

New record of *Eumonopyta Moriuti*, 1977 (Lepidoptera, Yponomeutidae) from Korea

Jae-Cheon Sohn*

Department of Science Education, Gongju National University of Education, Gongju, Chungnam 32553, Republic of Korea

*Correspondent: jsohn74@gjue.ac.kr

An yponomeutid genus *Eumonopyta* Moriuti, 1977 is recorded for the first time from Korea, based on the species *Eumonopyta unicornis* Moriuti, 1977. *Eumonopyta* is distinguished from *Yponomeuta* by the lack of the areole in the forewing, the presence of the hindwing veins, Sc and R₁ completely fused, the lack of the spinules on the gnathal processes, and the presence of three spiniform cornuti in the phallus. *Eumonopyta unicornis* is characterized by the presence of greenish irrotation on the forewings. The Korean records of *E. unicornis* are based on two male specimens from the islands, Geojedo (Gyeongsangnam-do) and Jejudo (Jeju-do) and one female specimen from the island Dolsando (Jeollanam-do). External appearance and genitalia of *E. unicornis* are redescribed and illustrated. The occurrence status of *E. unicornis* in Korea is briefly discussed. With our records from Korea, the distributional range of *E. unicornis* is expanded from Japan and Taiwan.

Keywords: *Eumonopyta*, Korea, Lepidoptera, new records, Yponomeutidae

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INTRODUCTION

A small genus of Yponomeutidae, *Eumonopyta* Moriuti comprises three species occurring in East and Southeast Asia. Moriuti (1977) distinguished this genus from *Yponomeuta*, based on the differences in wing venation and male genitalia. These diagnostic characteristics were critically revised by Sohn (2016). Adults of *Eumonopyta* are unique in Yponomeutidae in having their forewing ground-color mixed with gray and green. Like several genera in Yponomeutidae, they have a transparent membranous window in the basal area of each hindwing. This character is supposedly related to acoustic mimicry which helps deceiving entomophagous bats (O'Reilly *et al.*, 2019). No information on larval stages and hostplants is available for *Eumonopyta* (Gershenson and Ulenberg, 1998; Yamauchi and Hirowatari, 2013).

Eumonopyta had been considered as a monobasic genus in Yponomeutidae, endemic to Japan. Sohn (2016) found two new congeners and expanded its distributional range to Southeast Asia and India. *Eumonopyta unicornis*, the type species of the genus, occurs in East Asia. However, the species has not been known from Korea, in spite of its records from the neighboring countries.

The aim of this paper is to report *Eumonopyta unicornis* Moriuti for the first time from Korea. The genus *Eu-*

monopyta is first recorded from Korea. All the specimens examined are deposited in two collections: the Gongju National University of Education (GNUE) and the National Institute of Biological Resources (NIBR). Terms of genitalia and wing venation follow Klots (1970) and Wootton (1979), respectively.

TAXONOMIC ACCOUNTS

Order Lepidoptera
Family Yponomeutidae
Subfamily Yponomeutinae

Eumonopyta Moriuti, 1977

Eumonopyta Moriuti, 1977: 201. Type species: *Eumonopyta unicornis* Moriuti, 1977.

This genus differs from *Yponomeuta* in the lack of the areole in the forewing, the presence of the hindwing veins, Sc and R₁ completely fused, the lack of the spinules on the gnathal processes, and the presence of three spiniform cornuti in the phallus.

The distributional range of the *Eumonopyta* is restricted to East Asia (Korea, Japan and Taiwan), Southeast Asia (Thailand), and South Asia (India).

