韓應昆誌 35(2) : 114~118 (1996)
Korean J. Appl. Entomol.

Description of Three New Species of *Dichomeris* Hübner (Lepidoptera, Gelechiidae) from Korea and Russian Far East

극동러시아 및 한국産 *Dichomeris*屬 3新種 기재

Ponomarenko, M. G.* and K. T. Park**
엠. 지. 포노마렌코 · 朴奎澤

ABSTRACT Three new species of the genus *Dichomeris; bulawskii* sp. nov., *lutilinea* sp. nov. and *synergastis* sp. nov. are described from Korea and Russian Far East, with illustrations of genitalia.

KEY WORDS Systematics, Lepidoptera, Gelechiidae, *Dichomeris*, Korea, Russian Far East.

초 록 뿔나방科의 *Dichomeris*屬에 속하는 우리나라産 2種과 극동러시아産 1種을 新種으로 기재, 발표한다.

검색어 분류, 나비目, 뿔나방科, *Dichomeris*, 한국, 러시아

More than 50 species of the genus *Dichomeris* Hübner including 23 recently described species (Park, 1994, 1996; Park & Hodges, 1995) are known from Far Eastern Asia and Taiwan. In Korea, 18 species are known (Park, 1994), and 8 species are known from Russian Far East. Herewith further two species are described from Korea and one species from Russian Far East.

***Dichomeris bulawskii* sp. nov.** (Fis. 1, 5~8)

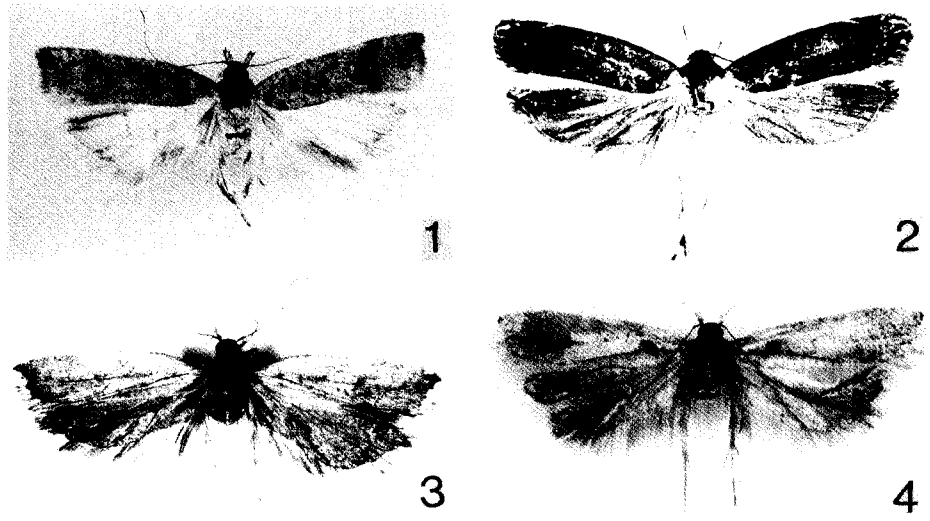

Fig. 1~4. Adults: 1, *Dichomeris bulawskii* sp. nov.; 2, *Dichomeris lutilinea* sp. nov.; 3~4, *Dichomeris synergastis* sp. nov.

*Institute of Biology and Pedology, Far East Branch of Russian Academy of Science, Vladivostok-22, 690022, Russia (러시아과학원 극동분소 생물토양연구소)
**Center for Insect Systematics, Kangwon National University, Chuncheon, 200-701 Korea (곤충계통분류연구센터, c/o 강원대학교)

