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# The Taxonomic Report

OF THE INTERNATIONAL LEPIDOPTERA SURVEY



## A TAXONOMIC STUDY OF, AND KEY TO, THE LECITHOCERIDAE (LEPIDOPTERA) FROM GUIZHOU, CHINA

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**ABSTRACT.** This paper provides a key to twelve species (in ten genera and three subfamilies) of Lecithoceridae from Guizhou Province, China. Among them, three species are unnamed and eight are new Guizhou Province records. The female of *Opacoptera ecblasta* Wu is known for the first time and its genitalia is illustrated for the first time.

**Additional key words.** Taxonomy, Lepidoptera, Lecithoceridae, fauna, Guizhou

### INTRODUCTION

The family Lecithoceridae is widely distributed throughout the world, with approximately 860 known species in over 100 genera. About 90% of the described species are known from the Oriental and the southern border of the Palaearctic regions. This area extends from southern China to the southern Himalayas and beyond to the entire Oriental region, with some being distributed in the Mediterranean subregion, including Asia Minor and southeastern Europe. Another 84 species are known from Australia, and 73 species from South Africa (Gaede 1937, Clarke 1965, Gozmany 1978, Wu 1997, Park 1999, Wu and Park 1998-1999).

In China, 46 genera with 219 species in 3 subfamilies have been reported by Wu (1997), and Park and Wu (1997). Among them, only one species, *Quassitagma glabrata* Wu and Liu, has been recorded for Guizhou Province. Guizhou is on the eastern section of the Yunnan-Guizhou Plateau in southwestern China. This paper gives a key to the 10 genera and 12 species in 3 subfamilies from Guizhou Province. Eight of these species are new records for Guizhou Province. The female of *Opacoptera ecblasta* Wu is known for the first time and its genitalia is illustrated. In addition, the *Atrichaozancla* sp., *Tegenocharis* sp., and *Odites* sp. are certainly new species. However, I have not yet named them as each is known from only one male specimen. These descriptions will follow when more specimens become available.

### KEY TO GUIZHOU PROVINCE SPECIES

1. Antenna short, less than 2/3 length of forewing ..... 2  
    Antenna long, more than 3/4 length of forewing ..... 5
2. Forewing with Cu<sub>2</sub> arising far from lower corner of cell; male genitalia with well developed gnathos .. 3  
    Forewing with Cu<sub>2</sub> arising from near the lower corner of cell; gnathos lacking or reduced in male genitalia ..... *Odites* sp.
3. Forewing only with one spot on end of cell..... *Sythropiodes* sp.  
    Forewing with 2 spots on cell and its end.....4

4. Forewing with a spot at anal fold .....	<i>S. issikii</i>
Forewing without spot at anal fold .....	<i>S. jiulianae</i>
5. Hindwing without vein $M_2$ .....	<i>Atrichozancla</i> sp.
Hindwing with vein $M_2$ .....	6
6. Abdominal tergites no spinose.....	7
Abdominal tergites spinose .....	10
7. Forewing with $Cu_1$ and $Cu_2$ separate at base .....	8
Forewing with $Cu_1$ and $Cu_2$ stalked .....	9
8. Forewing with spots, $M_3$ and $Cu_1$ coincident .....	<i>Lecitholaxa thiodora</i>
Forewing without spots, $M_3$ and $Cu_1$ separate at base .....	<i>Homaloxestis mucroraphis</i>
9. Forewing with $M_2$ and $M_3$ stalked .....	<i>Quassitagma glabrata</i>
Forewing with $M_2$ and $M_3$ separate .....	<i>Lecithocera palmata</i>
10. Forewing with $Cu_1$ and $Cu_2$ stalked .....	<i>Torodora manoconta</i>
Forewing with $Cu_1$ and $Cu_2$ separate .....	11
11. Forewing with $M_2$ and $M_3$ coincident .....	<i>Halolaguna sublaxata</i>
Forewing with $M_2$ and $M_3$ separate .....	12
12. Hindwing with $M_3$ and $Cu_1$ coincident .....	<i>Opacoptera ecblasta</i>
Hindwing with $M_3$ and $Cu_1$ stalked .....	<i>Tegenocharis</i> sp.

