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A new species of *Protopterna* Meyrick, 1908 from Korea (Lepidoptera: Tortricidae, Tortricinae)

Jae-Cheon Sohn

Abstract

A new species of the genus *Protopterna* Meyrick, 1908, *P. dongjooi* Sohn, sp. nov. is described from Korea. The type series include one male and one female collected from Island Wando. The genus is recorded for the first time in Korea. The species represents the northernmost distribution of *Protopterna*. Photos of the habitus and genitalia of both sexes are provided.

Keywords: Lepidoptera, Tortricidae, Tortricinae, *Protopterna*, taxonomy, Korea.

Una nueva especie de *Protopterna* Meyrick, 1908 de Corea (Lepidoptera: Tortricidae, Tortricinae)

Resumen

Se describe una nueva especie del género *Protopterna* Meyrick, 1908, *P. dongjooi* Sohn, sp. nov. de Corea. La serie tipo incluye un macho y una hembra recolectados en la isla de Wando. El género se registra por primera vez en Corea. La especie representa la distribución más septentrional de *Protopterna*. Se facilitan fotos del habitus y la genitalia de ambos sexos.

Palabras clave: Lepidoptera, Tortricidae, Tortricinae, *Protopterna*, taxonomía, Corea.

Introduction

The genus *Protopterna* was designated by Meyrick (1908) with the type species, *Protopterna chalybias* Meyrick, 1908. Systematic position of this genus within Tortricinae has been on debate. Obraztsov (1965) assigned it together with *Pternozyga* Meyrick, 1908 to Cnephasiini. This assignment was followed by Brown (2005). In the other, Yasuda & Razowski (1991) associated it with Euliini, now a synonym of Cochylini sensu Regier et al. (2012). These tribal assignments were questioned (Horak, 1998), since there is no apparent morphological characteristics supporting its relationships with Euliini or Cnephasiini. Horak (1998) therefore proposed its retention within Archipini, until any evidence tells otherwise. This proposal was followed by Jinbo (2013). The members of *Protopterna* can be characterized by two genital characteristics: the gnathos arms with a long lateral process and a spinulated prominence basally and the subbasal disc of valva prominent (Yasuda & Razowski, 1991). *Protopterna* comprises three species occurring in Asian tropics and subtropics. No data on immature stages have been available for the genus so far. In the present article, a new species of *Protopterna* is described from Korea. All type specimens are deposited in the Gongju National University of Education, South Korea (GJUE).

Taxonomic accounts

Protopterna Meyrick, 1908

Protopterna Meyrick, 1908. *J. Bombay Nat. Hist. Soc.*, 18, 621

Type species: *Protopterna chalybias* Meyrick, 1908. *J. Bombay Nat. Hist. Soc.*, 18, 621

This genus is very similar to *Minutargyrotoza* Yasuda & Razowski, 1991 in the overall appearance and the presence of a funnel-like sclerite in juxta but differs from the latter in the absence of subbasal disc on the valva and a falcate medial process of gnathos. *Protopterna* is recorded for the first time from Korea.

Included species (type locality in brackets)

Protopterna chalybias Meyrick, 1908. *J. Bombay Nat. Hist. Soc.*, 18, 621 [India]

Protopterna citrophanes Meyrick, 1921. *Zool. Meded.*, 6, 150 [Indonesia]

***Protopterna dongjooi* Sohn, sp. nov.** [Korea]

Protopterna eremia Yasuda & Razowski, 1991. *Nota lepid.*, 14(2), 185 [Japan]

***Protopterna dongjooi* Sohn, sp. nov.**

[Korean name: Ban-di-ipmalinabang]

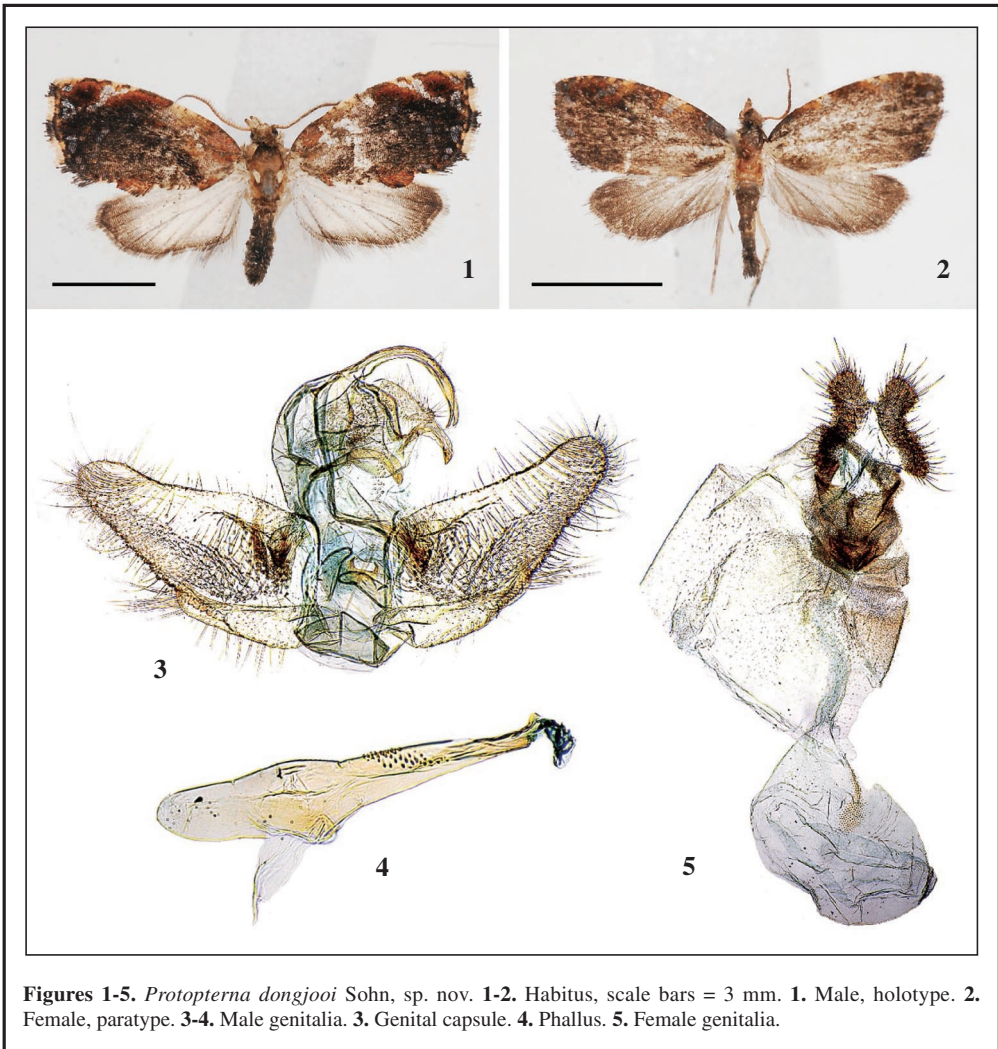
Holotype (Figure 1): 1 ♂, KOREA, Jeonnam Prov., Wando-gun, Gunoe-myeon, Wando Arboretum, 10-IV-2015 (S. S. Kim leg.), genitalia slide no. SJC-1081. Deposited in the GJUE. Paratype (Figure 2): 1 ♀, same locality as holotype, 18-IV-2015 (S. S. Kim leg.), GJUE.