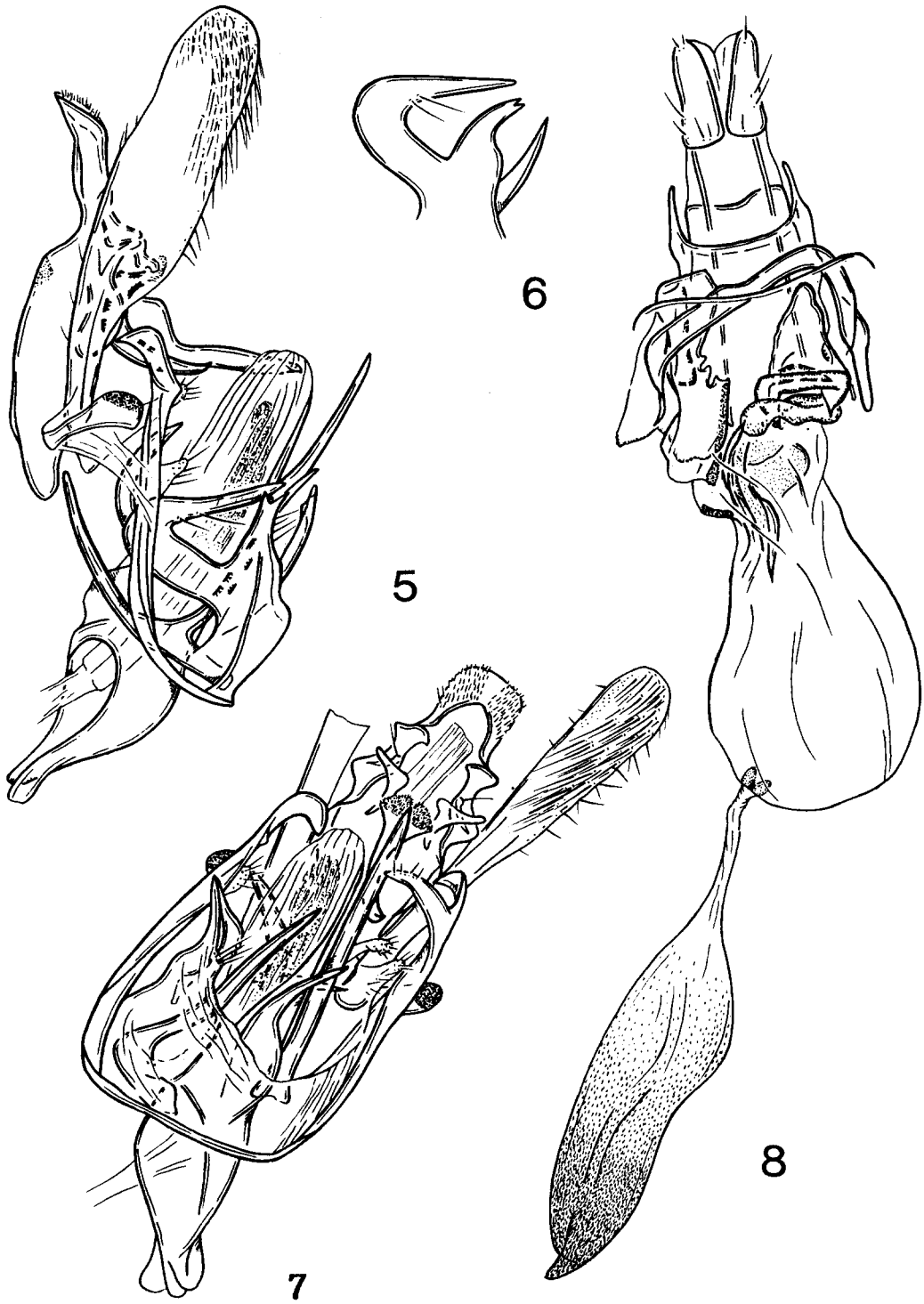

Fig. 5~8. Genitalia of *Dichomeris bulawskii* sp. nov.: 5, male genitalia of lateral view; 6, ditto, variability of processes of ventral sclerite; 7, ditto, ventral view; 8, female genitalia.

Diagnosis. The genitalia of the new species is similar to those of *sparsellus* species group: *D. atomogypsa* (Meyrick), *D. sparsellus* (Christoph), *D. trilobella* Park et Hodges, and *D. angulata* Park et Hodges, but the new species can be differentiated by the asymmetrical vinculum and processes of the anellus in the male genitalia, and the oblique sclerite and the triangular plate of the antrum, and relatively large, densely spiculose accessory bursae in the female genitalia.

