



## Notes on the genus *Prismosticta* (Lepidoptera, Bombycidae) with description of a new species from China

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The bombycid genus *Prismosticta* was established by Butler in 1880 with *P. fenestrata* as its type species. The genus is mainly distributed in Asian countries: Vietnam, Thailand, Cambodia, China, India, Indonesia, Japan, Malaysia, Myanmar (Holloway, 1987; Chu & Wang, 1993, 1996; Zolotuhin & Witt, 2009). Recently, Kishida & Wang (2011) synonymized *P. sinica* Yang, 1995 with *P. fenestrata* Butler, 1880, leaving five species in the genus. Chu & Wang (1993) described '*Prismosticta unihyala*' based on two male specimens collected from the Wuyishan Mountains, Fujian Province, China, but it is distinctly separated from other *Prismosticta* species by the following characters: uncus with a long dorsal uncuslike projection arising from the base of uncus, and valvae asymmetrical. We consider that '*Prismosticta unihyala*' does not belong to any named genus, and will address this issue elsewhere.

The purpose of this paper is to describe a new *Prismosticta* species from China, and present brief notes on the identification and distribution of all known species of *Prismosticta*. The type specimens of previously described species in the Natural History Museum, London, UK (BMNH) were examined, as well as field collected materials from China, and specimens preserved in the South China Agricultural University (SCAU) and Hunan Agricultural University (HUNAU). Morphological terminology follows Lemaire & Minet (1999); photographs of adults and genitalia were taken with a Canon EOS 50D digital camera.

### *Prismosticta* Butler, 1880

*Prismosticta* Butler, 1880, *Ann. Mag. nat. Hist.* 6 (5): 67. (Type species: *Prismosticta fenestrata* Butler, 1880, *Ann. Mag. nat. Hist.* 6 (5): 68. Type locality: Darjeeling, India.). Type-species by original designation.

*Prismosticta*: Chu & Wang, 1993, *Sinozoologia* 10: 239; Chu & Wang, 1996, *Fauna Sinica Insecta* 5: 52.

This genus is similar to *Andraca* Walker, 1865, but can be distinguished from it by the following characters: apical part of the forewing with one or two white hyaline spots, discal cell of forewing with a black spot. Distributed in China, India, Japan, Indonesia, Malaysia, Thailand, Myanmar, Vietnam, Cambodia.

### Key to the species of *Prismosticta* Butler

1. Apical part of the forewing of male with two triangular white hyaline spots; apical part of the forewing of female with one smaller crescent-shaped white hyaline spot. . . . . *P. hyalinata*
- Apical part of the forewing of male and female with one triangular white hyaline spot . . . . . 2
2. Uncus entire . . . . . *P. tiretta*
- Uncus bilobed. . . . . 3

3. Uncus with two sickle-shaped processes. . . . . 4  
 - Uncus with two short triangular lobes. . . . . 5  
 4. Forewing greenish brown, uncus weakly bilobed, V-shaped. . . . . *P. tiapinga* sp.n.  
 - Forewing yellowish brown, uncus deeply bilobed, U-shaped. . . . . *P. fenestrata*  
 5. Mesial gnathos distinctly swelling with heavy spinulate, medial valva with a robust pyramide-like appendix. . . . . *P. regalis*  
 - Mesial gnathos slightly swelling without spinulate, medial valva with a robust bilobed appendix. . . . . *P. microprisma*

