

A STUDY OF CRYPTOLECHIA ZELLER (LEPIDOPTERA: OECOPHORIDAE) IN CHINA (I), WITH DESCRIPTIONS OF FIFTEEN NEW SPECIES

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Abstract The present paper reports thirty-three species of the genus *Cryptolechia* in China. Fifteen species are described as new to science: *C. deflecta* sp. nov., *C. kangxianensis* sp. nov., *C. microbyrsa* sp. nov., *C. falsivespertina* sp. nov., *C. zhengi* sp. nov., *C. neargometra* sp. nov., *C. paranthaedeaga* sp. nov., *C. comutivalvata* sp. nov., *C. fascirupta* sp. nov., *C. stictifascia* sp. nov., *C. jigongshanica* sp. nov., *C. mirabilis* sp. nov., *C. anthaedeaga* sp. nov., *C. gei* sp. nov. and *C. varifascirupta* sp. nov. The genital structures of the new species are illustrated.

Key words Lepidoptera, Oecophoridae, *Cryptolechia*, new species, China

1 INTRODUCTION

The genus *Cryptolechia* Zeller was erected in 1852, with *C. stramineella* Zeller as the type species. Gaede (1939) recorded 154 species worldwide. Later, Turner (1947) reported seven species from Australia, Diaknoff (1952) described four from Burma and Viette (1954, 1955) described two from Madagascar. From 1941 to 1993, some species originally placed in *Cryptolechia* were transferred to the other oecophorid genera or other Lepidoptera families. To date, forty-seven species have been recorded in the Palaearctic and Oriental regions.

In China, seventeen species were described by Meyrick (1914 ~ 1938) and one species reported by Strand (1920). This paper lists all the known Chinese species and describes fifteen new species. The type specimens are deposited in the Department of Biology, Nankai University, Tianjin, China.

The abbreviation GSN is used for Genitalia Slide Number.

2 SYSTEMATICS

Cryptolechia Zeller, 1852

Cryptolechia Zeller, 1852, Lepid. Microptera

quae J. A. Wahlberg in Caffrorum terra collegit: 106.

Bida Walker, 1864, *List. Lep. Het. Brit. Mus.*, **29**: 842.

Leptosaces Meyrick, 1902, *Trans. N. Zeal. Inst.*, **20**: 7.

Hysipselon Chretien, 1915, *Ann. soc. Ent. Fr.*, **84**: 328.

Psilocorsis Clemens, 1860, *Proc. Acad. Nat. Sci. Philad.*, **1860**: 212.

Prosarotra Meyrick, 1909, *Ann. Transv. Mus.*, **2**: 23.

Hagno Chambers, 1872, *Conad. Ent.*, **4**: 129.

Melaneulia Butler, 1883, *Trans. Ent. Soc. Lond.*, **1883**: 70.

Inga Busck, 1908, *Proc. U. S. Nat. Mus.*, **35**: 200.

Type species: *Cryptolechia stramineella* Zeller, 1852

Head with loosely appressed scales, side tufts sometimes projected in tuft over forehead. Antenna without pecten in scape. Labial palpus long or very long, recurved, third segment shorter than second, acute. Hind tibia clothed with hairs above.

Male genitalia: Uncus well produced. Gnathos

usually absent. Valva varied in shape, usually expanded in distal portion. Transtilla more or less developed. Sacculus well defined. Cornutus present or absent.

Female genitalia: Ductus bursae mostly sclerotized basally. Signum present or absent.

Biology: Larvae feed in rolled or spun leaves, or in fruit capsules. Foodplants include *Cupuliferae*, *Myrtaceae*, *Proteaceae*, *Salicaceae*, *Campanulaceae*.

Distribution: With limited distribution in some other regions, the genus is rich in the Palaearctic and Oriental regions according to the literature data and our collection.

Checklist of *Cryptolechia* Zeller in China

11 *Cryptolechia argometra* Meyrick, 1935

Cryptolechia argometra Meyrick, 1935, *Exot. Microl.*, **4**: 567.

Distribution: China: Taiwan.

21 *Cryptolechia chlorozyga* Meyrick, 1938

Cryptolechia chlorozyga Meyrick, 1938, *D. Ent. Ztschr. Iris*, **52**: 10.

Distribution: China: Sichuan.

31 *Cryptolechia coriata* Meyrick, 1914

Cryptolechia coriata Meyrick, 1914, *Suppl. Entom. Berlin*, **3**: 53.

Distribution: China: Taiwan.

41 *Cryptolechia epistemon* Strand, 1920

Cryptolechia epistemon Strand, 1920, *Arch. F. Naturg.*, **84 A 12**: 194.

Distribution: China: Taiwan.