Description. Wingspan 19~20 mm. Head and thorax greyish brown. Ocellus present. Second segment of labial palpus with triangular scale tuft; light brown on inner surface, greyish brown on outer surface; 3rd segment light brown, longer than 2nd one. Male without a pair of hairpencils on mesothoracic anepisternum. Forewing greyish brown, studded with numerous small dark-brown dots; with a small dark-brown and oblong spot near base, an oblique short streak along cell medially; a dark brown, arched streak inwardly curved at end of cell, followed by brownish patch; R_4 and R_5 stalked at about 2/3 of length, R_5 to costa, CuA_1 and CuA_2 stalked near basal 1/4; termen slightly sinuate. Hindwing brownish grey, termen heavily sinuate; M_3 and CuA_1 connate; cell closed; cubital pecten absent.

Male genitalia (Figs 5~7). Uncus with almost straight on distal margin of apex. Gnathos relatively small, curved at right angle. Valva dilated to apex beyond basal 1/3. Vinculum narrow, asymmetrical: right arm with lateral lobe curved inwardly at basal 1/5, left one sometimes with a small knob near base. Ventral sclerite ("*juxta*" after Ponomarenko, 1992; "*sicae*" after Park, 1994) heavily ankylosed with aedeagus at base, consists of various shape of processes as in figure: right one almost straight, ventral one inflatted basally, and other five ones curved variously with some variability of their apexes. Aedeagus relatively stout, slightly longer than valva, membranous in distal part, lacking cornutus; coecum with three plates.

Female genitalia (Fig 8). Eighth segment incurved on distal margin, with narrow lateral processes. Well differentiated by oblique band-like sclerite, which located between 7th and 8th segments ventrally, narrowed in its right half; antrum extremely broad with a triangular plate at right, a pocket-shaped plate at left; the S-shaped, plicated sclerite extending from antrum to right side of bursae copulatrix. Bursae copulatrix membranous, with two oval plates of signum near anterior part. Accessory bursae arising from signum, inner surface spiculose, more dense anteriorly.

Holotype. male, Primorye Territory, 27km SW Slavjanka, 6. IX. 1994 (M.G. Ponomarenko). Paratypes: 1♂, 13♀, ditto, 5-7. IX. 1994; 1♂, 1♀, 25 km NE Nakhodka, Lazovy range, 8. VIII. 1995 (M.G. Ponomarenko); 1♀, 3 km SE Andreevka, 7. VIII. 1985 (S. Yu. Sinev). Holotype is housed in the Zoological Institute of Russian Academy of Sciences, St.-Petersbourg; paratypes are in the collection of Institute of Biology and Pedology, Vladivostok, Russia.

Distribution. South of the Primorye Territory, Russia.

Etymology. The new species is named after a naturalist, Alexander Bulawsky, who was a butterfly-fancier in Russian Far East.

***Dichomeris synergastis* sp. nov.** (Fig. 3, 4, 9~11)

Diagnosis. *D. synergastis* sp. nov. is very similar to *D. atomogypsa* (Meyrick) by the pattern of the forewing, but the forewing of the new species is narrower and elongated. Male genitalia is closely related to *D. sparsellus* (Christoph), but it can be easily distinguished by the ventral sclerite and narrower vinculum without lateral lobes.

Description. Wingspan 20~22 mm. Head and thorax yellowish grey. Ocellus present. Second segment of labial palpus with small triangular greyish yellow scale tuft; 3rd segment concolourous to 2nd and longer. Male without a pair of hairpencils on mesothoracic anepisternum. Forewing relatively narrow, ground colour of forewing greyish yellow, darker towards distal part; a large, distinct dark-brown spot near base, diameter of spot about as 1/4 width of basal part of wing (some of specimens lacking this spots, as in Fig. 3); with two hardly visible discal dots: one near middle and the other at end; a plical dot almost under first discal one, hardly visible; R_3 closer to R_{4+5} than R_2, R_4

