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One new species of the genus *Pediasia* Hübner, [1825] from China (Lepidoptera: Crambidae, Crambinae)

W. C. Li & H. H. Li

Abstract

Pediasia rotundiprojecta Li & Li, sp. n. is described from Tibet, China. The female of *Pediasia pseudopersella* Bleszyński, 1959 is described for the first time. Image of adult of the new species is provided and the genitalia are illustrated.

KEY WORDS: Lepidoptera, Crambidae, Crambinae, *Pediasia*, new species, China.

Una nueva especie de China del género *Pediasia* Hübner, [1825] (Lepidoptera: Crambidae, Crambinae)

Resumen

Se describe del Tibet, China *Pediasia rotundiprojecta* Li & Li, sp. n. Se describe por primera vez la hembra de *Pediasia pseudopersella* Bleszyński, 1959. Se proporciona la imagen del adulto de la nueva especie y se ilustra su genitalia.

PALABRAS CLAVE: Lepidoptera, Crambidae, Crambinae, *Pediasia*, nueva especie, China.

Introduction

Pediasia was established by Hübner in 1825 with *Tinea fascelinella* Hübner, [1813] as the type species. This genus can be recognized by the synapomorphy of the phallus, always curved downward strongly at middle, and the apex only partially sclerotized longitudinally but twisted to form a complete tube in the male genitalia (LANDRY, 1995).

The genus comprises 81 species worldwide (BŁESZYŃSKI & COLLINS, 1962; BŁESZYŃSKI, 1965, 1967; KOZAKEVICH, 1978; CHEN *et al.*, 2004; STRELTZOV & USTJUZHANIN, 2009). Prior to this study, 14 species were recorded in China. This paper adds one new species to the genus, and describes the female of *Pediasia pseudopersella* Bleszyński, 1959 for the first time. Terminology follows BŁESZYŃSKI (1965). All the studied specimens are deposited in the Insect Collection, College of Life Sciences, Nankai University, Tianjin, China.

Genus *Pediasia* Hübner, [1825]

Pediasia Hübner, [1825]: 365. Type species: *Tinea fascelinella* Hübner, [1813].

Carvanca Walker, 1856: 119. Type species: *Carvanca trisecta* Walker, 1856.

Pseudopediasia Ganey, 1987: 36. Type species: *Pseudopediasia mikkolai* Ganey, 1987.

Oseriates Fazekas, 1991: 308. Type species: *Tinea aridella* Thunberg, 1794.

General characters: Frons rounded, conical protuberance absent. Ocellus and chaetosema present.

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Forewing usually paler along veins, often with two faint transverse lines; R_1 and R_2 free, R_3 and R_4 stalked, R_5 and R_{3+4} stalked, M_2 and M_3 separate. Hindwing with open cell, M_2 present. Female frenulum single, male frenulum hook absent. In male genitalia, basal process of costa well-developed, pseudosaccus present, phallus with cornutus. In female genitalia, papilla anale separate, apophysis posterior longer than apophysis anterior, ductus bursae varied in shape, signum absent.

Distribution: The Palearctic, Oriental, African and Nearctic regions.

Remarks: This genus is close to *Agriphila* Hübner, [1825] in having identical wing patterns and venations, the costa with sclerotized protuberance in the male genitalia, and the papilla anale separate in the female genitalia. It can be distinguished by the phallus curved downward strongly at middle, partially sclerotized at apex, and without an apical spine in the male genitalia, and by the absence of the signum in the female genitalia. In *Agriphila*, the phallus is straight at middle, its apex is entirely sclerotized and bears a small ventral spine; and the signum is present.

***Pediasia rotundiprojecta* Li & Li, sp. n. (Figs. 1-4)**

Material examined: Holotype ♂, CHINA, Tibet (Xizang): Bowo (Bomi) [29° 53' N, 95° 45' E], 2800 m, 19-VIII-2003, leg. Xipu Wang and Huaijun Xue, genitalia slide no. LWC08391. Paratypes: 16 ♂♂, 4 ♀♀, data same as holotype; 4 ♂♂, 1 ♀, Bayizhen [29° 40' N, 94° 20' E], Nyingchi (Linzhi), 2900 m, 22-VI-31-VII-1983, leg. Houhun Li; 1 ♂, Bayizhen, Nyingchi (Linzhi), 2000 m, 6-VIII-2003, leg. Xipu Wang and Huaijun Xue; 1 ♂, Mainling (Milin) [29° 10' N, 94° 10' E], 11-VI-1983, leg. Houhun Li; 2 ♀♀, Tangmai (Tongmai) [30° 09' N, 95° 06' E], Tibet, 5-6-VI-1983, leg. Houhun Li.

