

Gelechiidae (Lepidoptera) from North Korea with description of two new species*

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Abstract - Based on the material collected in North Korea by the staff of the Hungarian Natural History Museum since 1971, 19 species of Gelechiidae are identified. Of them, 2 species are described as new to science (*Aroga gozmanyi* sp. n. and *Hypatima mediofasciana* sp. n.) and 5 species are reported for the first time from the Korean Peninsula. With 8 figures.

INTRODUCTION

The material examined for this study is in the collection of the Hungarian Natural History Museum (HNHM), Budapest, made during the zoological expeditions in North Korea by the staff of the museum from 1971 to 1988. When compared with the collection of Macrolepidoptera, the number of Microlepidoptera in the collection is small. One material is in the collection of Institute of Systematics and Evolution of Animals (ISEA), Krakow. In North Korea only four species of Gelechiidae, (*Brachmia triannulella*, *Dichomeris picrocarpa*, *D. oceanis* and *Pectinophora gossypiella*) have been known to date. Some species cited were identified by Mr. OMELKO who visited the HNHM previously.

Abbreviations used are as follows:

HNHM - Hungarian Natural History Museum, Budapest, Hungary.

ISEA - Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Krakow, Poland.

CIS/KWNU - Center for Insect Systematics, Kangweon National University, Chuncheon, Korea.

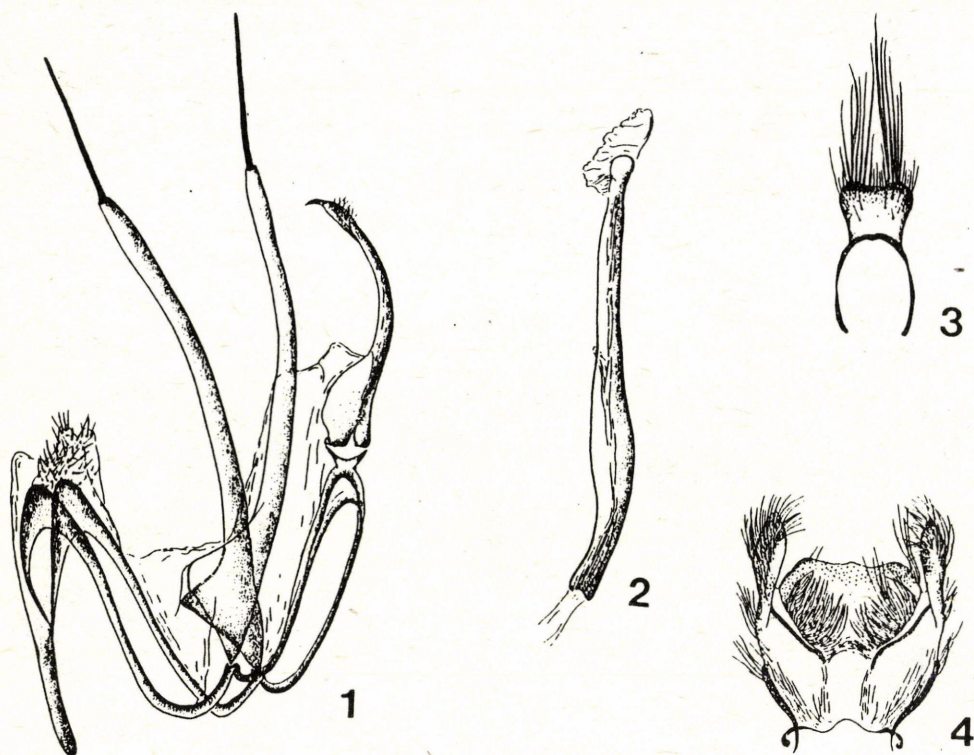
DESCRIPTION OF NEW SPECIES

Aroga gozmanyi sp. n. (Figs 1-4)

H o l o t y p e : male, Mt. Kumgang, Kangweon Prov., N. Korea, 26. V. 1985 (VOJNITS et ZOMBORI), gen. slide no. 1918. - **P a r a t y p e s :** 3 males, same locality as holotype, 24-26. V. 1985 (VOJNITS et ZOMBORI).