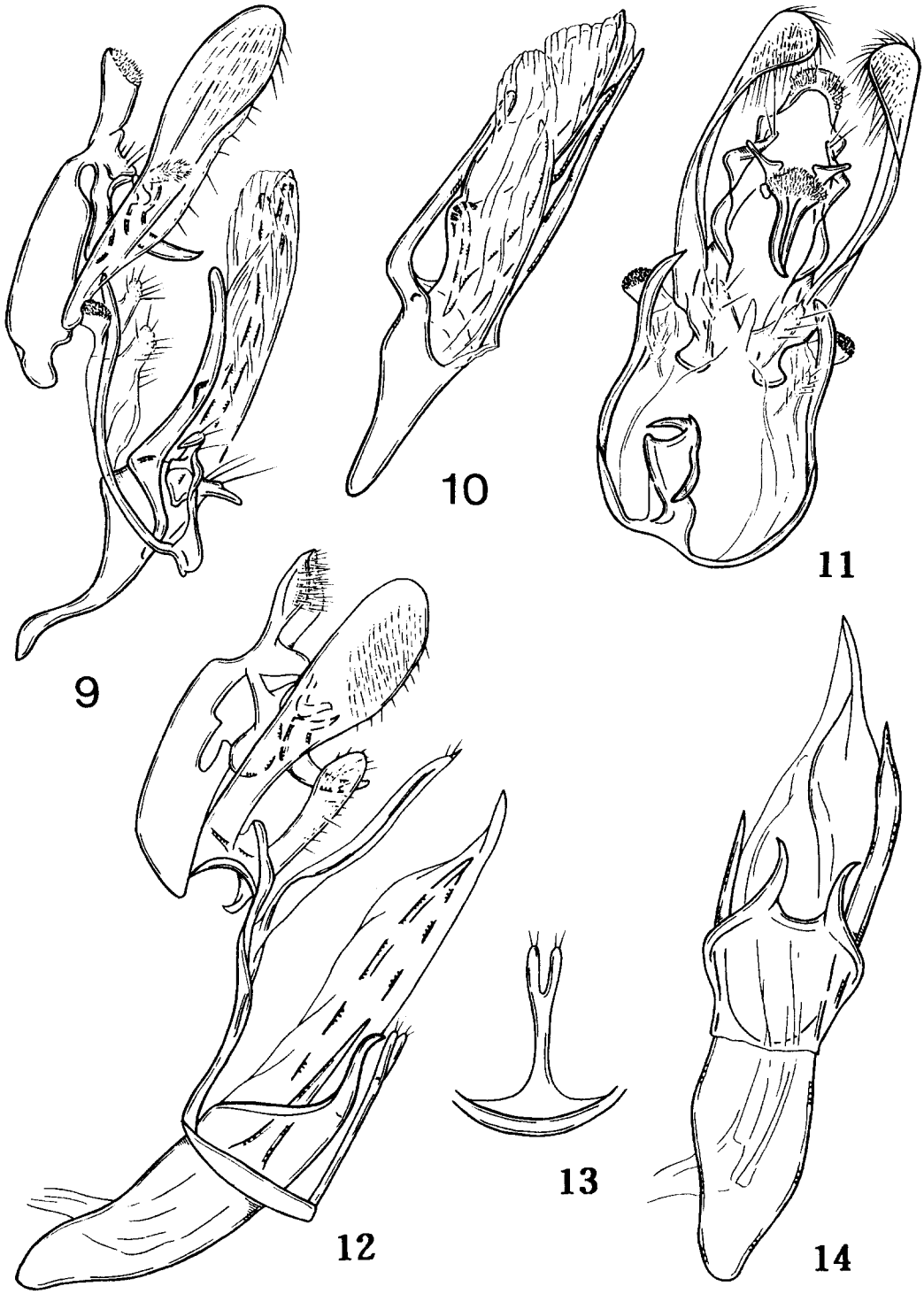

Fig. 9~11. Male genitalia of *D. synergastis* sp. nov.: 9, ditto, lateral view; 10, ditto, aedeagus 11, ditto, ventral view. Fig. 12~14. Male genitalia of *D. lutilinea* sp. nov.: 12, ditto, lateral view; 13, ditto, ventral sclerite; 14, ditto, aedeagus.

and R_5 stalked near 2/3, R_5 to costa, M_2 approximate to M_3 at base, CuA_1 and CuA_2 stalked near 1/5 of length. Hindwing brownish grey; M_3 and CuA_1 connate; cell closed; cubital pecten absent. Female: unknown.

