

Discovery of *Archips dichotomus* Falkovitsh and *Eana argentana* (Clerk) (Lepidoptera, Tortricidae) in Korea

韓國産 *Archips dichotomus* Falkovitsh와 *Eana argentana*(Clerk)의 발견(나비목, 잎말이나방과)

Bong-Kyu BYUN

邊 鳳 奎

ABSTRACT Two species of Tortricinae, *Archips dichotomus* Falkovitsh and *Eana argentana* (Clerk) were examined and illustrated for the first time in Korea with their brief redescrptions of the external and genitalic characters.

KEY WORDS *Archips*, *Eana*, Tortricinae, Tortricidae, Lepidoptera, systematics, Korea

초 목 과거 우리나라産으로 기록은 있었으나 표본확인이 되지 않아 현재까지도 그 분포여부가 불확실해왔던 잎말이나방과의 2종, *Archips dichotomus* Falkovitsh와 *Eana argentana*(Clerk)에 대한 확인을 위해 최근 체코과학원 국립곤충연구소에 소장되어 있는 북한産 표본을 입수, 검경하여 이들의 분포기록을 정리하였다. 동시에 외부형태 및 생식기의 특징을 간략한 재기재 및 도해와 함께 보고한다.

검색어 잎말이나방亞科, 잎말이나방과, 나비목, 分類, 韓國

Archips dichotomus Falkovitsh and *Eana argentana* (Clerk) were belonging to the subfamily Tortricinae were known as to be distributed in Korea (Razowski, 1977; Inoue, 1954), but no specimen has been found and no further literatures are available for their occurrence in Korea to date. Thus they were not included in recent publication "Check List of Insects from Korea (The Entomol. Soc. Korea and Kor. Soc. Appl. Entomol., 1994)". Park et Byun (1991) mentioned with uncertainty of their distribution in the recent publication. Recently the author had a chance to examine the specimens which were loaned from Dr. J. Jaros and redescrbed briefly for the first time from Korea.

The author wishes to express his sincere thanks to Dr. J. Jaros, Institute of Entomology, Czech Academy of Sciences (IECA) for his kind loan of the specimens in this study.

DESCRIPTION OF SPECIES

Archips dichotomus Falkovitsh 진검모무늬잎말이나방(新稱) (Figs. 1, 3)

Archips dichotomus Falkovitsh, 1965, Ent. Obozr. 44: 417, Figs. 5, 6. <Type locality: Vladivostok, Russia>; Razowski, 1977, Acta Zool. Cracov., 22(5): 140.

Wingspan 24 mm in male (Fig. 1).

Diagnosis. The species is very similar to *A. xylostenus* (L.), but it can be distinguished from the latter by rather dark pattern color, the shape of tegumen and slightly drooped valva ventrally.

Pattern. Costa of forewing gently curved outwards to middle of it, then straight to the apex; apex very short with scales slightly extending costally; termen indistinctly sinuate post-apically, then weakly convex; costal fold reaching to before middle of costa, rather slender. Ground color greyish yellow tinged brown;

greyish shade between median fascia and subapical blotch present; basal blotch subtriangular. Median fascia indistinct costally with proximal edge starting from the margin of costal fold to middle of dorsum, its outer margin reaching to the termination of dorsum, slightly concaved at middle to the outer margin; distal edge slightly cut at median cell. Subapical blotch broad with divided into two portions; apex and postapical part of termen brown. Hindwing heavily greyish brown; cilia rather greyish brown.

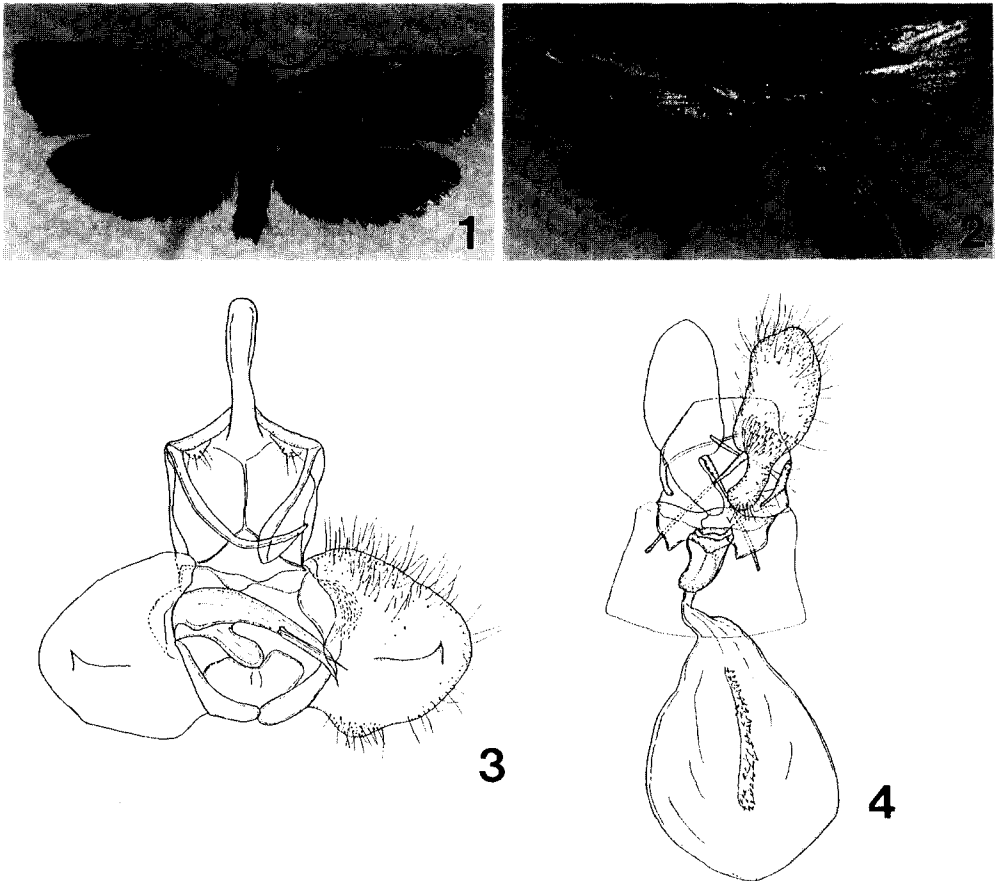
Male genitalia (Fig. 3). Uncus elongate, rounded at the top. Socius round, small with moderate hairs terminally. Transtillae broad, rounded, deeply emarginated at middle. Gnathos hook-shaped, sharpened terminally. Valva semioval bearing a sharp spine on mid-

