

# A New Record of *Saridoscelis sphenias* Meyrick, 1894 (Lepidoptera, Yponomeutidae), the Second Species of Saridoscelinae, from Korea

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## 상제집나방아과의 두 번째 종인 *Saridoscelis sphenias* Meyrick, 1894의 국내 첫 기록

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**ABSTRACT:** *Saridoscelis sphenias* Meyrick is reported for the first time from Korea. It represents the second species of Saridoscelinae in the country. The external appearance and male genitalia of *S. sphenias* are described and illustrated. Records of this species in Korea bring a concern as a pest species to domestic blueberry cultivations.

**Key words:** Fauna, Korea, Lepidoptera, *Saridoscelis*, Yponomeutidae

**초록:** 국내 미기록종인 *Saridoscelis sphenias* Meyrick을 보고한다. 이 종은 상제집나방아과의 두번째 종으로 기록된다. 정확한 동정을 위해 외부 형질과 수컷 생식기를 그림과 함께 기술한다. *Saridoscelis sphenias* Meyrick은 블루베리의 잠재 해충으로 국내 농가에 주의를 요한다.

**검색어:** 동물상, 한국, 나비목, 상제집나방속, 집나방과

*Saridoscelis* is the type genus of Saridoscelinae and it currently includes four species occurring in temperate and tropical Asia (Lewis and Sohn, 2015). This genus exhibits three unique characteristics (Moriuti, 1977; Dugdale et al., 1998): the male sternum VIII configuration, the socii of the male genitalia with fringed sensilla, and the hindwing with all three M branches. All known hostplants of *Saridoscelis* belong to Ericaceae, suggesting a strong trophic fidelity. Significant economic damage by *Saridoscelis* is rare but *S. sphenias* Meyrick has been regarded as a pest species in blueberry cultivation (Yu et al., 2012).

Sohn and Choi (2016) reported *Saridoscelis kodamai*

Moriuti from Korea. This was the first record of Saridoscelinae from the country. In their report, its occurrence status was pending due to the lack of evidence. In the present study, the second Korean species of Saridoscelinae and *Saridoscelis* is reported with photos of external and male genital features.

## Material and methods

Specimens were obtained from the collection of the Department of Science Education, Gongju National University of Education (GNUE). The type specimen of *Saridoscelis sphenias* was photographed from the Natural History Museum, London, UK (NHMUK).

Genitalia slides of specimens were prepared following Clarke (1941), except that Chlorazol black and Euparal resin

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were used for staining and permanent mounting, respectively. Terms for genitalia follow Klots (1970). The ‘GSN’ in the specimen data stands for ‘genitalia slide number.’

## Taxonomic accounts

### Family Yponomeutidae 집나방과

### Subfamily Saridoscelinae Moriuti 1977 상제집나방아과

### Genus *Saridoscelis* Meyrick, 1894

*Saridoscelis* Meyrick, 1894: 28. Type species: *Saridoscelis sphenias* Meyrick, 1894.

This genus is characterized by a unique modification of the male 8<sup>th</sup> abdominal sternite (Kyrki, 1990). The adults of *Saridoscelis* are mostly whitish moths with dark brown, straight streaks on the forewing. In all known cases, the larvae are associated with three genera of Ericaceae: *Leucothoe*, *Pieris*, and *Vaccinium*.

### *Saridoscelis sphenias* Meyrick, 1894 작은상제집나방 (Figs. 1, 2)

*Saridoscelis sphenias* Meyrick, 1894: 28. Type locality: Myanmar, Koni.

*Saridoscelis issikii* Moriuti, 1961: 66. Type locality: Japan, Honshu, Hyogo Pref., Nisinomiya.