Male genitalia (Fig 9~11). Uncus and gnathos as same as those of the related species. Valva slightly curved at middle dorsally and dilated towards apex. Vinculum relatively narrow, without lateral lobes. Basal plate of ventral sclerite short, asymmetrical: two lobes at its right corner, one turned to left, and the other turned to ventrolaterally. Aedeagus about equal to genitalia in length, with a pair of well-developed lobes from zone laterodorsally, right one almost straight, left one bent near base; cornutus single, bar shaped.

Holotype. male, Yong-In, Kyunggi Prov., 21. V. 1989 (Y.S. Jo). Paratypes: 2♂, ditto, 21. V. 1989 (Y.S. Jo); 1♂, Mt. Odae, 22. V. 1989 (K.T. Park). Type specimens are housed in the Center for Insect Systematics, Chuncheon, Korea.

Distribution. Korea.

***Dichomeris lutilinea* sp. nov.** (Fig 2, 12~14)

Diagnosis. The pattern of forewings of *D. lutilinea* sp. nov. is very similar to *D. cuspis* Park, but it can be easily distinguished by the male genitalia; especially the shape of ventral sclerite and apex of lateral lobes of the vinculum.

Description. Wingspan 15.5 mm. Head and thorax dark brown. Ocellus present. Second segment of labial palpus without developed scale tuft, slightly thickened and flattened, light yellow on inner and dorsal surfaces, dark brown on outer surface; 3rd segment dark brown, shorter than 2nd, with creamy white apex. Male without a pair of hairpencils on the mesothoracic anepisternum. Forewing dark brown, with a slanting creamy white line at 2/3 of costal margin, a yellowish line running along margin from 1/5 of costa to mid of termen; termen with four yellowish longitudinal lines: the first line on vein M_1, 2nd on M_2, 3rd at end of M_3, and 4th at tornus; apex more or less acute; stalk of R_{4+5} about 1/3 of length; CuA_1 and CuA_2 stalked near half of length. Hindwing greyish brown, apex acute; M_3 and CuA_1 short stalked; cell closed; cubital pecten absent. Female: unknown.

Male genitalia (Figs 12~14). Uncus and gnathos as same as those of *D. cuspis* Park. Valva gradually dilated to apex. Valvella extending 1/2 length of valva. Vinculum thin, band shaped; lateral lobes longer than valvella, sclerotized and slightly curved into S-shaped, with a sharp and small thorn on apex. Ventral sclerite stretched into bar-shaped in basal part, with bilobed apex beyond 2/3 length. Aedeagus with two lateral lobes, longer one almost twice than shorter one in length; ventrolateral surface on right side sclerotized; a broad ventral plate with two finger-shaped processes medially, which slightly curved outwardly.

Holotype. male, Chuncheon, Kangweon Prov., 15. VI. 1992 (K.T. Park). Type specimen is housed in the Center for Insect Systematics, Chuncheon, Korea.

Distribution. Korea.

ACKNOWLEDGEMENTS

The first author, especially, wishes to acknowledge the "Korea Science and Engineering Foundation" for her participation in the KOSEF Post-doctoral Fellowships for Foreign Researchers Program from the mid. of January to the mid. of July, 1996.

REFERENCES

Park K. T. 1994. Genus *Dichomeris* in Korea, with Descriptions of Seven New Species (Lepidoptera, Gelechiidae). *Insecta Koreana,* **11**: 1-25.

Park K. T. 1996. Description of new species of *Dichomeris* Hübner (Lepidoptera, Gelechiidae). *Tinea,* **4**: 230-233.

Park K. T. & R. W. Hodges. 1995. Gelechiidae of Taiwan III. Systematic revision of the genus *Dichomeris* in Taiwan and Japan. *Insecta Koreana,* **12**: 1-96.

Ponomarenko M. G. 1992. Functional morphological analysis of male genitalia of the gelechiid moths of the subfamily Dichomeridinae sensu nov. (Lepidoptera, Gelechiidae). *Ent. Obozr.,* **71**(1): 160-177.

(Received April 4, 1996)