).

**Remarks.** This new species is very similar to *K. razowskii* in superficial and male genital structures, but it can be separated from the latter by the shape of sacculus of male genitalia, which provided with large, well developed termination, and slender aedeagus without ventral processes.

*Immariana* gen. nov.

<Type species: *Immariana acutiella* sp. nov.>

Superficially this new genus is very similar to the previously known related genera of the tribe Cnephagini such as *Oxypteron* Staudinger, *Tortricoides* Guenée and *Kawabeia* Razowski. Especially it is close to *Kawabeia* in the venation of both wings, but it can be separated from the latter by following characters: In forwing venation, the distance  $R_1-R_2$  less than twice as long as  $R_2-R_3$ ; chorda ill-defined; in hindwing,  $R_5-M_1$  long-stalked, instead of very shortly stalked in *Kawabeia*,  $M_2$  very close to  $CuA_1$  at base. It is also similar to *Oporopsamma* Gozmany and *Oxypteron* Staudinger, in which  $R_5$  and  $M_1$  starting from one point of cell in hindwing. In male genitalia, valva rather broad, not slender as much as in *Kawabeia*; sacculus long enough, with complicatedly rolled free termination; transtilla well developed with round central spinous part posteriorly instead of absence in *Tortricoides* or simply forming band-like in *Kawabeia*; aedeagus not bifurcate. No

remarkably separable characters from the related genera are found in female genitalia.

*Immariana acutiella* sp. nov.

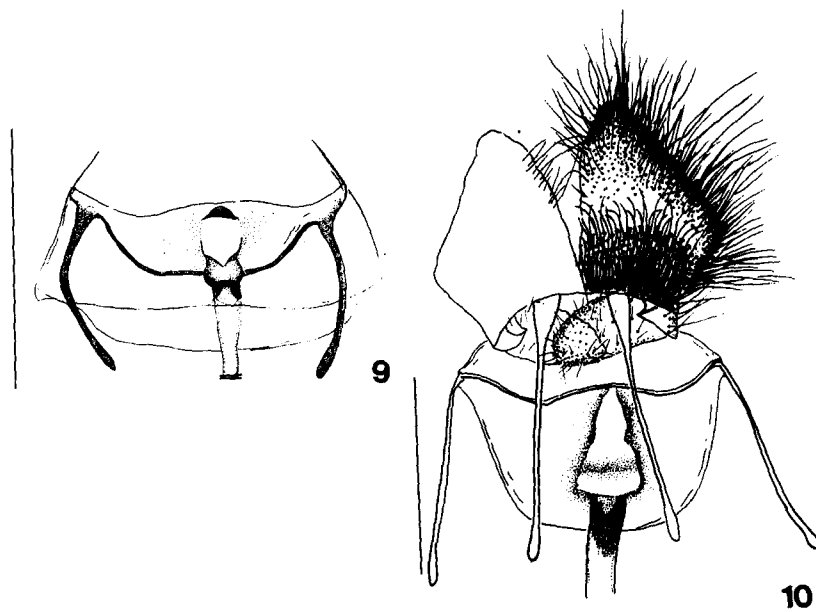
(Figs. 8, 10, 13)

**Wing span.** 27-29 mm. Forewing elongate, costa slightly curved near base; apex sharply protruded; termen strongly oblique. Ground colour greyish yellow, neutrally coloured and not strikingly marked, especially in female; basal patch dark grey, often obscure; median fascia unclearly marked from middle of costa to beyond middle of dorsum. Hindwing grey, broader than width of forewing.