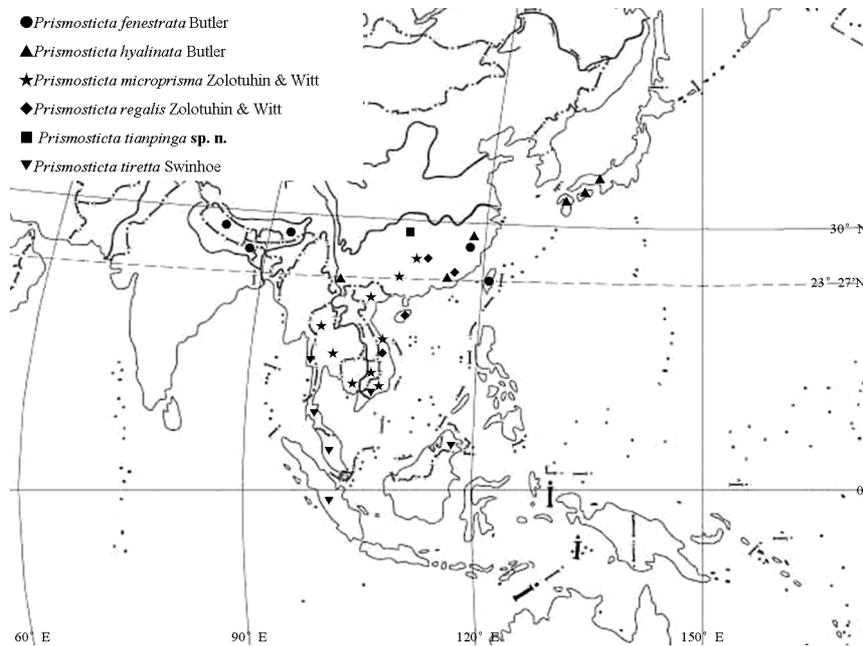


FIGURE 1. Distribution of *Prismocticta* spp.

***Prismocticta fenestrata* Butler, 1880**

*Prismocticta fenestrata* Butler, 1880, *Ann. Mag. nat. Hist.* 6 (5): 68. Type locality: Darjeeling, India.  
*Prismocticta sinica* Yang, 1995, *Insects of Baishanzu Mountain, Eastern China*: 353. Type locality: Zhejiang, China.

This species can be distinguished by the uncus with two sickle-shaped processes, the middle of uncus deeply bilobed, U-shaped. Its fully grown larva (originally identified as *Andraca bipunctata* Walker, 1865) was described by Sevastopulo (1939). Distributed in China (Zhejiang, Xizang, Taiwan), India, Nepal.

***Prismocticta hyalinata* Butler, 1885**

*Prismocticta hyalinata* Butler, 1885, *Cistula ent.* 3: 125. Type locality: Japan.  
*Apha hyalinata*: Grünberg, 1913, *In Seitz, Macrolep. World* 2: 186.  
*Prismocticta hyalinata*: Chu & Wang, 1993, *Sinozoologia* 10: 240; Chu & Wang, 1996, *Fauna Sinica Insecta* 5: 53.

This species can be distinguished by the apical part of the forewing with two triangular or one smaller crescent-shaped white hyaline spots. The species is sexually dimorphic: antenna rami of male longer than those of female; female with two pairs hindtibial spur; in the apical part of the female forewing, there is one hyaline spot, which is much smaller than two spots found in male; mesial termen of forewing in female more convex than in male. The larvae feed on Symplocaceae. Distributed in China (Zhejiang, Fujian, Yunnan), Japan (Honshu, Shikoku, Kyushu).

***Prismocticta tiretta* Swinhoe, 1903**

*Prismocticta tiretta* Swinhoe, 1903, *Fascic. Malay. Zool.* 1: 52. Type locality: Sandakan, Borneo.  
*Prismocticta tiretta*: Barlow, 1982, *An introduction to the moths of South East Asia*: 46.

This species is similar to *P. fenestrata* but coloration is lighter; hind wing with termen wavy, discal spot curved concave basad, apical triangular white hyaline spot smaller than in *P. regalis*. This species was described from Sandakan, Borneo, and Holloway (1987) reported the range as Sundaland. Subsequently it has been recorded from Vietnam, Malaysia, Thailand, Myanmar (Candèze, 1927; Zolotuhin & Witt, 2009).

### *Prismosticta micropisma* Zolotuhin & Witt, 2009

*Prismosticta micropisma* Zolotuhin & Witt, 2009, *Entomofauna* 16: 251. Type locality: Vietnam.