### Subfamily Lecithocerinae

The subfamily Lecithocerinae is characterized by the male genitalia with a bridge-like structure connecting the tegumen and the valva, and the uncus almost always vestigial with two lobes at the dorsal base, only exceptionally united into a broad plate, but never as a thorn or spine.

1. *Lecithocera palmata* Wu and Liu, 1993.

*Lecithocera panmata* Wu and Liu, 1993: 332; Wu, 1997: 134.

Material examined: Guizhou, Chishui Co., Jinshagou, 1 ♂, June 2, 2000, Wu Chunsheng.

Distribution: Guizhou, Hainan.

2. *Homaloxestis mucroraphis* Gozmany, 1978.

*Homaloxestis mucroraphis* Gozmany, 1978: 71; Wu, 1997: 147.

Material examined: Guizhou, Xishui Co., Sanchahe, 1 ♀, May 28, 2000, Wu Chunsheng.

Distribution: Guizhou, Yunnan.



**Figures 1-2** Adults. **Fig. 1.** ♂ *Quassitagma glabrata* Wu and Liu, 1992: Guizhou Province, China. **Fig. 2.** ♂ *Lecitholaxa thiodora* (Meyrick): Guizhou Province, China.

3. *Quassitagma glabrata* Wu and Liu, 1992 (Fig. 1).

*Quassitagma glabrata* Wu and Liu, 1992: 445; Wu, 1997: 209.

Material examined: Guizhou, Xishui Co., Sanchahe, 1 ♂, May 28, 2000, Wu Chunsheng.

Distribution: Guizhou, Jiangxi, Fujian, Hunan, Yunnan.

4. *Opacoptera ecblasta* Wu, 1996.

*Opacoptera ecblasta* Wu, 1996: 12; 1997: 157.

Female genitalia (Fig. 3): Eight sternite long and wide, caudal margin almost straight; apophyses anteriores longer than 1/2 length of apophyses posteriors; antrum funnel-shaped; ductus bursae longer than corpus bursae, narrow at base, then widening toward corpus bursae; ductus seminalis arising beyond middle of ductus bursae; corpus bursae with 2 signa, one with 5 big dents, the other densely with minute spines on upper 1/3.

Material examined: Guizhou, Xishui Co., Sanchahe, 3 ♂, 1 ♀, May 28, 2000, Wu Chunsheng.

Distribution: Guizhou, Sichuan.

Remarks: This species is endemic in Southwestern China. The female is known for the first time and the genitalia is newly illustrated.

5. *Lecitholaxa thiodora* (Meyrick, 1914) (Fig. 2).

*Lecithocera thiodora* Meyrick, 1914, Supplta. Ent. 3:51.

*Lecithocera leucoceros* Meyrick, 1932, Exot. Microlepidopt. 4: 204.

*Lecitholaxa thiodora* (Meyrick, 1914), Gozmany, 1978: 124; Wu, 1997: 185; Park and Lee, 1999: 123.

Material examined: Guizhou, Xishui Co., Sanchahe, 1 ♂, May 28, 2000, Wu Chunsheng.

Distribution: Guizhou, Beijing, Henan, Jiangsu, Zhejiang, Jiangxi, Fujian, Hunan, Guangdong, Sichuan, Hainan, Taiwan; Japan, Korea.

6. *Atrichozancla* sp.

Wing expanse 10mm. Antenna grayish yellow, with brown annulations. Second segment of labial palpus grayish white, with brown scales on outer surface of base; 3<sup>rd</sup> segment slender, pale grayish yellow. Head, thorax and tegula grayish white. Forewing long and narrow, apex pointed, termen oblique; ground color pale grayish yellow, with a large brown spot at end of cell. Hindwing pale grayish yellow.