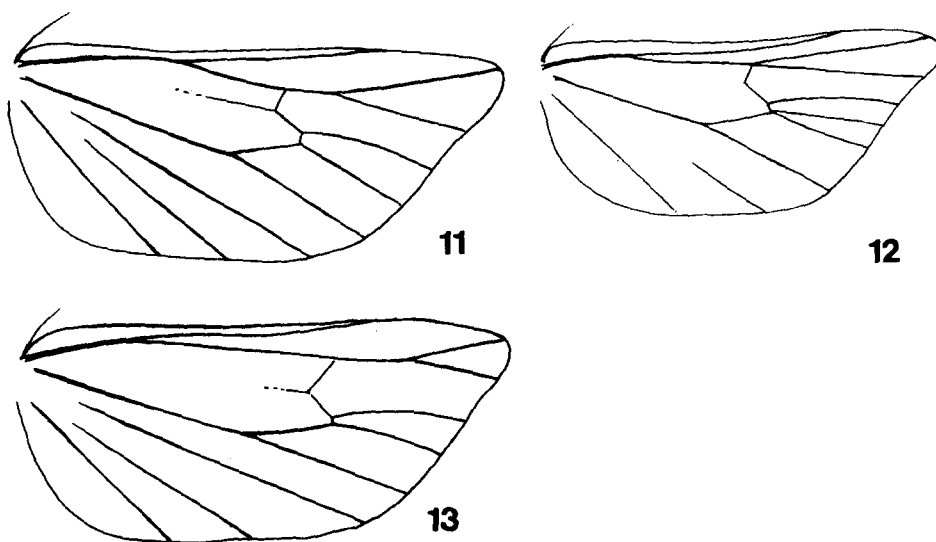
Venation of both wings are very close to the genus *Kawabeia*. In forwing, all vein separated; chorda ill-defined, orginate far from beyond  $R_1$ ; disatance of  $R_1-R_2$  farther than  $R_2-R_3$  but less than twice;  $R_5$  reaching beyond apex.  $M_2$  far from  $M_3$  at base,  $M_3$  closer to  $CuA_1$  at base. In hindwing  $R_5-M_1$  long-stalked, length of stalk 2/5 of  $R_5$  branch;  $M_2$  and  $CuA_1$  separate at base, but very close at base.  $M_3$  absent.  $CuA_2$  arising from beyond 4/5.

**Male genitalia** (Fig. 8). Uncus slender, apex obtuse, bearing numerous minute spine from base to beyond meddle. Socii well developed, large, drooping, rounded apically. Gnathos strongly sclerotized with a large median process. Valva rather broad; sacculus long, reaching near to 3/4 of valva, with complicatedly rolled free termination, bearing dense hairs. Transtilla with large, round median spinose protrusion posteriorly. Juxta large, characterized. Aedeagus simple, long, not bifurcate, blunt apically.

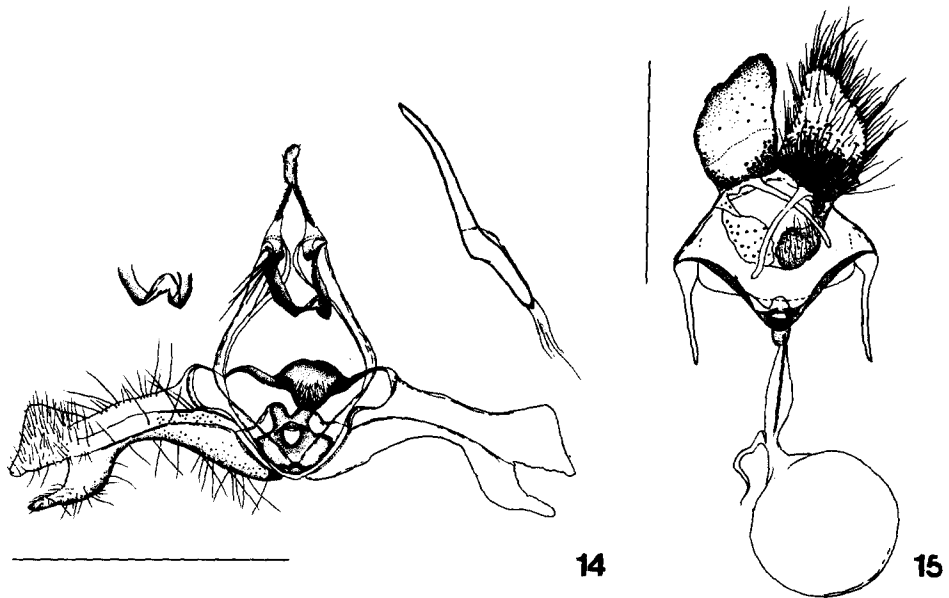
**Female genitalia** (Fig. 10). Papilla analis broad with numerous hairs at the tip and short scale-like hairs at base densely; apophysis



**Figs. 9-10.** Female genitalia: 9. *K. fuscofasciata* sp. nov.-gen. slide no. 2109; 10. *Immariana acutiella* sp. nov.-gen. slide no. 2160(scale bars:1mm).



