Volume 2 **15 December 2000** **Number 6**

The Taxonomic Report

OF THE INTERNATIONAL LEPIDOPTERA SURVEY

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

CHUNSHENG WU
Institute of Zoology, the Chinese Academy of Sciences
Beijing 100080, China

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_2 arising far from lower corner of cell; male genitalia with well developed gnathos .. 3
   Forewing with Cu_2 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…….. *Sycthropiodes* sp.
   Forewing with 2 spots on cell and its end……..……4

4. Forewing with a spot at anal fold ..…….……... *S. issikii*
   Forewing without spot at anal fold ……..…….……. *S. jiulianae*
5. Hindwing without vein M_2 …… *Atrichozancla* 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 ..…….…….. *Lecitholaxa thiodora*
   Forewing without spots, M_3 and Cu_1 separate at base …….…… *Homaloxestis mucroraphis*
9. Forewing with M_2 and M_3 stalked ……..…….. *Quassitagma glabrata*
   Forewing with M_2 and M_3 separate ……..……. *Lecithocera palmata*
10. Forewing with Cu_1 and Cu_2 stalked ……..……. *Torodora manoconta*
    Forewing with Cu_1 and Cu_2 separate …...……...…… 11
11. Forewing with M_2 and M_3 coincident ……..……...… *Halolaguna sublaxata*
    Forewing with M_2 and M_3 separate …….. 12
12. Hindwing with M_3 and Cu_1 coincident …… *Opacoptera ecblasta*
    Hindwing with M_3 and Cu_1 stalked ……..…… *Tegenocharis* sp.

Subfamily Lecithocerinae

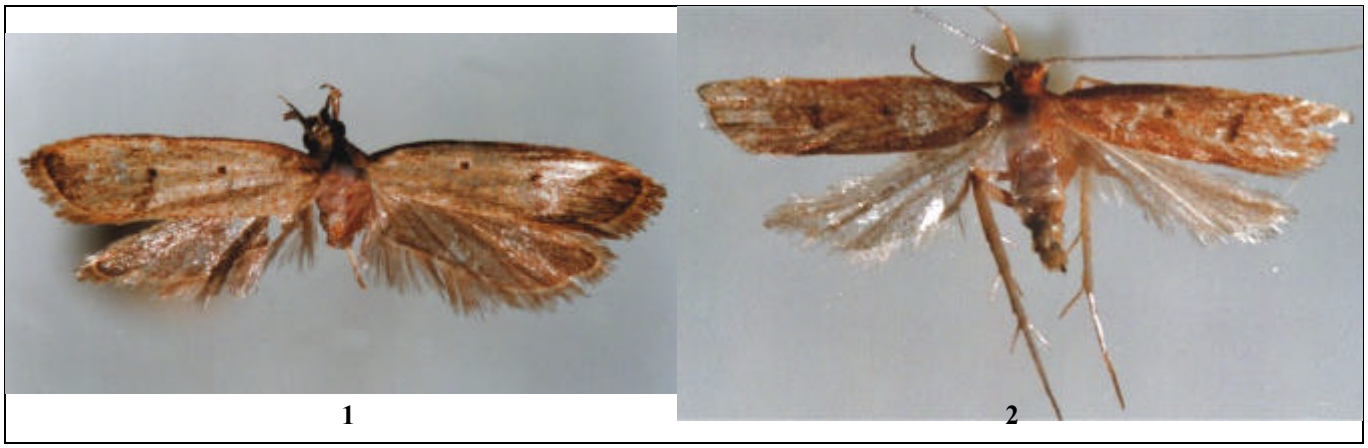
The subfamily Lecithocerinae is characterized by the male genitalia with a bridge-like structure connecting the tegumen and the valva, and the uncus almost always vestigal with two lobes at the dorsal base, only exceptionally united into a broad plate, but never as a thorn or spine.

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; 3rd 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; 3rd segment slender, slightly longer than 2nd, 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. *Scythropiodes jiulianae* Park and Wu, 1997.

Scythropiodes 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; 3rd 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 *Scythropiodes* 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 *Scythropiodes* Matsumura from the genus *Odites*, and combined 16 previously known species of *Odites* into *Scythropiodes*. The genus *Scythropiodes* differs from the genus *Odites* by the forewing with Cu_2 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.

ACKNOWLEDGMENTS

This project was supported by a grant for systematic and evolutionary biology, Chinese Academy of Sciences, Beijing.