Male Genitalia (Fig. 5): Gnathos small, basal half wide; lobes of uncus short and wide, bearing hairs; valva long, broad in basal 2/5, apical 3/5 even to a finely rounded apex, bearing hairs and bristles; sacculus wide and long; juxta large, bottle shaped, base with a long thorn; aedeagus as long as valva; vesica with a group of small spines in apical half.

Material examined: Guizhou, Xishui Co., Sanchahe, 1 ♂, May 28, 2000, gen. slide no. WZ20004, Wu Chunsheng.

Distribution: Guizhou.

Remarks: The Genus *Atrichozancla* Janse includes 2 named species from Africa. The venation of this species agrees with that of *Atrichozancla*, but the labial palpus with smooth scales on second segment is inconsistent with the description of the genus, which bears tufts of rough scales on second segment. The characters of labial palpus are important in establishing genera in family Lecithoceridae. Thus, this species may present a new genus and a new species, but it is unnamed and included in *Atrichozancla* because we have only one male specimen.

7. *Tegenocharis* sp.

Wing expanse 13 mm. Antenna pale orange, with annulation on segments. Second segment of labial palpus relatively narrow, pale yellowish brown; 3<sup>rd</sup> segment slender, slightly longer than 2<sup>nd</sup>, pale yellowish brown. Head, thorax, and tegula pale yellowish brown. Forewing yellowish brown, with a silky luster, no pattern. Hindwing grayish yellow.

Male genitalia (Fig. 4): Gnathos small; lobes of uncus short and wide, bearing hairs; valva long, broad at base, tapering to middle, then even width to a rounded apex, bearing hairs and bristles; sacculus long, base wide, middle with a row of bristles; juxta shield-shaped, a pair of caudal processes short and pointed; aedeagus as long as valva; vesica with a spine apically.

Material examined: Guizhou, Chishui Co., Jinshagou, 1♂, June 2, 2000, gen. slide no. WZ20016, Wu Chunsheng.

Distribution: Guizhou.

Remarks: Genus *Tegenocharis* Gozmany contains 2 named species respectively from Nepal and China. This species is related to *T. tenbrans* Gozmany from Nepal, but differs from the latter by the valva with a broad basal half and juxta laterally pointed on caudal margin.

### Subfamily Torodorinae

Members of the subfamily Torodorinae have no bridge-like structure in the valva of the male genitalia, while the uncus is directed caudally and is thorn-like.

1. *Torodora manoconta* Wu and Liu, 1994.

*Torodora manoconta* Wu and Liu, 1994: 164; Wu, 1997: 67.

Material examined: Guizhou, Chishui Co., Jinshagou, 4♂, June 2, 2000, Wu Chunsheng; Xishui Co., Sanchahe, 1♂, May 28, 2000, Wu Chunsheng.

Distribution: Guizhou, Jiangxi, Yunnan, Taiwan.

2. *Halolaguna sublaxata* Gozmany, 1978.

*Halolaguna sublaxata* Gozmany, 1978: 238; Wu, 1997: 90; Park and Lee, 1999: 127.

Material examined: Guizhou, Chishui Co., Jinshagou, 1♂, June 2, 2000, Wu Chunsheng.

Distribution: Guizhou, Jiangsu Zhejiang; Korea.

### Subfamily Oditinae

The genus *Odites*-group, including *Scythropiodes*, comprises about 150 species in the world. It has been commonly placed in the family Lecithoceridae, but sometimes placed previously in the Xyloryctidae. Lvovsky (1996) supported the opinion that the genus *Odites* and its allied genera belong to Lecithoceridae, and proposed a new subfamily Oditinae.

The wing venation and the gnathos in the male genitalia of the genus *Scythropiodes* agree with those of the Lecithoceridae, but the shorter antennae and the shape of wings more resemble to these of the family Xyloryctidae, as stated by Gozmany (1978). Park and Wu (1997) placed the *Scythropiodes* in the family Lecithoceridae rather than Xyloryctidae.