**Figs. 11-13.** Wing venation of hindwing: 11. *Kawabeia razowski* (Kawabe); 12. *Oporopsamma stenoptera* (Filipjev); 13. *Immariana acutiella* sp. nov.



Figs. 14-15. *Oporopsamma stenoptera* (Filipjev): 14. Male genitalia-gen. slide no. 2622; 15. Female genitalia-gen. slide no. 2644.(scale bars: 1mm)

anteriores as same as apophysis posteriores in length.

Posterior part of ostium bursae weakly chitinized in triangular shape. Caudal margin of ostium bursae emarginated ventrally. Antrum short, weakly sclerotized.

**Material examined.** Holotype: Male, Gwanglung, Gyonggi Prov., 27.Ⅲ.1986, K.J. Won. Paratypes: 1♀, Gwanglung, 22.Ⅲ.1986, K.J. Won; 1♂, Gwanglung, 30.Ⅲ.1986, K.J. Won.

**Distribution.** Korea (Central).

**Remarks.** All the specimens were collected at the late of March, which mostly overwintered in adult stage. The generic name, *Immariana* was derived from the Korean term "Immari" (= leafroller).

#### *Oporopsamma* Gozmany, 1954

*Oporopsamma* Gozmany, 1954, Ann. Hist.-nat. Mus. Hungar., ser. nova, 5: 274.

<Type species: *Cnephasia wertheimsteini* Rebel>

#### *Oporopsamma stenoptera* (Filipjev)

꼬마줄무늬잎말이(新稱)(Figs. 14, 15)

*Eana stenoptera* Filipjev, 1962, Trudy Zool. Inst. Akad. Nauk USSR, 30: 381.

*Opropsamma stenoptera*: Razowski, 1965, Acta Zool. Cracov., 10(3) 281, Pl. XX: 36.

*Oxypteron stenoptera*: Kuznetsov, 1973, Ent. Obozr., 56: 94.

**Wing span.** 17 mm in both sexes. Forewing expanding posteriorly; costa straight to the middle, then curved; apex pointed; termen more or less oblique. Ground colour greyish with very delicate brownish olive; markings dark brownish-grey; median fascia from middle of costa to 2/3 of dorsum. Venation in hindwing,  $R_5-M_1$  starting from one point of the median cell;  $M_2$  separate at base;  $M_3-CuA_1$  connate.

**Male genitalia** (Fig. 14). Uncus rather short. Gnathos weakly developed. Socii very small with numerous hairs laterally. Valva broad at

base, narrow beyond the middle, enlarged in posterior portion with a pocket-shaped emargination.

**Female genitalia** (Fig. 15). As shown in figure 15, sterigma sclerotized, extended laterally. Ostium bursae well sclerotized. Ductus bursae longer than the length of corpus bursae. Corpus bursae ovate, no signum.

**Material examined.** GW: 1♂, 2♀, Chuncheon, 12.V.1986, K.T. Park; 1♀, same locality, 9.V.1989, K.T. Park et B.K. Byun; 1♀, Same locality, 29.V.1989, K.T. Park; 1♀, Same locality, 16.V.1990, K.T. Park; 1♂, Hongcheon Exp. Forest, 13.V.1987, K.T. Park. GG: 1♂, Mt. Dodram-san, 19.V.1990, K.T. Park.

**Distribution.** Korea (new record), East Asia (Amur land), Primorski.

**Remarks.** The genus *Oporopsamma* Gozmany has been often treated as a junior synonym of *Oxypteron* Staudinger by previous authors, but Razowski(1965, 1987) placed it as a valid genus, based on its characteristic shape of pocket-shaped sclerite of valva in male genitalia. However their female genitalia is very similar, and also both genera have no or very weakly developed gnathos in male genitalia. Kuznetsov (1973) placed *stenoptera* Filipjev in the genus *Oxypteron*, which Razowski(1965) placed it in the genus *Oporopsamma*. Razowski(1987) stated that  $R_5-M_1$  in *Oporopsammad* separate in the hindwing instead of  $R_5-M_1$  starting from one pointed of cell in *Oxypteron*. These genera are still currently riddled with taxonomic confusion wanting comprehensive revision, thus we place tentatively this species in the genus *Oporopsamma* in this paper.

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