M a l e : Wingspan, 14-16 mm. Head appressed with light yellow scales. Thorax dark brown. Basal segment of labial palpus covered with dark brown; second segment thickened with rough scales ventrally and forming a furrow; terminal segment slender, as long as 2nd, speckled with dark brown scales especially on dorsal surface; apex pointed. Antenna evenly dark brown, with a rather long pedicel. Fore and mid legs dark grey ventrally, tarsus with pale yellow rings. Hind tibia dorsally covered with hair-like scales, with pale yellow sca-

* Zoological collectings by the Hungarian Natural History Museum in Korea, No. 105.



Figs. 1-3. *Aroga gozmanyi* sp. n., 1 = male genitalia, 2 = aedeagus, 3 = eighth tergite, 4 = eighth sternite

les near middle and terminal end. Forewing covered with dark brown scales, with a yellow patch around 3/4 of costa. Hindwing grey, wider toward base; termen slightly sinuate; apex weakly produced.

Male genitalia (Figs 1-4). Uncus long, broadened at basal 1/3, curved downward, with acute apex. Gnathos absent. Valva very slender, flagelliform, slightly curved, 1.3 times as long as the length of uncus + tegumen, with a needle-like long spine at apex. Tegumen narrow, with somewhat stellate distal end. Vinculum long, in form of narrow band. Saccus rather long. Aedeagus long, basal 1/4 narrow and then widened beyond half; no cornutus. Eighth tergite crown-shaped, with long ribbons anteriorly, bearing long, hair-like setae along distal margin; eighth sternite forming a large plate, with digitate lobes at both posterior corners, anterior margin emarginate at middle.

Female unknown.

Distribution: Korea (North).

Remarks: The new species is dedicated to Dr. GOZMÁNY of Hungarian Natural History Museum, Budapest who has greatly helped me in various ways during my stay for this study in February, 1991. This species is closely related to the European species, *Aroga flavicomella* ZELLER, but it is easily distinguished from the latter by the following characters: forewing brownish dark grey instead of chocolate brown in *flavicomella*, thorax covered with dark brown scales; in male genitalia, valva much longer with long needle-like spines at distal end.

***Hypatima mediofasciana* sp. n.**

(Figs 5-8)

H o l o t y p e : Male, Kaesung, S. Hwanghae Prov., N. Korea, 30. VII. 1982 (FORRÓ et RONKAY), gen. slide no. 1926; left wing damaged. - **P a r a t y p e :** female, Mt. Myohyang, N. Pyongan Prov., N. Korea, 18. VII. 1982 (FORRÓ et RONKAY), gen. slide no. 1925.

M a l e a n d f e m a l e : Wingspan, 11-13 mm. Head covered with appressed scales, greyish white on vertex and speckled with grey scales posteriorly. Thorax grey. Antenna simple, with a rather wide and distinct dark brown ring on each segment. Tuft of scales on 2nd segment of labial palpus light brown, irrorated with dark brown outwardly, paler toward base inwardly; terminal segment longer than 2nd, with three dark bands alternated with creamy white bands, covered with rough scales above, apex pointed. Hind tibia fringed with yellowish white hairs above. Markings and pattern of forewing very similar to those of *Hypatima saxigera* MEYRICK which was reported from Kwanhsien, China, but it can be separated from the latter by the characters of male genitalia as below.

M a l e g e n i t a l i a (Figs 5-7). Uncus with broad apex, densely covered with setae at sub-distal portion, rounded at apex. Gnathos strongly sclerotized, sickle-shaped, with well developed lateral arms connected with strong ridges along lateral margin of uncus posteriorly and tegumen anteriorly. Tegumen expanded basally. Valva rather slender, terminal third broad, elongated and spatulate, densely covered with long hairs; middle portion narrow and incurved anteriorly, with a row of small bristles along inner margin; base slightly widened, with a strong basal emargination; connected with a round plate dorsally, accompanied by membranous lobes ventrally. Lobes of aedeagal fulcrum digitate, covered with short setae; apex of lobes rather protruded at inner-distal end. Aedeagus tubular, broadened at basal third, then gradually narrowed, slightly twisted beyond distal 1/5, apex rounded with a sharp protrusion ventrally.

F e m a l e g e n i t a l i a (Fig. 8). There is nearly no difference between *H. saxigera* and the new species in the female genitalia, according to the examination of the genital slide of its lectotype (B. M. slide no. 7379/K. Sattler). Only some little differences in ostium bursae and its lateral plate were found; some variable differences were found in Korean materials which seem to be of an infraspecific degree.