dle of near medio-laterally; sacculus weakly developed. Aedeagus long, gently curved at middle, rather broader at base, two cornuti present.

Material examined. 1♂, Mt. Myohyangsan, 300m, Hyangsan, North Pyongan Prov., 25. VI. 1987 (J. Jaros lgt.)-coll. ICEA.

Distribution. Korea (N), China, Russian Far East (Primorye).

Bionomy. Kuznetsov (1973) mentioned that "the species hibernate in the egg stage on the bark. The larva spins the leaves of numerous plant species, being injurious to plum and pear in the orchards". Razowski (1977) noted that "the larvae observed from end of May till end of June, flight between 23. VI and 5. VIII". But unknown in Korea.



Figs. 1-4. Adults: 1, *Archips dichotomus* Falkovitsh; 2, *Eana argentana* (Clerk); 3-4. genitalia: 3, *Archips dichotomus* Falkovitsh (♂); 4, *Eana argentana* (Clerk) (♀).

Host plant. *Aralia mandshurica* R., *Juglans mandshurica* M., *Armeniaca mandshurica* (K.), *Fraxinus rhynochophylla* H., *Lespedeza bicolor* T., *Maackia amurensis* R., *Ulmus propinqua* K. and *Salix rorida* L. (Razowski, 1977). Unknown in Korea.

Remarks. The species was first listed in the "Monograph of the genus Archips" (Razowski, 1977) as to be distributed in Korea without any material record. And there has been no publication following him to date. Jaros *et al.* (1992) enumerated only its name without collecting data in the report on the North Korean fauna. Thus the species is not cited in the recent publication, "Check List of Insects from Korea(1994)".

***Eana argentana* Clerk** 은빛잎말이나방 (Figs. 2, 4)

Phalaena argentana Clerk, 1759, Icon. Ins. rar., 1: 11.

Tortrix argentana: Meyrick, 1895, Hand. Brit. Lep.,: 542; Walsingham, 1900, Ann. Mag. Nat. Hist., (7)5: 460.

Cnephasis argentana: Inoue, 1954, Check List Lep. Japan, 1: 82.

Cnephasia argentana: Zool. Soc. Kor., 1968, Nom. Anim. Korea, 2: 47.

Ablabia argentana: Barret, 1905, Lep. Brit. Isl., X: 253.

Eana argentana: Obraztsov, 1956, Tijd., 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; Kuznetsov, 1973, Ent. Obozr., 56: 94; Yasuda, Bull. Univ. Osaka Pref., (B)2: 152, Figs. 131, 458, 615; Kuznetsov, 1975, Hac. Moht. 3: 415; Park *et al.*, 1976, Res. Rep. ORD Korea 18: 88; Park, 1983, Ins. Koreana 3: 18; Knill-Jones *et al.*, 1986, Ent. Gaz. 37: 9; Razowski, 1987, Acta Zool. Cracov. 30(11): 197; Kuznetsov, 1987, Keys to Insects of the European part of the USSR, IV(1): 467, Fig. 304; Hirashima, 1989, Check List Jap. Ins. 2: 894.

Wingspan 23 mm in female (Fig. 2). Forewing expanded. Costa slightly curved, apex pointed; termen slightly sinuate beyond apex; oblique. Ground color uniformly silver-white; cilia white, patterns indistinct; underside of forewing blackish grey except termen portion

whitish grey. Hindwing whitish, delicately suffused with grey in central portion; cilia white.

Female genitalia (Fig. 4). Sterigma with pointed terminally at anterior corners. Antrum fairly long, well sclerotized; ductus bursae short; ductus seminalis originated just after antrum; corpus bursae broad, large, with long signum consisting of numerous dents.