51 *Cryptolechia facunda* (Meyrick, 1910)

Leptosaces facunda Meyrick, 1910, *J. Bombay Nat. Hist. Soc.*, **20**: 155.

Distribution: Northern and Eastern China; Japan, India.

61 *Cryptolechia fenerata* Meyrick, 1914

Cryptolechia fenerata Meyrick, 1914, *Suppl. Entom. Berlin*, **3**: 53.

Distribution: China: Taiwan.

71 *Cryptolechia gypsochra* Meyrick, 1938

Cryptolechia gypsochra Meyrick, 1938, *D. Ent. Ztschr. Iris*, **52**: 10.

Distribution: China: Yunnan.

81 *Cryptolechia hoplostola* Meyrick, 1938

Cryptolechia hoplostola Meyrick, 1938, *D. Ent. Ztschr. Iris*, **52**: 52.

Distribution: China: Yunnan.

91 *Cryptolechia isomichla* Meyrick, 1938

Cryptolechia isomichla Meyrick, 1938, *D. Ent. Ztschr. Iris*, **52**: 11.

Distribution: China: Shaanxi, Yunnan.

101 *Cryptolechia malacobyrsa* Meyrick, 1921

Cryptolechia malacobyrsa Meyrick, 1921, *Exot. Microl.*, **2**: 394.

Depressaria bicinctella Matsumura, 1931, 6000 *Illustr. Ins. Jap.*: 1089.

Distribution: China: Fujian, Henan, Jiangxi, Shaanxi, Sichuan, Taiwan; Japan; Korea.

111 *Cryptolechia metacentra* Meyrick, 1914

Cryptolechia metacentra Meyrick, 1914, *Suppl. Entom. Berlin*, **3**: 52.

Distribution: China: Taiwan.

121 *Cryptolechia mitis* Meyrick, 1914

Cryptolechia mitis Meyrick, 1914, *Suppl. Entom. Berlin*, **3**: 52.

Distribution: China: Taiwan.

131 *Cryptolechia pelophaea* Meyrick, 1931

Cryptolechia pelophaea Meyrick, 1931, *Exot. Microl.*, **4**: 192.

Distribution: China: Taiwan.

141 *Cryptolechia prothyropa* Meyrick, 1938

Cryptolechia prothyropa Meyrick, 1938, *D. Ent. Ztschr. Iris*, **52**: 11.

Distribution: China: Yunnan.

151 *Cryptolechia stadaea* Meyrick, 1934

Cryptolechia stadaea Meyrick, 1934, *D. Ent. Ztschr. Iris*, **48**: 39.

Distribution: China: Zhejiang.

161 *Cryptolechia torophanes* Meyrick, 1935

Cryptolechia torophanes Meyrick, 1935, in Caradja & Meyrick, *Material. Microl. Fauna chinesis. Prov.*: 81.

Distribution: China: Henan, Shaanxi, Zhejiang; Korea.

171 *Cryptolechia vespertina* Meyrick, 1910

Cryptolechia vespertina Meyrick, 1910, *Journ. Bombay Nat. Hist. Soc.* **20**: 162.

Distribution : China : Fujian , Sichuan , Taiwan , Zhejiang ; India.

181 *Cryptolechia zeloxantha* **Meyrick, 1934**

Cryptolechia zeloxantha Meyrick, 1934, *Exot. Microl.* **4** : 478.

Distribution : China : Sichuan.

191 *Cryptolechia deflecta* **Wang, sp. nov.**

Distribution : China : Gansu , Shaanxi.

201 *Cryptolechia kangxianensis* **Wang, sp. nov.**

Distribution : China : Gansu.

211 *Cryptolechia microbyrsa* **Wang, sp. nov.**

Distribution : China : Henan.

221 *Cryptolechia falsivespertina* **Wang, sp. nov.**

Distribution : China : Shaanxi.

231 *Cryptolechia zhengi* **Wang, sp. nov.**

Distribution : China : Henan , Gansu , Shaanxi.

241 *Cryptolechia neargometra* **Wang, sp. nov.**

Distribution : China : Shaanxi , Gansu.

251 *Cryptolechia paranthaedeaga* **Wang, sp. nov.**

Distribution : China : Gansu , Jiangxi.

261 *Cryptolechia cornutivalvata* **Wang, sp. nov.**

Distribution : China : Jiangxi.

271 *Cryptolechia fascirupta* **Wang, sp. nov.**

Distribution : China : Sichuan.

281 *Cryptolechia stictifascia* **Wang, sp. nov.**

Distribution : China : Shaanxi.

291 *Cryptolechia jigongshanica* **Wang, sp. nov.**

Distribution : China : Henan.

301 *Cryptolechia mirabilis* **Wang, sp. nov.**

Distribution : China : Henan , Jiangxi.