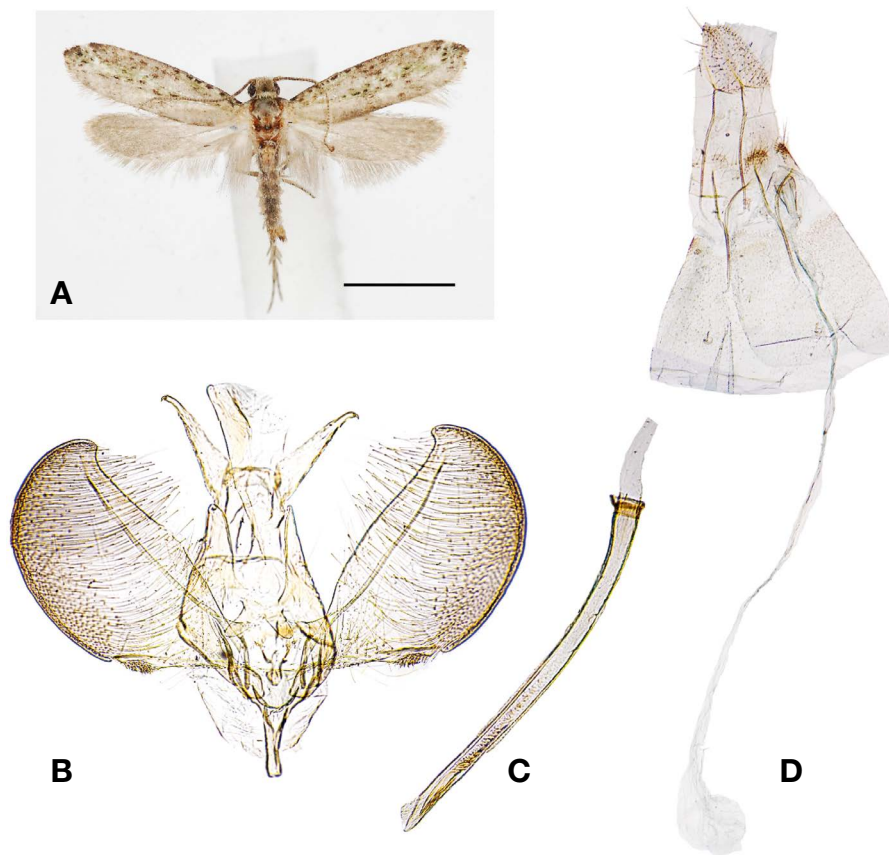


Fig. 1. *Eumonopyta unicornis* Moriuti. A. Habitus (scale bar = 3 mm). B. Male genitalia. C. Phallus. D. Female genitalia.

Eumonopyta unicornis Moriuti, 1977 폴색집나방 (Fig. 1)
Eumonopyta unicornis Moriuti, 1977: 201. Type locality:
 Japan, Tokyo, Sizenen.

Description. Head - Vertex gray, intermixed with pale gray scales laterally and anteriorly; frons dark gray. Antenna 1/2 as long as forewing; scape gray, intermixed with dark gray scales on distal half; flagellomeres gray. Labial palpus dark brownish gray on outer surface, pale gray on inner surface. Thorax - Patagium gray; tegula dark brownish gray, intermixed with grayish green scales on distal half; mesonotum gray, intermixed with grayish green scales on anterior 1/3 and pale gray scales on posterior margin; mesoscutellum dark brown. Forewing length 5.9–6.9 mm (n = 3), gray, intermixed with dark gray scales on costal area and grayish green scales on medial area; dark brown dots scattered on costal and medial areas; postmedian bar white, oblique from distal 1/10 of costa. Legs with coxa pale gray; femur, tibia and tarsi dark gray dorsally, pale gray ventrally. Male genitalia (Fig. 1B) - Uncus subrectangular; tuba analis weakly sclerotized ventrally. Socius elongate, tapered to apex, with cheliform seta apically. Tegumen oblique laterally;

gnathos digitiform, 1/3 as long as socius. Valva broad, broadly round along ventral margin, hairy on ventral and basal areas; apex slightly protruding and curved inward; costa slightly concave at basal 1/3; saccus 1/3 as long as ventral margin of valva, with dense-setose, elliptical zone on distal 1/4. Vinculum diverged; saccus elongate, 1/2 as long as socius. Phallus (Fig. 1C) narrow, slightly curved at basal 1/3, nearly as long as valva, with ring-like basal scape; three cornuti small, spiniform, with spinulate zone 1/2 as long as phallus. Female genitalia (Fig. 1D) - Papillae anales oblique ventrally, setose. A pair of setose humps on ventrite VIII small. Apophyses posteriores including basal forks as long as apophyses anteriores. Ostium bursae small, beyond ventrite VII. Ductus bursae very narrow, gradually dilated in distal 1/4; antrum 1/2 as long as papilla analis, funnel-shaped. Corpus bursae obovate, 1/6 as long as ductus bursae; signum absent.

Material examined. 1♂, Gyeongsangnam-do, Geoje-si, Geojedo Island, Dongbu-myeon, Mt. Nojasan (N34°47' 47.3", E128°36'50.8"), 18 August 2017 (JC Sohn), NIBS. 1♀, Jeollanam-do, Yeosu-si, Dolsando Island, 23 June 2017 (JC Sohn), genitalia slide no. SJC-1184, GJUE. 1♂,

Jeju-do, Jejudo Island, Seogwipo-si, Sekdal-dong, 1100 point (N33°21'32.1", E126°27'44.4", alt. 1109 m), 1 August 2016 (JC Sohn), genitalia slide no. SJC-1073, GJUE.

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

Remarks. The collecting records of this species suggest that *Eumonopyta unicornis* occurs broadly in the southern islands of Korea. It appears to be a rare species in Korea but confirmation of its residence is pending until information on the hostplants becomes available.

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