Diagnoses: This species is similar to *Protopterna eremia* Yasuda & Razowski, 1991 in overall appearance but differs from the latter in having the apparent sexual dimorphism in the hindwing coloration (paler in male); the narrower valva and uncus, the broadened medial plate of gnathos in the male genitalia; and the smaller sterigma in the female genitalia.

Description: Head - Vertex fuscous, paler anteriorly; frons pale brown on upper half, dark fuscous on lower half. Antennae serrate in male, filiform in female, 2/5 as long as forewing; scape dark fuscous, intermixed with pale-reddish brown scales basally; flagellomere dark brown on basal 1/3; pale-brownish gray on distal 2/3. Labial palpus porrect; 1st segment white; 2nd segment broadened with scale tufts, 4x longer than 1st segment, pale-reddish brown laterally, white mesally; 3rd segment as long as 1st segment, dark fuscous, intermixed with pale-reddish brown scales. Thorax - Patagium dark fuscous; tegula brownish olive on basal half, dark fuscous on distal half; mesonotum dark-purplish fuscous. Foreleg with coxa white; femur white, narrowly tinged with dark brown dorsally; tibia dark brown, with white band at middle and distal end; 1st tarsomere dark brown; remaining tarsomeres pale-yellowish gray, with dark brown band at distal 1/3. Hindleg with coxa and femur silvery white; tibia pale fuscous dorsally, silvery white ventrally; tarsomeres fuscous, with pale-yellowish gray ring distally. Forewing length 6.2 mm in male, 5 mm in female, broadened to termen, dark brown, tinged with brown basally and costally in male; costa dark brown, with sparse costal strigulae in basal half and four pale-orange spots in distal 1/3; antemedian area tinged with pale orange in costal area; two postmedian strigulae oblique, silvery blue; subterminal spots silvery blue; dorsum with reddish brown scale tufts at basal 1/6 and distal 1/3; fringe pale orange, intermixed with dark brown scales at apex, middle and tornus. Hindwing silvery white in male, fuscous in female, tinged with dark fuscous along margins and veins, fringes pale fuscous.

Male genitalia: Uncus slender, curved, bifid in terminal 1/5. Tegumen a narrow; socius 1/2 as long as uncus, digitiform, narrowed distally, long-setose; gnathos U-shaped, dilated medially, with curved, apically-denticulate basal process. Valva narrowed to apex beyond sacculus, narrowly round apically; costa, long-hairy; costa slightly convex at basal 1/3; sacculus 1/2 as long as ventral margin of valva, narrowed distally; subbasal disc semi-oval, arising from round pocket, long-hairy. Juxta small, open

dorsally. Vinculum subquadrate, broadened medially. Phallus nearly straight, tapered to apex beyond middle, with denticulate area postmedially.



Figures 1-5. *Protopterna dongjooi* Sohn, sp. nov. 1-2. Habitus, scale bars = 3 mm. 1. Male, holotype. 2. Female, paratype. 3-4. Male genitalia. 3. Genital capsule. 4. Phallus. 5. Female genitalia.

Female genitalia: Papillae anales narrow, curved at dorsal 2/5, dilated dorsally, setose. Apophysis posteriores as long as apophysis anteriores. Sterigma largely fused with abdominal segment VIII, expanded in inverted-triangular form near ostium bursae. Surrounding area of ostium bursae elevated, sclerotized in V-shape. Collar tubular, 1/3 as long as ductus bursae. Ductus bursae of even width, as long as corpus bursae. Corpus bursae obovate, with scobinate band on posterior half.

Distribution: Korea (endemic).

Etymology: The species name is dedicated to my lovely wife, Dongjoo Kang.

Remarks: This species represents the northernmost distribution of *Protopterna*. It seems to be one of the rare lepidopteran in Korea, given the scarce collecting records.

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