1. *Scythropiodes issikii* (Takahashi, 1930).

*Depressaria issikii* Takahashi, 1930, Kaju gaityu kakuron, 1:285.

*Odites plocamopa* Meyrick, 1935: 84; Clarke, 1955: 478.

*Odotes perissopis* Meyrick, 1936: 27; Clarke, 1955: 477.

*Odotess issikii* (Takahashi); Saito, 1961: 51.

*Scythropiodes issikii* (Takahashi); Lvovsky, 1996: 650; Park and Wu, 1997: 42.

Material examined: Guizhou, Chishui Co., Jinshagou, 3♂, June 2, 2000, Wu Chunsheng.

Distribution: Guizhou, Liaoning, Beijing, Hebei, Shandong, Shaanxi, Zhejiang, Anhui, Hunan, Jiangxi, Fujian, Guangxi, Yunnan, Sichuan; Japan; Korea.

Hosts: *Gardenis jasminioides* Ellis, *Malus pumila* Miller, *Pyrus* spp., *Populus nigra* L. *Salix* spp., *Smilax china* L., *Ulmus pavifolia* Jacquin, *Viburnum awabuki* K., and *Weigela coreaensis* Thunberg.

2. *Scythrioides jiulianae* Park and Wu, 1997.

*Scythrioides jiulianae* Park and Wu, 1997: 37.

Material examined: Guizhou, Chishui Co., Jinshagou, 1 ♂, June 2, 2000, Wu Chunsheng.

Distribution: Guizhou, Sichuan, Jiangxi.

3. *Odites* sp.

Wing expanse 20 mm. Antenna yellowish brown, with brown annulations. Second segment of labial palpus brown on basal 3/4 outer surface, and yellowish white on apical 1/4 and inner surface; 3<sup>rd</sup> segment slender, yellowish white. Face yellowish white; vertex, thorax and tegula yellowish gray. Forewing grayish yellow, with a dark brown spot at end of cell, another small one at apex; clila long, grayish white; underside with a row brown spots along termen. Hindwing pale yellow.

Male genitalia (Fig. 6): Valva elliptical, bearing long hairs, with acute apex; basal process with leaf-like basal part, and horn-shaped apical part. Transtilla with a pair of long bar bearing a dent apically. Juxta long, elliptical, with a digitate lobe on caudal margin, and a pair of lateral lobes in middle. Aedeagus longer than valva, vesica with 2 strong cornuti.

Material examined: Guizhou, Chishui Co., Jinshagou, 1 ♂, June 2, 2000, gen. slide no. WZ20014, Wu Chunsheng.

Distribution: Guizhou.

Remarks: Genus *Scythrioides* Matsumura was erected by monotypy, based on *S. seriatopunctata* Matsumura, 1931, originally placed in the family Yponomeutidae. However, Inoue (1954) included it in the Gelechiidae, treated it as a junior synonym of *Odites* Walsingham. Lvovsky (1996) separated the genus *Scythrioides* Matsumura from the genus *Odites*, and combined 16 previously known species of *Odites* into *Scythrioides*. The genus *Scythrioides* differs from the genus *Odites* by the forewing with Cu<sub>2</sub> arising far from the lower corner of cell, and male genitalia with well developed downturned gnathos, which is lacking or reduced in *Odites*.

This species is similar to *Odites notocapna* Meyrick in superficial characters, but differs from the latter by the shapes of valva and juxta.