311 *Cryptolechia anthaedeaga* **Wang, sp. nov.**

Distribution : China : Henan.

321 *Cryptolechia gei* **Wang, sp. nov.**

Distribution : China : Sichuan.

331 *Cryptolechia varifascirupta* **Wang, sp. nov.**

Distribution : China : Sichuan.

3 DESCRIPTIONS OF NEW TAXA

Cryptolechia deflecta **Wang, sp. nov.** (Figs. 1 - 2)

Wing expanse 14.0 - 15.0 mm. Labial palpus yellow ; second segment long , distal part mixed with black scales ; third segment about IP3 of second in

length, densely with black scales. Antenna black. Thorax, tegula and forewing black. Forewing with a creamy fascia at 1P2 extending from costa outward to posterior margin, somewhat bent outward; costa with a creamy spot at about 3P4; cilia black. Hindwing black except for basal half of costa grayish white; cilia blackish. Legs yellow; tibiae covered with blackish gray hairs; tarsi blackish gray, distal half with white spots or rings.

Male genitalia (Fig. 1, GSN: W95141): Uncus narrow at base, widened to about 1P3, then gradually narrowed to rounded end. Tegmen arched, irregularly banded. Valva narrow at base, somewhat expanded distally, densely setose; apical margin set with a sclerotized sharp spine ventrally; costal margin slightly concave near base, then gently arched; ventral margin concave inward near end. Saccus triangularly shaped, distal part with short setae. Saccus a little shorter than sacculus, with rounded anterior margin. Aedeagus stout, slightly bent medially, with short spines.

Female genitalia (Fig. 2, GSN: W95140): Papilla analis short and broad. Posterior apophyses about twice as long as anterior apophyses. Ductus bursae membranous except for basal 1P4 sclerotized, anterior half expanded, partially with minute toothlike spines. Corpus bursae elliptical, shorter than ductus bursae, with warts. Signum heavily sclerotized, partially with dentate edge.

Holotype, Zhouzhi County (3411°N, 10812°E), Shaanxi Province, alt. 1350 m, July 14, 1987, coll. Houzhun Li. Paratypes: 1, July 13, 1987, other same data as holotype; 3, Fengxian (3319°N, 10615°E), Shaanxi Province, alt. 1600 m, July 9 - 14, 1988, coll. Houzhun Li; 1, Ningshan County (3313°N, 10813°E), Shaanxi Province, alt. 880 m, June 18, 1987, coll. Houzhun Li; 2, 1, Kangxian (3314°N, 10515°E), Gansu Province, alt. 800 m, June 7, 1995, coll. Aisihaer.

This species is similar to *Cryptolechia argometra* Meyrick in the external characters, but can be separated from the latter by the fascia at middle of forewing slightly oblique outward; valva without

dense hairs at base and aedeagus longer and stronger in the male genitalia.

Etymology: This specific name is derived from Latin *deflectus* (bending), referring to the shape of the fascia on the forewing.

Cryptolechia kangxianensis Wang, sp. nov. (Fig. 3)

Wing expanse 1215 mm. Head brown, face yellowish. Labial palpus yellowish white; second segment with brown spots in distal part; third segment ventrally with a thin black line extending from base to end, dorsally dotted with black scales. Antenna black. Thorax, tegula and forewing black. Forewing with a creamy fascia at 1P3 extending from costa to posterior margin, somewhat narrower anteriorly; costa with a creamy spot at about 3P4; cilia black. Hindwing and cilia blackish. Legs gray, tibiae and tarsi with brown spots.

Male genitalia (Fig. 3, GSN: W96062): Uncus wide cone-shaped, with long setae. Valva narrowed at base, slowly expanded toward apex, apical margin rounded; costal margin concave inward near base, with sclerotized edge. Saccus sclerotized, large and broad in basal half, narrow bandlike in distal half, pointed apically. Saccus short and small, anterior margin rounded. Aedeagus short, somewhat curved, apex roundly pointed.

Female: Unknown.

Holotype, Kangxian (3314°N, 10515°E), Gansu Province, alt. 800 m, June 8, 1995, coll. Aisihaer. Paratype: 1, other same data as holotype.

This new species is closely related to *Cryptolechia neargometra* Wang sp. nov. in appearance, but can be distinguished from the latter by the male genitalia: uncus cone-shaped, not triangular; saccus narrow bandlike in distal half; aedeagus short, without curved thin band in distal.

Etymology: The specific name refers to the type locality of the species (Kangxian).