Material examined. 1♀, Mt. Paektusan, 140 m, Samjiyon, Ryanggang Prov., 12. VII. 1987 (J. Jaros lgt.)-coll. FRI.

Distribution. Korea (N), Japan, China, Mongolia, Russia, Caucasus, Europe, Africa, India, Kashmir, Asia Minor, N America.

Bionomy. The larvae of species found on various broad leaved herbaceous plants, and in turf of cereals. Sometimes damages seedling of conifers in Russia (Kuznetsov, 1973). Unknown in Korea.

Host plant. *Poa pratensis* L. (Gramineae) and *Larix leptolepis* G. (Pinaceae) were known from Japan (Yasuda, 1975). Unknown in Korea.

Remarks. The species with a worldwide distribution was first cited by Inoue (1954) as to be distributed in Korea and then several previous authors (Zool. Soc. Kor., 1968; Park, 1983; Park *et al.*, 1991; Check List Ins. Kor., 1994) followed him, but no specimen has been found in Korea to date. It was also cited by Jaros *et al.* (1992) based on the N Korean material without collecting data. The author recently examined a female specimen, which was donated from Dr. J. Jaros, ICEA, and reports it with illustration.

REFERENCES

- Barrett, C.G. 1905. The Lepidoptera of the British Islands. X: 152-381.
- Bradley J. D., W. G. Tremewan & A. Smith. 1979. The British Tortricoid Moths, Tortricidae: Olethreutinae: 146-148, pl. 8, Figs 5, 6. pl. 33.
- Hannemann, H. J. 1961. Die Tierwelt Deutschlands, 48., Teil: Kleinschmetterlinge oder Microlepidoptera 1. Die Wickler. 233 pp, Figs. 1-22.
- Hirashima, Y. 1989. A Check List of Japanese Insects. II: 891-896.
- Inoue, H. 1954. Check List of the Lepidoptera of

- Japan. I: 78-89.
- Jaros J., K. Spitzer, J. Havelka & K.T. Park. 1992.** Synecological and Biogeographical outlines of Lepidoptera Communities in North Korea. *Ins. Koreana* 9: 78-114.
- Knill-Jones R.P. et K.P. Bland. 1986.** Rediscovery of *Eana argentana* (Clerk) (Lepidoptera, Tortricidae) in Perthshire. *Ent. Gaz.* 56: 44-161.
- Kuznetsov, V. I. 1973.** Leaf-rollers (Lepidoptera, Tortricidae) of the Southern Part of the Soviet Far East and Their seasonal cycles. *Ent. Obozr.* 56: 44-161.
- Kuznetsov, V.I. 1975.** On the fauna of leaf-rollers (Lepidoptera, Tortricidae) of Mongolia. *Hac. Moht.* 3: 408-436.
- Kuznetsov, V.I. 1987.** 21. Tortricidae, *In Medvedev et al., Keys to Insects of the European part of the USSR.* IV(1): 279-577.
- Meyrick, E. 1895.** A Handbook of British Lepidoptera, pp 451-560.
- Obraztsov, N.S. 1956.** Die Gattungen Der Palaearctischen Tortricidae. *Tijd. Ent.* 99(3): 107-154.
- Park, K. T. 1983.** Microlepidoptera of Korea. *Ins. Koreana* 3: 8-24.
- Park, K.T. & B.K. Byun. 1991.** Revision of the Tribe of Cnephasiini (Lepidoptera: Tortricidae: Tortricinae) in Korea. *Kor. J. Appl. Ent.* 30(4): 271-284.
- Park, K.T. & J.S. Park. 1976.** The Tortricinae of Korea (Lepidoptera, Tortricidae) with Eleven Unrecorded Species from Korea. *Res. Rep. ORD Korea* 18: 4-94.
- Razowski, J. 1965.** The Palaearctic Species of the genus Cnephasiini (Lepidoptera, Tortricidae). *Acta Zool. Cracov.* 10(3): 255-257.
- Razowski, J. 1977.** Monograph of the genus Archips Hbner (Lepidoptera, Tortricidae), *Acta Zool. Cracov.* 22(5): 55-205.
- Razowski, J. 1987.** The Genera of Tortricidae (Lepidoptera, Tortricidae), Part 1. Palaearctic Chlidanothinae and Tortricinae. *Acta Zool. Cracov.* 30(11): 141-353.
- The Entomological Society of Korea and Korean Society of Applied Entomology, 1994.** Check List of Insects from Korea, pp. 744, Seoul.
- Walsingham, L., 1900.** Asiatic Tortricidae, *Ann. Mag. Nat. Hist.* 7(5): 121-467.
- Yasuda, T. 1975.** The Tortricinae and Sparganothinae of Japan (Lepidoptera; Tortricidae), *Bull. Univ. Osaka Pref. (B)* 27: 18-664.
- Zool. Soc. Korea. 1968.** Tortricidae, *In Zool. Soc. Korea*, pp. 46-47. *Nomia Animalium Koreanorum.* 2: 46-47.

(Received March 21, 1997)