D i s t r i b u t i o n : Korea (North).

R e m a r k s : The new species can be easily distinguished from *H. saxigera* by the characters of the male genitalia: apex of uncus much broadened, with round distal margin; terminal 3rd of valva larger and broader, digitate lobes of aedeagal fulcrum rather angled at inner distal end. This species as well as *H. saxigera* should be separated from the genus *Hypatima* because of their characters of male genitalia, especially in the elongated saccus.

LIST OF SPECIES

The species marked with asterisk (*) are new to Korea.

Metzneria inflamatella CHRISTOPH, 1882 - Material examined: 2 males, 2 females, Samjiyon, Mt. Paiktu, 2-9. VIII. 1989 (E. PALIK), coll. ISEA. - Distribution: Korea (S., N.), Japan, China, Amur region.

***Gelechia conditor** OMELKO - Material examined: Samjiyon, Mt. Paiktu, 1 male, 19. VII. 1977 (Dely et DELY-DRASKOVITS), determined by OMELKO. - Distribution: Korea (N.), USSR. - This species is reported as new for the Korean Peninsula.

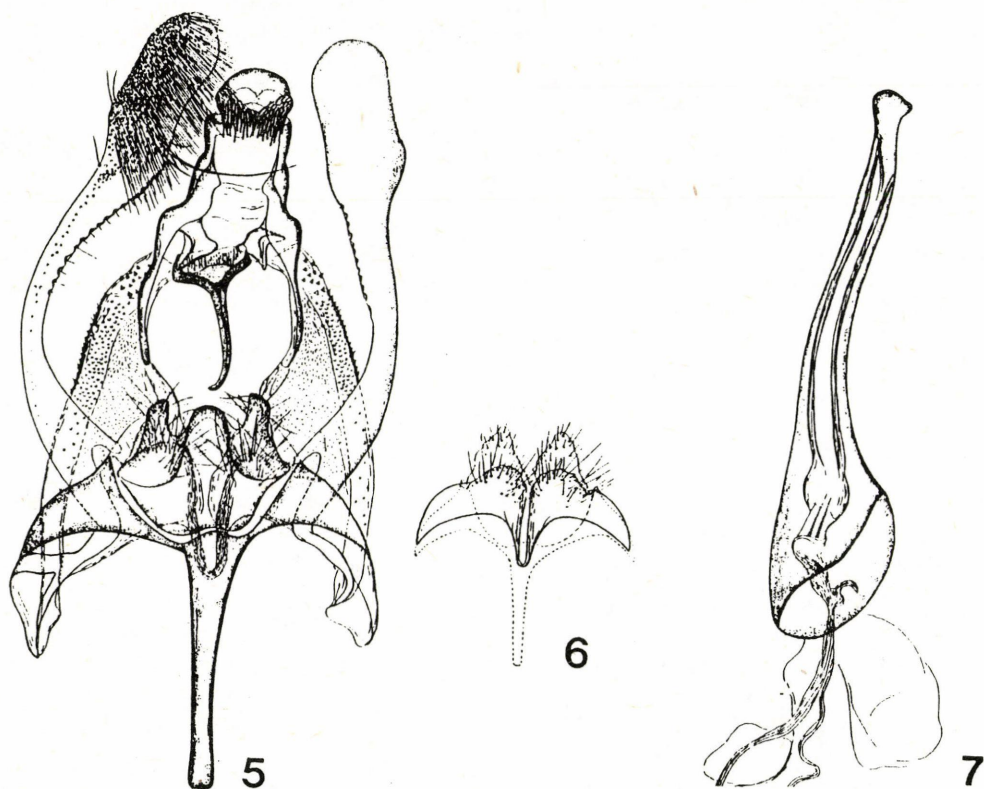
Evippe albidorsella (SNELLEN, 1884) - Material examined: Mt. Kumgang, Kangwon Prov., 1 female 1(?), 9-11. VII. 1977 (DELY et DELY-DRASKOVITS); 1 male, 26. V. 1985 (VOJNITS et ZOMBORI); 1 male, 1 female, Kaesung, S. Hwanghae, 29. VII. 1982 (FORRÓ et RONKAY). - Distribution: Korea (S., N.), Japan, China, E. Siberia. - In S.

Korea, this species is common throughout the country. Larva feeds on leaves of *Lespedeza bicolor* (Park 1983).