LITERATURE CITED

Clarke, J.F.G. 1965. Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick, Vol. 5. London: British Museum. pp. 1-255.

Gaede, M. 1937. Gelechiidae. *In* F Bryk, ed. Lepidopterorum catalogues. Vol. 79. Berlin: Gravenhage, pp. 1-630.

Gozmany, L. 1978. Lecithoceridae. *In* H.G. Amsel, F. Gregor and H. Reisser, eds. Microlepidoptera Palaearctica. Vol. 5. Wien: Georе and Co., pp. 1-306.

Park, K.T. 1999. Lecithoceridae (Lepidoptera) of Taiwan (I): Subfamily Lecithocerinae: Genera Homaloxestis Meyrick and Lecithocera Herrich-Schaffer. Zoological Studies 38 (2): 238-256.

Park, K.T., and C.S. Wu. 1997. Genus Scythropiodes Matsumura in China and Korea (Lepidoptera, Lecithoceridae), with Description of Seven new species. Ins. Koreana 14: 29-50.

Park, K.T., and S.M. Lee. 1999. A Review of the Lecithocerinae and Torodorinae (Lepidoptera, Lecithoceridae) in Korea. Ins. Koreana 16 (2): 119-129.

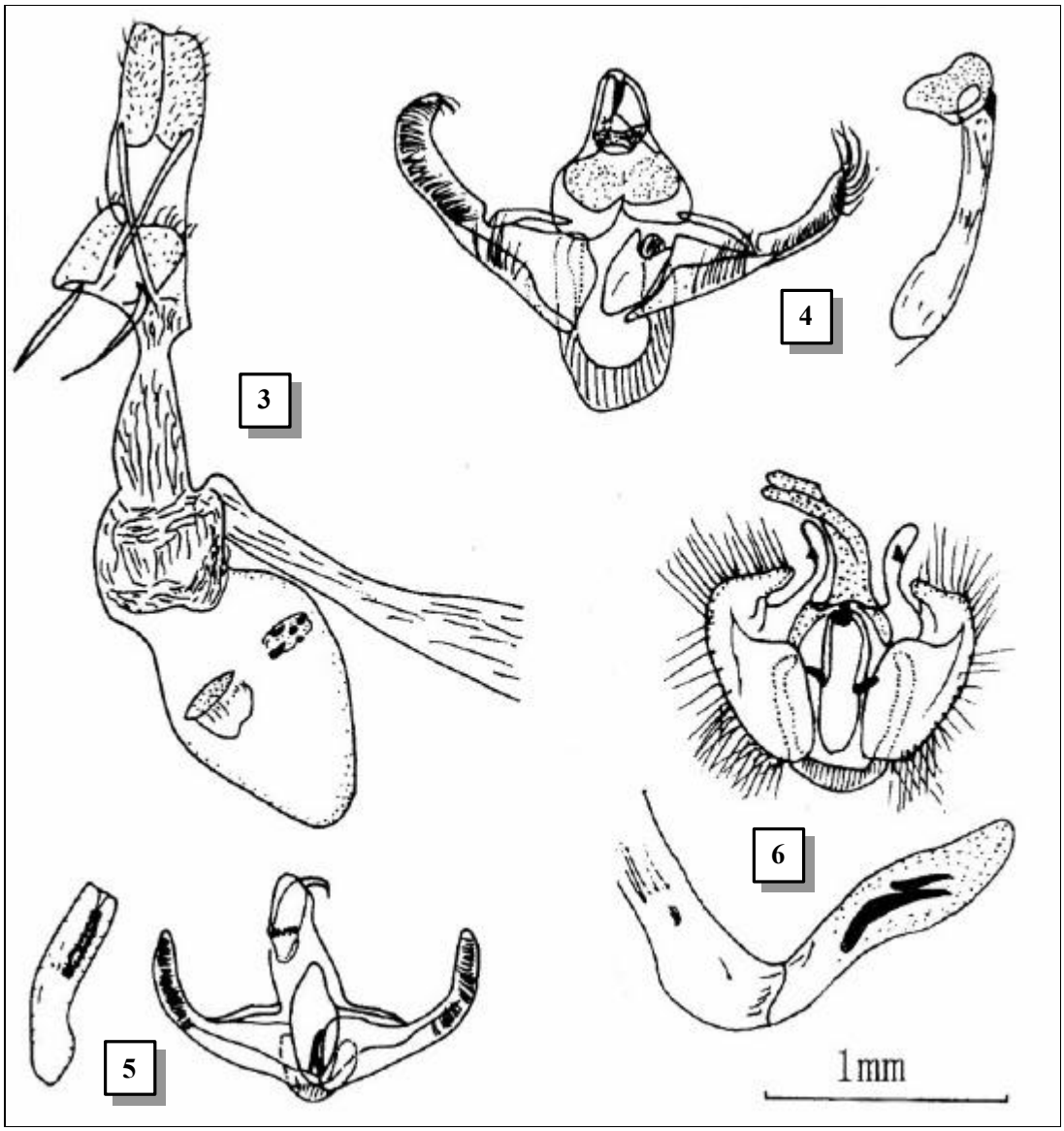
Wu, C.S., and Y.Q. Liu. 1992. Lepidoptera: Lecithoceridae. *In* Huang Fusheng, ed. Insects of Wuling Mountains Area, Southwestern China, pp. 445-447.