**Description.** Head - Vertex and frons white. Labial palpus slender, white; 2nd segment tinged with dark grayish brown on outer surface. Antenna white, 6/7 as long as forewing. Thorax - Tegula white, intermixed with pale grayish brown scales medially; mesonotum pale grayish brown, tinged with white anteriorly and laterally. Forewing length 5-5.5 mm, pale grayish brown, intermixed with white scales, white horizontally along middle; costa dark brown on basal 1/6, accompanied with three oblique, dark grayish brown streaks on distal 1/3; dorsal patch oblique, broadened to dorsum, dark grayish brown; subterminal line straight, oblique, broadened to tornus, dark grayish brown; cilia dark grayish brown. Hindwing and cilia dark grayish brown. Eight abdominal sternite (Fig. 2B) triangular, deeply-emarginated medially on basal margin, with T-shaped arm apically, Male genitalia (Fig. 2A) - Uncus elongate, bifid; socius long, slender in basal 2/3, digitate in distal 1/3, with a bundle of spiniform setae apically. Tegumen trapezoidal in distal half, rectangular in basal half; gnathal arm conical, dentate, with subtriangular plate below. Valva elongate, sparsely setose; costa curved, bulged on distal 1/3; saccular plate as long as basal 2/5 of valva, with conical bulge apically. Saccus slender, 2x longer than socius, elongate-triangular basally, dilated in distal 1/4. Phallus (Fig. 2C) slender, nearly straight; apex with curved carina; cornuti present as fine spinules. Female not found in this study, described in Moriuti (1977).

**Material examined.** 1 ♂, Jeonnam Prov., Jindo-gun, Gogun-

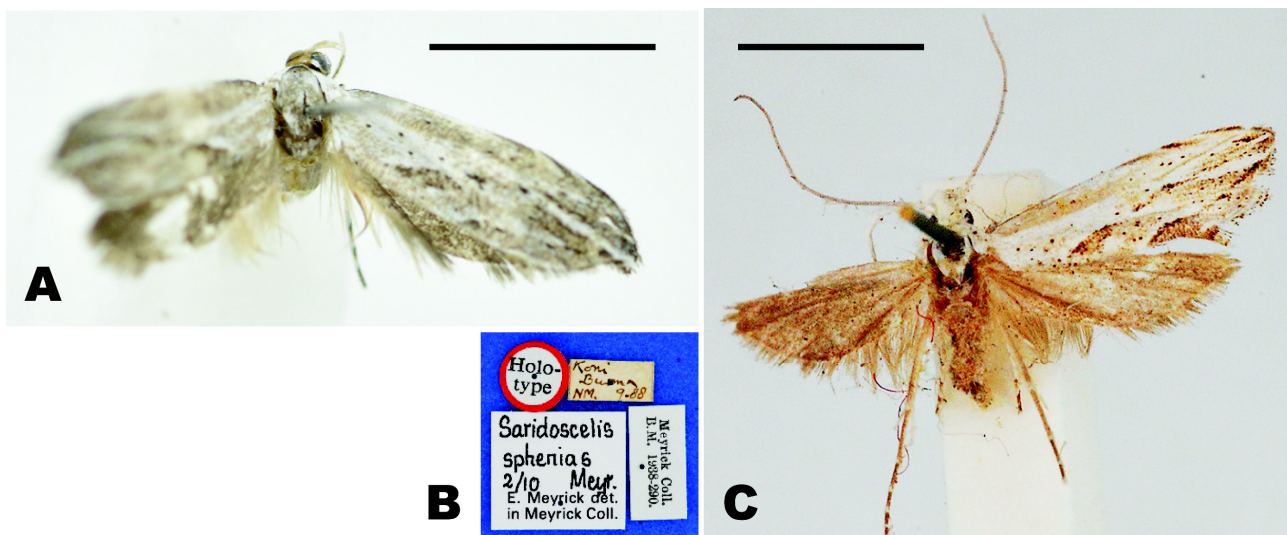
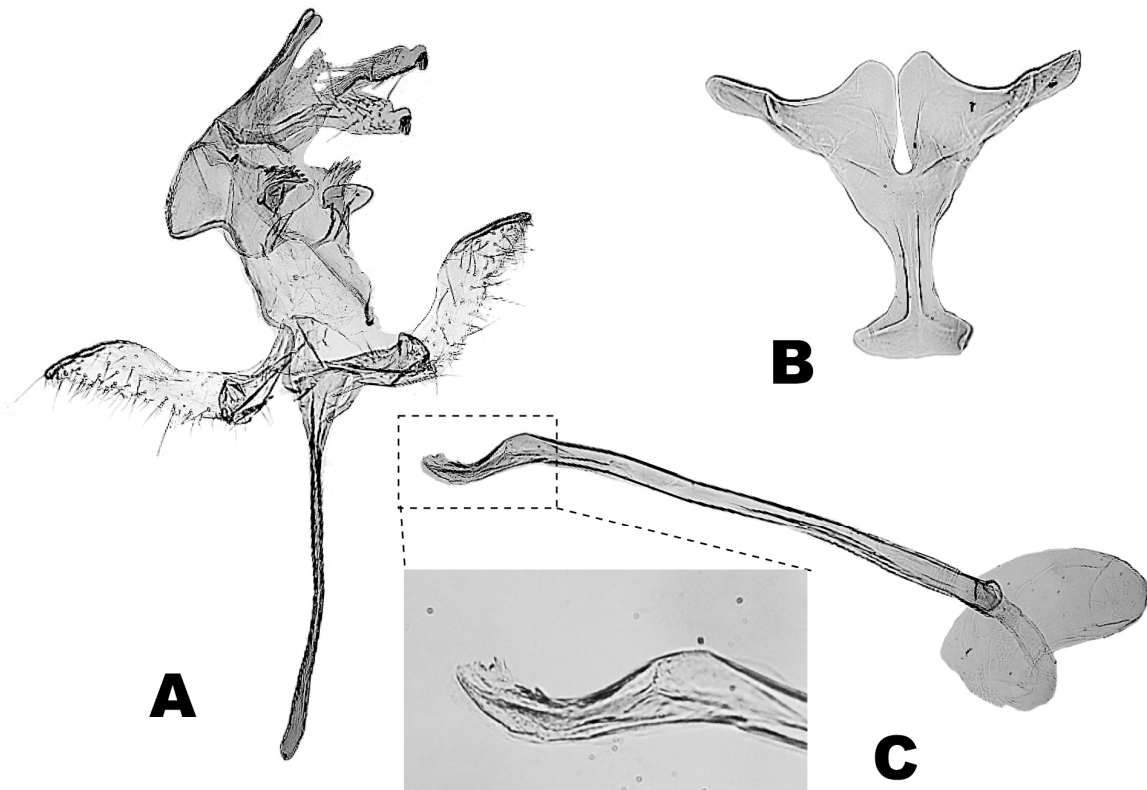


