

A New Genus of Lecithoceridae (Lepidoptera) from China

Chun-Sheng Wu*

Institute of Zoology, Chinese Academy of Sciences, Beijing 100080, China

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Chun-Sheng Wu (2002) A new genus of Lecithoceridae (Lepidoptera) from China. *Zoological Studies* 41(2): 158-161. A new genus, *Dixognatha* gen. nov., based on *Athymoris nectarus* Wu, is described. The new genus *Dixognatha* is easily separable from the all known genera in the Lecithoceridae by the forked gnathos of the male genitalia and the unique juxta. The venation of the new genus is similar to that of *Athymoris* Meyrick, but differs from the latter by the forewing with M_1 and R_{3+4+5} being stalked (δ) or connate (♀). In addition, the author redescribes *Dixognatha nectarus* (Wu) n. comb., including a description of the male genitalia which has not previously been known. <http://www.sinica.edu.tw/zool/zoolstud/41.2/158.pdf>

Key words: *Dixognatha* gen. nov., Lecithoceridae, Lepidoptera.

Through the courtesy of Dr. M. Wei, Central South Forestry College, Zhuzhou city, Hunan, the author obtained many specimens of Microlepidoptera from the collection of the College. After careful examination, the author found a male of *Athymoris nectarus* Wu (Lecithoceridae) in this collection. *A. nectarus* Wu was described from Sichuan, based on a female. It was placed in the genus *Athymoris* Meyrick due to the similarity of its venation patterns. As a result of examining the male, the author has concluded that it represents a new genus of the subfamily Torodorinae, based mainly on the venation and the morphology of the genitalia of both sexes.

The genus *Athymoris* Meyrick was erected by monotypy, based on *A. martialis* (Meyrick, 1935). *A. martialis* Meyrick was originally described from Taiwan, and it was reported from mainland China by Gozmány (1978) and from Japan by Moriuti (1982). The female was reported and illustrated for the 1st time from Korea by Park and Lee (1999). Wu (1996, 1997) described another 3 new species of the genus *Athymoris* from China, *A. paramecola* Wu and *A. fuscus* Wu based on male specimens, and *A. nectarus* Wu based on a female.

In this paper, I redescribe *Dixognatha nectarus* (Wu) n. comb., including a description of the male genitalia which have not previously been known, and describe a new genus from China. The examined materials are deposited at the Institute of Zoology, the Chinese Academy of Sciences, Beijing, China.

Dixognatha gen. nov.

The author (1997) published the phylogeny of the Lecithoceridae at the generic level using cladistic technology. According to the phylogenetic analysis, the new genus represents a specialized group in the subfamily Torodorinae. The gnathos branching (Fig. 3) at the base in this genus is unique to the family Lecithoceridae. The juxta with antler-shaped processes (Fig. 3) is also unique.

Type species: *Dixognatha nectarus* (Wu) n. comb. *Bibliography:* *Athymoris nectarus* Wu 1996: 307 (here designated)

Description: Head round, with scale tuft on vertex. Labial palpus ascending, about 6 times as long as diameter of eye, smooth scaled; terminal segment as long as 2nd one, slender, acuminate. Antenna slightly shorter than forewing in length,

*To whom correspondence and reprint requests should be addressed. Tel: 86-10-62562791. Fax: 86-10-62565689. E-mail: wucs@panda.ioz.ac.cn

more or less finely ringed. Forewing narrow and long, costa slightly arched at apical 1/2; apex pointed; termen obviously oblique and concave; tornus obvious; R_1 from middle of cell; R_2 from 6/7; R_{3+4+5} on 1/2 and 3/4 long stalk; R_5 terminating far below apex in termen; M_1 and radial stalk connate (♀) or stalked (♂); M_2 and M_3 coincident; M_{2+3} and CuA_{1+2} connate; CuA_1 and CuA_2 stalked; cell closed. Hindwing barely wider than forewing, elongated trapezoidal; apex finely pointed; termen oblique and straight; tornus flatly rounded; R_s and M_1 stalked, R_s terminating to costa; M_3 and CuA_3 stalked, CuA_2 far separate from Cu_1 , cell almost open (Fig. 1). Abdominal tergites each with a transverse spinose zone.

