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A NEW SPECIES OF THE GENUS *SCYTHROPIODES* MATSUMURA, 1931 (LEPIDOPTERA: PELEPODIDAE) FROM KOREA AND TAIWAN

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Summary. A new species of Peleopodidae, *Scythropiodes sungsookimi* Sohn et Wu, **sp. n.**, is described on the basis of six specimens from Korea and Taiwan. External and genital features of the new species are illustrated. Holotype of new species is deposited in the Gongju National University of Education, Gongju, Korea.

Key words: moths, Gelechioidea, taxonomy, new species, East Asia.

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Резюме. Новый вид *Scythropiodes sungsookimi* Sohn et Wu, **sp. n.** из сем. Peleopodidae описывается по 6 экземплярам из Кореи и Тайваня. Приводятся иллюстрации внешнего вида и гениталий самца и самки. Голотип нового вида хранится в Национальном педагогическом университете Конджу, Корея.

INTRODUCTION

The genus *Scythropiodes* had been synonymized with *Odites* Walsingham, 1891 but later separated from the latter by a complex of distinctive characters: antennae shorter than costal margin of the forewing; labial palpi large, curved upward, second segment of moderate width and equal in length to third segment; the wings wide, light in colour, usually with a dark discal dot and a dark dot in the middle of the *R-Cu* cell; forewing with *CuA*₁ and *CuA*₂ spaced at base; the male genitalia symmetrical, with an elongated tegumen, but without an uncus; gnathos typical beak-shaped, with apex slightly curved downwards (Lvovsky, 1996). The systematic status of the *Odites*-group has been debated but it is currently associated with Peleopodidae *sensu* Minet (1986) according to the latest phylogenetic study (Wang & Li, 2020). This opinion has been followed by the present study.

Scythropiodes comprises 36 species occurring in Asia and Africa, with its highest species diversity in China (Wang & Li, 2016, 2019). The adults are white, pale yellow or gray in color and mostly have a few spots on the forewings. Many species of the genus are very similar in the external appearance and thus, examination of their genitalia is necessary for reliable identification. Such procedure often leads to the discovery of the cryptic species in *Scythropiodes* (e.g. Miyano, 2022). The larvae are usually leaf-tiers or leaf-rollers on various angiosperms. They are seldom considered as notorious pests but at least three species of *Scythropiodes*: *S. leucostola* (Meyrick, 1921), *S. malivora* (Meyrick, 1930) and *S. lividula* (Meyrick, 1932), may damage the fruits of apple trees (Arai *et al.*, 2010).

In the present article, we describe a new species of *Scythropiodes* from Korea and Taiwan. Its generic association is substantiated by the morphology of male genitalia. Our study shows that the species diversity of *Scythropiodes* still remains underestimated in East Asia, as already hinted in Miyano (2022).

MATERIAL AND METHODS

Type specimens are deposited in three institutional collections: the Gongju National University of Education, Gongju, Korea (GJUE); the National Institute of Biological Resources, Incheon, Korea (NIBR); and the Taiwan Forestry Research Institute, Taipei, Taiwan (TFRI). Selected specimens were dissected for genitalia. Slide specimens of genitalia were prepared, following Clarke (1941) except that chlorazol black and Euparal resin were used as a staining agent and a permanent mounting medium, respectively. Terms of genitalia follow Klots (1970). The “GSN” in the collecting data denotes the “genitalia slide number”.

DESCRIPTION OF NEW SPECIES

Genus *Scythropiodes* Matsumura, 1931

Scythropiodes Matsumura, 1931: 1099.

Type species: *Scythropiodes seriatopunctata* Matsumura, 1931.

***Scythropiodes sungsookimi* Sohn et Wu, n. sp.**

<https://zoobank.org/NomenclaturalActs/270866FF-4652-4AC6-A134-2251018EDB6C>

Figs 1–5

TYPES. Holotype: ♂, **Korea**: Chungnam Prov., Dangjin-si, Myeoncheon-myeon, Mt. Amisan, 36°50'23.59"N 124°40'04.21"E, alt. 215 m, 4.VIII 2022 (JC Sohn), [GSN] SJC-1176, GJUE. Paratypes: 1♀, same as holotype, [GSN] SJC-1417, GJUE; 1♂1♀, **Korea**: Chungnam Prov., Gongju-si, Banpo-myeon, Hakbong-ri, Mt. Gyeryongsan, Temple Donghaksa, 36°21'11.9"N 127°13'05.0"E, 9.VIII 2021 (JC Sohn), GJUE & NIBR; 2♂, **Taiwan**: Ilan Co., Fushan, 28.VI 1995 (SH Yen), [GSN] SJC-1223, TFRI.

DIAGNOSIS. This species is similar to *Odites notocapna* Meyrick, 1925 in the external appearance and body size but differs from the latter in the presence of the white forewings (pale yellow in *O. notocapna*) and the lack of marginal dots on the forewings.