Aroga mesostrota (MEYRICK, 1932) - Material examined: 3 males, 4 females, Mt Ryongak, near Pyungyang, S. Pyungan Prov., 24-30. V. 1985 (VOJNITS et ZOMBORI). - Distribution: Korea (S. N.), Japan, China. - It is reported for the first time that the larvae spin the leaves of *Quercus* sp. and feed on them. It is also one of the common species in S. Korea.

***Telphusa comprobata** MEYRICK, 1935 - Material examined: Mt. Myohyang, N. Pyungan Prov., 1 (?), 18. VII. 1982 (FORRÓ et RONKAY). - Distribution: Korea (N.), Japan. - This species has been known as an endemic one in Japan, but it is now reported for the first time from the Korean Peninsula. It has been known that larvae feed on leaves of *Sorbus comixta* in Japan (MORIUTI 1982).

***Chorivalva hodgesi** (PARK, 1989), comb. n. - Material examined: Mt. Kungang, Kangweon Prov., 3 females, 23. VII. 1982 (FORRÓ et RONKAY), HNHM. - Distribution: Korea (S., N.). - The genus *Neochronistis*, based on the type species, *hodgesi* PARK, is considered to be a junior synonym of *Chorivalva* OMEKO, 1988 due to the priority of the date. The species, *hodgesi* is also very close to *unisaccula* which is the type species of the latter, but it has no cuneate cornutus in aedeagus as OMEKO stated in its original description.



Figs. 5-7. *Hypatima mediofasciana* sp. n., 5 = male genitalia, 6 = juxtal plate and lobes in dorsal view of genitalia, 7 = aedeagus

***Telephila issikii** OKADA, 1961 - Material examined: Mt. Kumgang, Kangweon Prov., 1 male, 28. VI. 1985 (VOJNITS et ZOMBORI). - Distribution: Korea (N.), Japan. - This species has been known as an endemic one in Japan to date (MORIUTI 1982), but it is reported now for the first time from the Korean Peninsula. Host plant of larvae unknown.

Thiotricha pontifera MEYRICK, 1932 - Material examined: Mt. Kumgang, Kangweon Prov., 2 males, 3 (?), 24-25. VII. 1982 (FORRÓ et RONKAY). - Distribution: Korea (S., N.), Japan.

***Thiotricha synodonta** MEYRICK, 1936 - Material examined: Mt. Myohyang, N. Pyongan Prov., 1 (?), 18. VII. 1982 (FORRÓ et RONKAY). - Distribution: Korea (N.), Japan. - This species is reported for the first time from the Korean Peninsula.

Two other species belonging to the genus *Thiotricha* were examined but not determined as yet: species (1); 1 female, Mt. Kumgang (22. VII. 1982) and species (2); 1 female, Mt. Myohyang (17. VII. 1982).

Aproaerema anthylidella (HÜBNER, [1831]) - Material examined: Sariwon, N. Hwanghae, 1 female, 28. IX. 1978 (VOJNITS et ZOMBORI); Pyongyang, 1 male, 15. IX. 1979 (STEINMANN et VÁSÁRHELYI). - Distribution: Korea (S., N.), Japan, Asia minor, Europe. - It has been known that the larval foodplant is *Trifolium pratense* in Japan and in Europe.

Anacamptis solemnella (CHRISTOPH, 1882) - Material examined: Samjiyon, Mt. Paiktu, 1 female, 19. VII. 1977 (DELY et DELY-DRASKOVITS). - Distribution: Korea (S., N.), Japan, China. - It has been known that larvae feed on *Prunus salicina*.