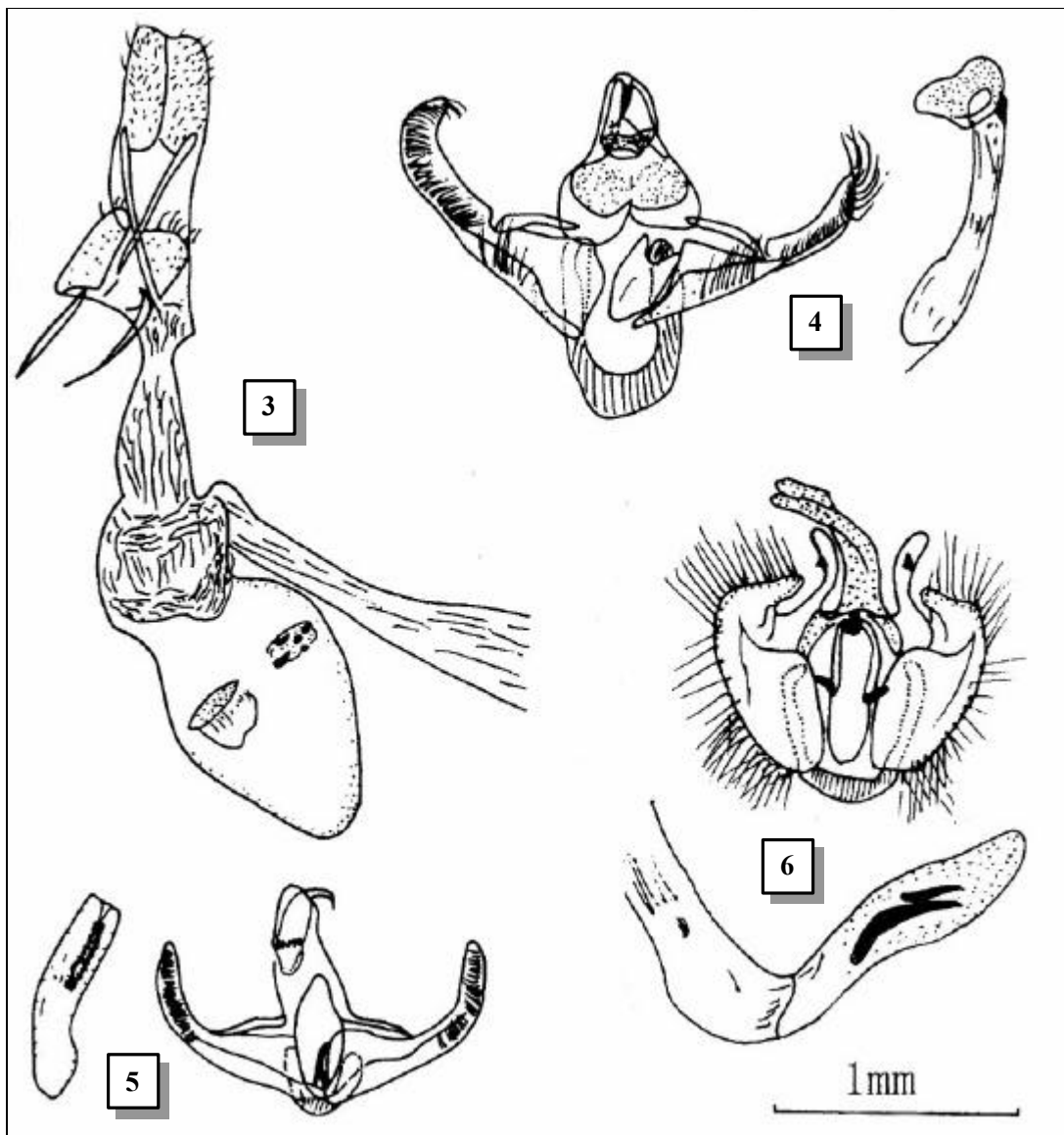
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**Figures 3-6.** Male and female Genitalia. **Fig. 3.** Female *Opacotera ecblasta* Wu. **Fig. 4.** Undescribed male *Tegenocharis* sp. **Fig. 5.** Undescribed male *Atrichozancla* sp. **Fig. 6.** Undescribed male *Odites* sp.

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