Fig. 1. Adults of *Saridoscelis sphenias* Meyrick. A: male, Jindo-gun, Korea; B: holotype labels; C: holotype, female. Scale bars: 3 mm.



**Fig. 2.** Eighth sternite and male genitalia of *Saridoscelis sphenias* Meyrick. A: genital capsule; B: eighth sternite; C: phallus.

myeon, Mt. Cheomchalsan, near Mosa Village, pine tree forest (34°28'00.8"N, 126°21'41.7"E), 29 August 2016 (JC Sohn), genitalia slide no. SJC-1074; 1 ♂, Jeonnam Prov., Wando-gun, Is. Wando, Wando-eup (34°17'53.1"N, 126°42'46.8"E), 24 August 2017 (JC Sohn).

**Distribution.** Korea (new record), Japan, Taiwan, India.

**Host plants.** Ericaceae - *Vaccinium bracteatum* Thunberg (Moriuti, 1961).

**Remarks.** The type specimen of *Saridoscelis sphenias* is illustrated in this study (Figs. 1B and C). This species seems to be a resident or recently-established species in Korea. Its distribution within the country appears limited to the south-western parts. Given the pest status of *Saridoscelis sphenias* in the neighboring countries, its occurrence in Korea may pose a threat to domestic blueberry cultivation. This species seems to be on flight in August, but it is known to be bivoltine in Japan (Moriuti, 1977).

## Statements for Authorship Position & contribution

Sohn, J.C. : Gongju National University of Education, Professor; performed overall procedures of research and wrote the manuscript

All authors read and approved the manuscript

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