This species is similar to *P. tirecta*, but can be distinguished from the latter by the termen of hind wing round not being wavy; forewing with discal spot nearly round; uncus weakly bilobed. Segment A8 of larvae with a long middorsal scolus. Distributed in China (Guangdong, Guangxi), Vietnam, Thailand, Cambodia.

### *Prismosticta regalis* Zolotuhin & Witt, 2009

*Prismosticta regalis* Zolotuhin & Witt, 2009, *Entomofauna* 16: 252. Type locality: Fujian, China.

Externally, this species is similar to *P. tirecta*, but can be distinguished from the latter by mesial gnathos distinctly swelling with heavy spinulate, medial part of the valva with a robust pyramide-like appendix, sacculus with a narrow and long toothed process directed dorsal margin. Distributed in China (Guangdong, Hainan, Fujian), Vietnam.

### *Prismosticta tianpinga* Wang, Huang & Wang, sp. n.

(Figs. 2–4?)

**Type material.** Holotype. Male, Tianping Mountain, Badagongshan National Nature Reserve, Zhangjiajie City, Hunan Province, China, 14.V.2007, Liu-Sheng Chen, Zhen Li and Yang Long leg., deposited in South China Agricultural University, Guangzhou, China (SCAU). Paratype. 1 male, same data as holotype except for 6.V.2009, Guo-Hua Huang leg., deposited in Institute of Entomology, Hunan Agricultural University, China (HUNAU).



**FIGURE 2.** Male adult of *Prismosticta tianpinga* sp. n., Holotype.

**FIGURE 3.** Male abdominal segments of *Prismosticta tianpinga* sp. n., Holotype.

**FIGURE 4.** Male genitalia of *Prismosticta tianpinga* sp. n., Holotype.

**Description.** Male. Forewing length 16–18 mm, antenna length 5–8 mm, bipectnate to apex (Fig. 2). Head. Frons covered with grey scales; proboscis absent; labial palpi moderately long with long brown scales. Thorax. Dorsum brown with long postmedian setae; abdomen with black scales, between thorax and abdomen with a wide light-grey band. Forewing ground color greenish brown; apex slightly falcate, apical part of the forewing with a larger triangular white

hyaline dot; termen almost straight, curved near apex; antemedian and basal fasciae curved inwardly; postmedian and discocellular fasciae curved towards basal part of the forewing; discal cell with a larger dot. Anterior part of hind wing red brown, posterior part greenish brown; termen wavy; postmedian and discocellular fasciae obscure. Abdomen. Tergite VIII helmet, sternite VIII nearly rectangular (Fig. 3). Male genitalia (Fig. 4) with uncus short and robust with two sickle-shaped processes, mesial uncus weakly bilobed, V-shaped; gnathos slender with mesial scobination and protruded spines; apex of valva slightly pointed, mesial valva with a nearly rectangular process; saccus broad and short; aedeagus almost straight, about 0.7 x length of valva, vesica with three cornuti. Female. Unknown.

**Etymology.** The specific name refers to the type locality of Tianping Mountain.

**Remarks.** The new species is similar to *P. regalis* in wing pattern, and to *P. fenestrata* in male genitalia. Distinguishing characters include: forewing greenish brown in *P. tianpinga*, yellowish brown in *P. regalis*; mesial uncus deeply bilobed, U-shaped, apex of valva truncate, mesial valva with a tongue-like process in *P. fenestrata*, mesial uncus weakly bilobed, V-shaped, apex of valva slightly pointed, mesial valva with a nearly rectangular process in *P. tianpinga*. Distributed in China (Hunan).

## Acknowledgements

We thank Mamoru Owada (National Museum of Nature and Science, Tokyo, Japan) for suggestions and help with the manuscript. For the field survey, we are indebted to Liu-Sheng Chen, Zhen Li and Yang Long for their assistance. This study was supported by Scientific Research Fund of Hunan Provincial Education Department (10B048) and General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (2009IK277).

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