_____. 1993. A Study of the Chinese *Lecithocera* Herrich-Schaffer, 1853 and Descriptions of New Species (Lepidoptera: Lecithoceridae). Sinozoologia, 10: 319-346.

Wu, C.S. 1996. Revision of the genus *Opacoptera* Gozmany (Lepidoptera: Lecithoceridae). Entomologia Sinica, 3 (1): 9-13.

_____. 1997. Lepidoptera Lecithoceridae. *In* Editorial Committee of Fauna Sinica, Academia Sinica, ed. Fauna Sinica. Insecta Vol. **7**. Beijing: Science Press, 306 pp.

Wu, C.S., and K.T. Park. 1998-1999. A Taxonomic Review of the Family Lecithoceridae (Lepidoptera) from Sri Lanka. **I**., Tinea 16 (1): 61-72, 1999; **II**., Ins. Koreana 15: 1-22, 1998; **III**., Korean Journ. Syst. Zool. 15 (1): 1-9, 1999; **IV**., Insecta Koreana 16 (1): 1-14, 1999; **V**., Korean Journ. Syst. Zool. 15 (2): 205-220, 1999; **VI**., Insecta Koreana 16 (2): 131-142.



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.

The Taxonomic Report

is a publication of ***The International Lepidoptera Survey (TILS).***

(A Tax Exempt Non-Profit Scientific Organization)

TILS Purpose. TILS is devoted to the worldwide collection of Lepidoptera for the purpose of scientific discovery, determination, and documentation, without which there can be no preservation of Lepidoptera.
TILS Motto. As a world community, we can not protect that which we do not know.

The Taxonomic Report is projected for publication at the rate of 10 issues a year. Subscription/ dues for Volume Two are $50 US for domestic and $60 US for overseas subscribers. The subscription year follows the calendar year. All issues are mailed 1st class. At the end of each year, subscribers receive that year's volume on a record-only compact disc (CDR) for permanent archiving and reproduction for personal use (i.e. a museum or university may make as many copies as needed in whatever format desired). Non-members may receive individual issues in print any time for $10 per issue. Individual issues on CDR to non-members are $25 per issue post paid. **Subscriptions** and **individual issue** orders should be made payable to **TILS;** and **mailed to:** Scott D. Massey, Editor, 126 Wells Road, Goose Creek, SC USA 29445-3413.

Articles for publication are sought. They may deal with any area of taxonomic research on Lepidoptera. Before sending a manuscript, simply write **TILS** at the above address to set up discussion on how to best handle your research for publication.

Everyday around the world, in jungles and urban areas alike, insect species and subspecies are becoming extinct. Every year scores of taxa are lost that have not even been scientifically discovered and documented. Thus, their extinction is unnoticed because their existence is unknown. They are unknown simply because they have not been collected and systematically identified. Without systematic taxonomy there is nothing. Without the collection, and exchange of specimens (information) there will be no systematic taxonomy. Without amateur collectors the majority of the undiscovered species/subspecies will vanish before they are discovered. Be it butterflies or moon rocks, collecting is the first step of access to all other scientific information – and protection.

Donations are needed to support and further our efforts to discover and protect butterflies worldwide. All donations are US tax deductible. Please help generously.

Donations should be mailed to: **Treasurer, 126 Wells Rd., Goose Creek, SC 29445.**
Checks should be made payable to: **TILS.** Please indicate if you need an individual receipt.