Male genitalia (Fig. 3): Uncus well developed, fusing into an erect spine above tegumen; gnathos typically beak shaped, except with a long branch at base; costal bridgelike structure connecting tegumen and valva absent; valva simple, long, and narrow; sacculus obvious in basal 1/2 of valva; vinculum narrow; juxta plate shaped with large processes; aedeagus thick and short, vesica without cornuti.

Female genitalia (Fig. 4): Eight sternite deeply concave on caudal margin; antrum short and wide; ductus bursae long, simple; corpus bursae large; signum plate shaped.

Diagnosis: The new genus is easily separable from the all known genera in the Lecithoceridae by the forked gnathos and the unique juxta of the male genitalia. The venation of the new genus is similar to that of *Athymoris* Meyrick, but differs from the latter by the forewing with M_1 and R_{3+4+5} being stalked (♂) or connate (♀).

Distribution: China.

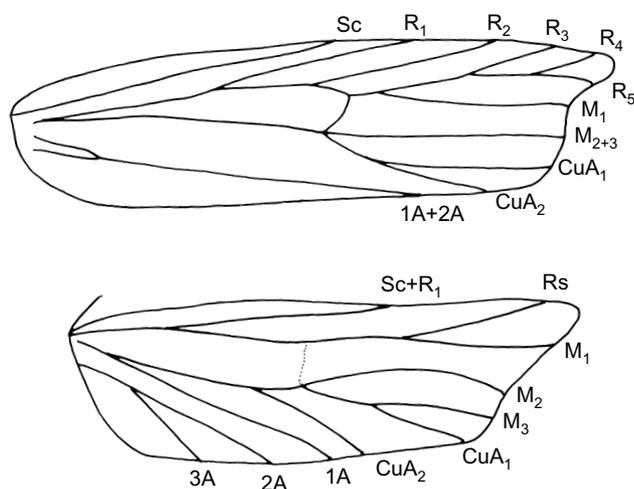


Fig. 1. Venation of *Dixognatha nectarus* (Wu).

Etymology: The name is derived from the Greek “dixoos” (= forked) and “gnathos” (= gnathos, jaw), corresponding to the forked gnathos of the male genitalia. Gender, feminine.

Remarks: The male genitalia lack a costal bridgelike structure connecting the tegumen and valva, and have a well-developed uncus. These 2 characters show that this new genus belongs to the subfamily Torodorinae.

***Dixognatha nectarus* (Wu, 1996), comb. nov.**

(Fig. 2)

Athymoris nectarus Wu 1996: 307; 1997: 88.

Diagnosis: Forewing with a large blotch on basal 2/5. Juxta with 5 processes in male genitalia.

Description: Wing expanse 16-17 mm. Antenna whitish yellow, slightly shorter than forewing in length; flagellum finely ciliate. Labial palpus long, 2nd segment normally thick, yellowish brown on outer surface and yellowish white on inner surface; 3rd segment slender, upturned, as long as 2nd. Head grayish white. Tegula grayish white. Thorax purplish. Ground color of forewing grayish brown; basal 2/5 purplish gray, its outer margin wavy and edged with a white line; discocellular spot small, purplish brown; with a white outer transverse line; cilia brown with a white basal line. Hindwing grayish brown; cilia pale gray.

Male genitalia (Fig. 3): Uncus long and wide, with a few minute bristles, apex slightly pointed; gnathos relatively short and thick, apical hook small, branch elongately horned; valva long and narrow, basal 1/3 wide, apical 2/3 even to a broadly rounded apex; sacculus short and wide, as long as 1/3 length of valva; juxta large, middle with a long thick process, caudal margin with 2 pairs of processes laterally, 1 pair long and apically rounded, the other small and apically pointed; aedeagus much shorter and wider than valva, vesica with minute denticles in apical 1/2.

Female genitalia (Fig. 4): Eight sternite laterally forming 2 square lobes on caudal margin; antrum short and wide; ductus bursae long, gradually widening from middle toward corpus bursae; corpus bursae long, elliptic; signum with a transverse groove in middle and peripheral spines.