Description: Adult (Fig. 1): Forewing length 9.0–11.5 mm. Frons pale brown mixed with white. Vertex white mixed with yellowish white. Labial palpus yellowish white on dorsal and inner sides, pale brown on ventral and outer sides, first segment white at base on ventral side. Maxillary palpus pale brown, white distally. Antenna blackish brown. Patagium pale yellow except pale brown laterally. Thorax white. Tegula white mixed with grey, posterior margin with long yellowish white scales. Forewing white, sparsely covered with pale brown scales; postmedian line pale brown, inconspicuous, outcurved at about anterior one third, incurved at about posterior one fourth; subterminal line white, lined with pale brown, dentate, outcurved at about middle; termen pale brown, posterior one third with three black small spots; fringe white, pale brown subbasally, tip mixed with grey. Hindwing grayish white to pale brown; fringe yellowish white to grey. Abdomen grayish white; female 7th sternite with rounded sclerotized plate anterolaterally (Fig. 2). Legs pale brown.

Male genitalia (Fig. 3): Uncus slender, narrowing to hooked tip. Gnathos slightly longer than uncus, bluntly rounded at tip. Tegumen narrow and long, about twice as long as gnathos. Valva narrow and long, concave at basal third, convex medially, tapering to bluntly rounded apex. Costa with strong thornlike basal process, conspicuously curved ventromedially; tip pointed, reaching as long as apex of valva. Pseudosaccus thumb-shaped. Juxta rounded. Phallus shorter than valva; cornuti double, one thick spinelike, another fusiform.

Female genitalia (Fig. 4): Papilla anale triangular, concave posteriorly; nearly as long as apophysis posterior. Apophysis anterior short and thin, slightly shorter than apophysis posterior. Lamella antevaginalis well-developed, U-shaped. Ductus bursae thin and long, about twice as long as corpus bursae, with sclerotized thumb-shaped protuberance at about posterior one fourth; anterior half with large sclerotized ovate sac, with longitudinal pleats. Ductus seminalis arising from posterior part of ductus bursae. Corpus bursae ovate, densely covered with tiny spines.

Distribution: China (Tibet).

Diagnosis: This species can be distinguished from its congeners by the unique characters in the genitalia. The basal process of costa conspicuously curved ventromedially, the phallus with a thick spinelike cornutus and a fusiform cornutus in the male genitalia; the ductus bursae bears a sclerotized thumb-shaped protuberance at about posterior one forth, and its anterior half with a large sclerotized sac in the female genitalia.

Etymology: The specific name is derived from the Latin prefix *rotund-* = round, and the Latin

projectus = protuberant, in reference to the ductus bursae with a distinctively sac-shaped protuberance in the female genitalia.

Pediasia pseudopersella Błeszyński, 1959 (Fig. 5)

Pediasia pseudopersella Błeszyński, 1959: 112; BŁESZYŃSKI, 1965: 367; CHEN *et al.*, 2004: 141.

Material examined: 1 ♂, 2 ♀♀, CHINA, Inner Mongolia: Xilinhaote [43° 57' N, 116° 03' E], 1030 m, 10-VIII-1997, leg. Houhun Li; 1 ♂, Dengkou [40° 20' N, 107° 00' E], 1000 m, 19-VIII-2002, leg. Zhiqiang Li and Dandan Zhang. 1 ♂, Gansu Province: Su'nan [38° 50' N, 99° 36' E], 2251 m, 16-VIII-2007, leg. Feng Yang and Hanguang Gao. 1 ♂, Xinjiang Uygur Autonomous Region: Weihugou, Jimusaer [44° 00' N, 89° 11' E], 1734 m, 9-VII-2007, leg. Xipu Wang *et al.*; 1 ♂, Baihaba, Habahe [48° 02' N, 86° 26' E], 1164 m, 27-VII-2007, leg. Xipu Wang *et al.*; 3 ♂♂, 2 ♀♀, Buerjin [47° 41' N, 86° 59' E], 1114 m, 22-28-VII-2007, leg. Xipu Wang *et al.*; 2 ♂♂, Nalati [43° 21' N, 84° 01' E], Xinyuan, 1562 m, 16-17-VIII-2007, leg. Xipu Wang *et al.*

Description: Forewing length 10.0-12.5 mm. BŁESZYŃSKI (1959, 1965) described and figured the male adult and genitalia.

Female genitalia (Fig. 5): Papilla anale triangular, slightly shorter than apophysis posterior. Apophysis anterior nearly as long as apophysis posterior. Ductus bursae long and thin, about three times as long as corpus bursae; posterior half sclerotized weakly, anterior half membranous. Ductus seminalis arising from posterior part of ductus bursae. Corpus bursae rounded.

Distribution: China (Gansu, Inner Mongolia, Xinjiang), Iran.

Diagnosis: *Pediasia pseudopersella* Błeszyński, 1959 is close to *P. yangtseella* (Caradja, 1939) in the female genitalia, but its ductus bursae is about three times as long as corpus bursae; in *P. yangtseella*, the ductus bursae is about twice as long as the corpus bursae. In the male genitalia, *P. pseudopersella* is conspicuously different from *P. yangtseella* by the costa with a curved basal process and a semicircular second process; in *P. yangtseella*, the basal process of costa is straight, and the second process of costa is thick spinelike.

Remarks: The female of this species is described for the first time herein.

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