DESCRIPTION. HABITUS (Figs 1, 2). *Head*: Vertex and frons lustrous, white. Labial palpus upcurved, acuminate apically; 1st segment 1/7 as long as 2nd, brownish gray; 2nd segment white, tinged with brownish gray on basal 6/7 of lateral surface; 3rd segment 4/5 as long as 2nd, white, tinged with dark brown on apical area. Antenna 2/3 as long as forewing, ciliate in males, filiform in females; scape white dorsally, pale-brownish gray ventrally; flagellum pale-brownish gray, tinged with white on basal 1/5.

Thorax: Patagium white; tegula and mesonotum pale-brownish gray. Forewing length 5.3–6.2 mm, lustrous, white, tinged with pale-brownish gray along dorsum; discal cell with black spot at middle and distal end; tornus with a black spot; cilia white. Hindwing and cilia pale gray. Foreleg grayish brown, intermixed with white scales on ventral surface of coxa and femur. Midleg with coxa and femur whiten, intermixed with grayish brown scales on dorsal surface; tibia and tarsomeres grayish brown dorsally, white ventrally. Hindleg with coxa pale orange; femur, tibia and tarsomeres pale gray.

Abdomen pale-brownish gray, intermixed with pale-yellowish gray laterally.

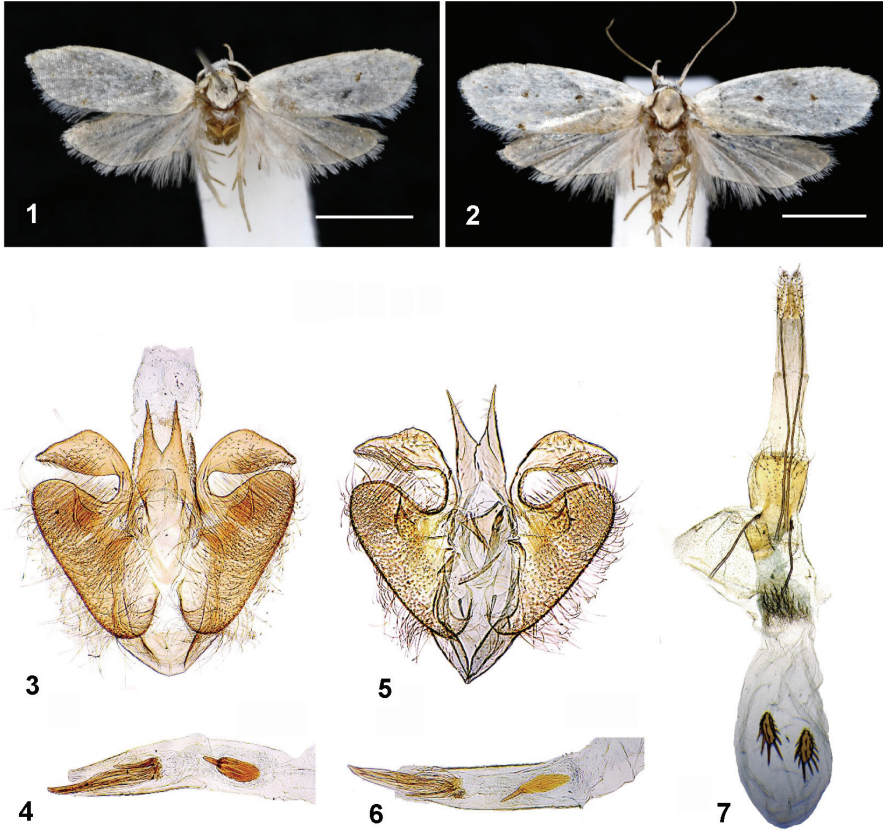
MALE GENITALIA (Figs 3–6). Tegumen oblique laterally; gnathos bifid, as long as transtilla; transtilla inverted-subtriangular. Valva ear-shaped, densely-hairy, with bulge at subbasal area of subcostal and elliptical cavity at saccular base; costal process arising near base, strongly-curved, expanded subtriangularly in terminal 2/3. Vinculum subtriangular; juxta elliptical. Aedeagus stout, narrowed distad, with three spiniform cornuti.

FEMALE GENITALIA (Fig. 7). Ovipositor telescopic. Sternite VIII sclerotized. Papillae anales narrow, setose. Apophyses posteriores 2.5x longer than apophyses anteriores. Ostium bursae moderate. Antrum columnar. Ductus bursae short, expanded near corpus bursae, spinulated and wrinkled on anterior 1/2. Corpus bursae elliptical, with two spinose, elliptical signa at middle.

REMARKS. Miyano (2022) reported three undescribed species of *Scythropiodes*. Of them, the new species described here is possibly conspecific with *Scythropiodes* sp. C.

DISTRIBUTION. Korea, Taiwan.

ETYMOLOGY. This species is named after Dr. Sung-Soo Kim, a famous lepidopterologist in Korea, in honor of his contributions to the knowledge of the Korean lepidopteran fauna.



Figs 1–7. *Scythropiodes sungsookimi* sp. n. 1 – adult, holotype, male; 2 – adult, paratype, female (from Mt. Gyeryongsan); 3, 4 – male genitalia, holotype: 3 – ventral view, without aedeagus, 4 – aedeagus; 5, 6 – male genitalia, paratype (SJC-1223): 5 – ventral view, without aedeagus, 6 – aedeagus; 7 – female genitalia, paratype (SJC-1417). Scale bars = 3 mm.

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