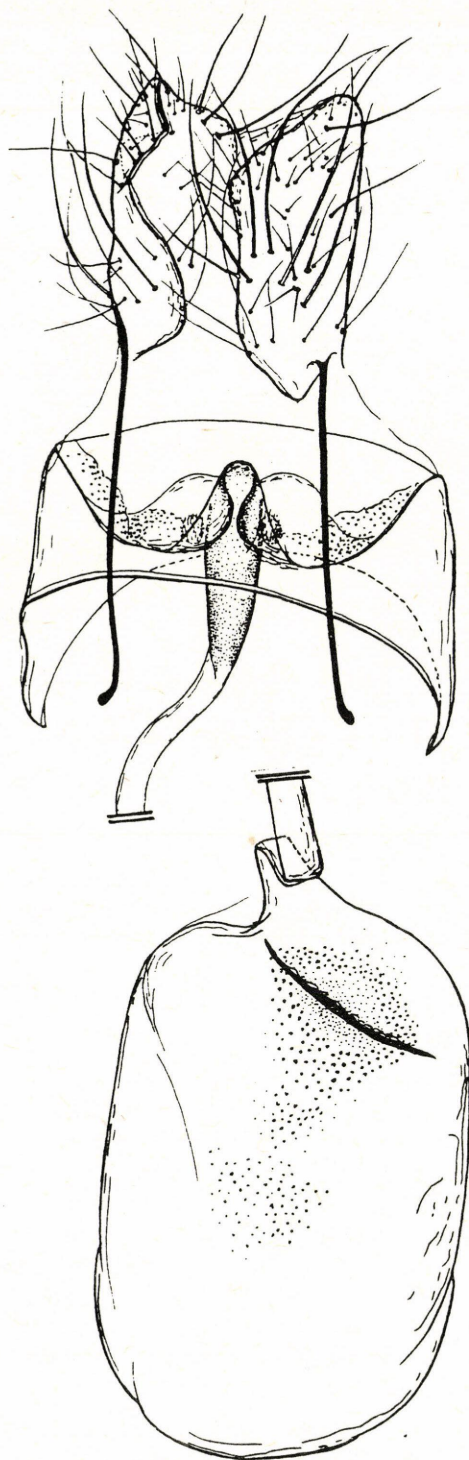
Brachmia modicella (CHRISTOPH, 1882) - Material examined: Samjiyon, Mt. Paiktu, 1 male, 20. VII. 1977 (DELY et DELY-DRASKOVITS); Mt. Kumgang, Kangweon Prov., 1 male, 19. IX. 1980 (FORRÓ et TOPÁL), 1 female, 25. VII. 1982 (FORRÓ et RONKAY); Mt. Myohyang, N. Pyongan Prov., 1 male, 17. VII. 1982 (FORRÓ et RONKAY). - Distribution: Korea (S., N.), Japan, Amur, Ussuri.

Brachmia triannulella HERRICH-SCHÄFFER, 1854. - Material examined: Sariwon, N. Hwanghae Prov., 1 male, 1 (?), 28. IX. 1977 (DELY et DELY-DRASKOVITS). - Distribution: Korea (S., N.), Japan, Taiwan, N. India. - The previously known species, *macroscapa* Meyrick, 1932, often treated as a subspecies of the species, is generally accepted as a synonym of the latter by recent authors. Larvae spin leaves of *Ipomoea batatas* and feed on them (PARK 1983).

***Brachmia rufescens** HAWORTH, 1829. - Material examined: Samjiyon, Mt. Paiktu, 1 female, 18. VII. 1977 (DELY et DELY-DRASKOVITS), determined by OMELKO. - Distribution: Korea (N.), N. W. USSR, M. Europe, Italy, Spain. - This species is reported as new for the Korean Peninsula.

Dichomeris harmonias MEYRICK, 1922 - Material examined: Mt. Kumgang, Kangweon Prov., 1 male, 4. VIII. 1975 (PAPP et VOJNITS), 1 male, 23. VII. 1982 (FORRÓ et RONKAY). - Distribution: Korea (S., N.), Japan, China. - It is known that the larva feeds on leaves of *Lespedeza bicolor* and *Trifolium repens* in Japan.

Dichomeris ustalella (FABRICIUS, 1795) - Material examined: Mt. Kumgang, Kangweon Prov., 1 (?), 27. V. 1985 (VOJNITS et ZOMBORI). - Distribution: Korea (S., N.), Japan, China, Siberia, Europe. - This species is widely distributed in the Palaearctic Region, and it is reported that the larva feeds on *Corylus heterophylla* var. *thunbergii* in Japan.



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Fig. 8. Female genitalia of *Hypatima mediofasciana* sp. n.

Dichomeris picrocarpa MEYRICK, 1913. - Material examined: Mt. Myohyang, N. Pyongan Prov., 1 male, 16. VII. 1982 (FORRÓ et RONKAY). - Distribution: Korea (S., N.), Japan, Manchuria, India (Assam). - It is one of the common species in S. Korea. The moths appear during June in the southern part of the country. Larvae feed on *Prunus* sp. in Korea.

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