Materials examined: 3 ♂♂, Zhangjiajie, Hunan, 6 July 1966, gen. slide no. ZW20037, ZW20046; 2 ♀♀, Jiangjin, Sichuan, 27 July 1981, gen. slide no. W89271, W89272.

Distribution: China (Hunan, Sichuan).

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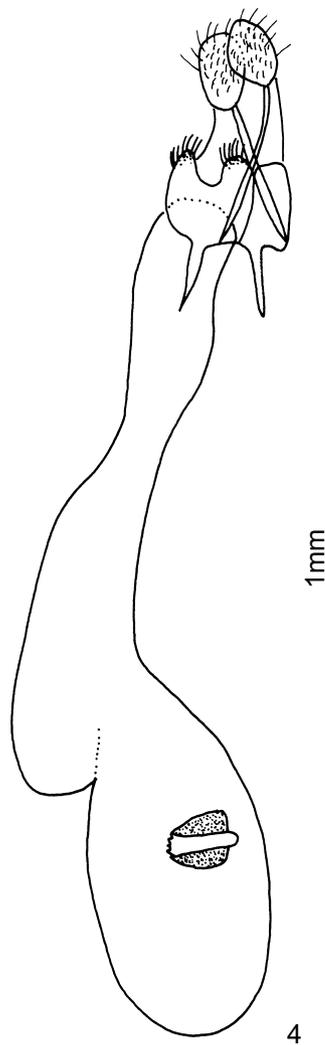
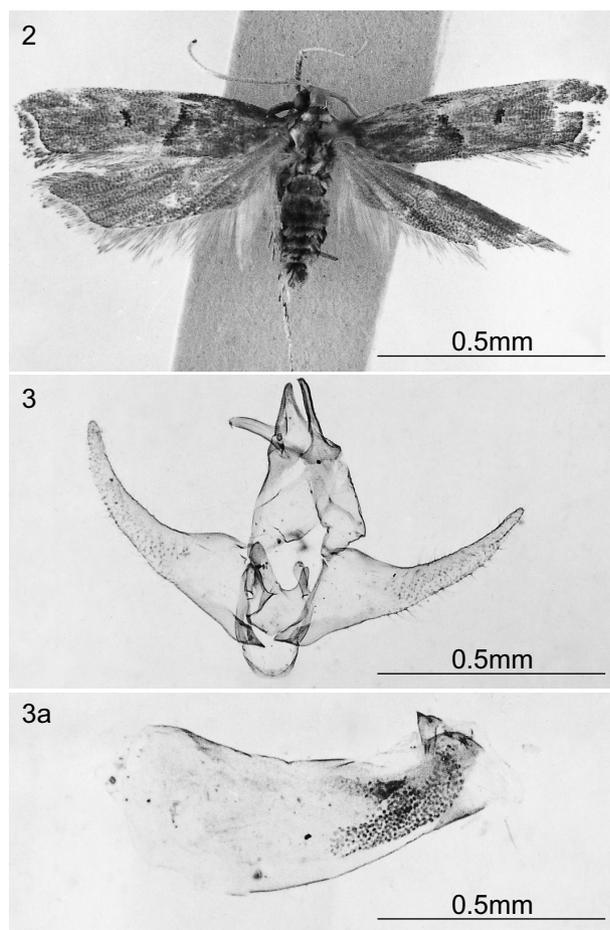
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Figs. 2-4. *Dixognatha nectarus* (Wu, 1996); 2. adult; 3. male genitalia (3a. aedeagus); 4. female genitalia.

中國瘤祝蛾亞科一新屬記述（鱗翅目：祝蛾科）

武春生

本文記述中國祝蛾亞科一新屬：叉顎祝蛾屬 *Dixognatha* gen. nov.。叉顎祝蛾屬 *Dixognatha* 隸屬於瘤祝蛾亞科 *Torodorinae*，模式種為 *Athymoris nectarus* Wu，其雄性外生殖器的顎形突基部有一個分支，這在祝蛾科中是獨一無二的，其陽莖端基環（*juxta*）的形態也很奇特，代表了祝蛾科中一個特化的類群。

關鍵詞：叉顎祝蛾屬，瘤祝蛾亞科，祝蛾科，鱗翅目。

中國科學院動物研究所