Cryptolechia microbyrsa Wang, sp. nov. (Fig. 4)

Wing expanse 13.5 mm. Head lutescent, with

Figs. 3 - 4 Male genitalia of *Cryptolechia* spp. (Scales = 0.5 mm)

3. *Cryptolechia kangxianensis* Wang, sp. nov. ; **4.** *Crptolechia microbyrsa* Wang, sp. nov.

erect scales in posterior area. Labial palpus lutescent, with fuscous scales on outer side; second segment with appressed scales, long, upturned, exceeding base of antenna; third segment short and thin, about 2P3 of second in length, acute apically. Antenna black, scape yellowish on dorsal surface, flagellum with pale rings. Thorax and tegula lutescent, somewhat ochreous, covered with dense black scales, posterior portion ochreous yellow. Forewing lutescent, with dense black scales and scattered ochreous yellow scales; several obscure black dots around apex; an indistinct brown fascia at about 2P3, cell with a distinct black spots at middle; costa arched; cilia ochreous yellow. Hindwing and cilia deep gray. Fore and mid legs black brown, with ochreous yellow spots. Hindleg grayish white, spur brown, tibia clothed with long hairs.

Male genitalia (Fig. 4, GSN: W98260): Uncus wide at base, gradually narrowed toward apex, caudal margin rounded, medially with long setae at both sides. Valva narrowed at base, widened to about 1P3, then slowly narrowed toward distal, apex bluntly rounded; transtilla wide, with blunt apex. Sacculus short, sclerotized; apical margin concave inward at middle, forming two processes: dorsal

process larger, apical margin blunt; ventral process smaller, apical margin rounded. Saccus short and small, anterior margin rounded. Aedeagus short, without cornutus.

Female: Unknown.

Holotype, Neixiang County (33.0°N, 111.8°E), Henan Province, 650 m, July 11, 1998, coll. Houzhun Li. Paratypes: 1, Mt. Jigong (31.8°N, 111.4°E), Henan Province, 700 m, June 10, 1997; 1, June 10, 1998, other same data as holotype.

This new species is allied to *Cryptolechia malacobyrsa* Meyrick, but can be differentiated from it by the body smaller in size, valva without projected angle in the ventral margin and sacculus differently shaped from that of the latter species in the male genitalia.

Etymology: The specific name is derived from the Greek *micro* (small) and *byrsa* partly from the species name *malacobyrsa*, referring to the similarity of the species with *C. malacobyrsa* Meyrick.

Cryptolechia falsivespertina **Wang, sp. nov.** (Figs. 5 - 6)

Wing expanse 13.5 - 15.0 mm. Head yellowish white. Labial palpus yellowish white, second

segment with scattered brown scales at base, third segment about 1P2 as long as second. Antenna brown. Thorax, tegula and forewing fuscous to grayish fuscous. Forewing with creamy spot at costal 2P5 and 4P5 respectively, the latter larger and dif2 fused, more or less triangularly shaped; black spot set at 2P3 of cell and fold respectively, each with an indistinct white dot at outside; a larger black spot set at end of cell; apex pointed; cilia brown, mixed with yellowish white. Hindwing and cilia gray. Legs grayish white; tibiae of fore and mid legs as well as all the tarsi with brown spots; hind tibia and

tarsus mixed with brown scales.

Male genitalia (Fig. 5, GSN: W95107): Un2 cus narrow at base, roundly dilated in distal part; lateral side shrunk at middle. Tegmen with anterior margin slightly arched inward. Valva narrow in basal half, expanded in distal half, somewhat elliptical, apical margin with a short sclerotized sharp spine. Sacculus triangularly shaped, roundly pointed in distal. Saccus triangular in shape, anterior margin roundly pointed. Aedeagus relatively long, basal half thick, distal half tapering, with a pile of short spines.

Figs. 5 - 6 *Cryptolechia falsivespertina* Wang, sp. nov.
5. Male genitalia; 6. female genitalia (Scales = 0.5 mm).

Female genitalia (Fig. 6, GSN: W96008): Papilla analis developed. Anterior apophyses about half as long as posterior apophyses. 8th sternite with posterior margin concave at middle. Ductus bursae with basal 3P5 heavily sclerotized, distal 2P5 membranous, with sclerotized plate. Corpus bursae membranous, about 1P2 of ductus bursae. Signum small, edged with sclerotized teeth, distal half in large spine form.

Holotype, Zhouzhi County (34.1°N, 108.

2°E), Shaanxi Province, 1750 m, July 16, 1987, coll. Houzhun Li. Paratypes: 4, 2, 1620 m, July 13 - 19, 1988, other same data as holotype; 1, Fengxian (33.9°N, 106.5°E), Shaanxi Province, 1600 m, July 12, 1988, coll. Houzhun Li.

This new species is similar to *Cryptolechia vespertina* Meyrick, but can be distinguished from the latter by the following points: head and labial palpus yellowish white, second segment of labial pal2

pus black at base or completely black; forewing with a distinct creamy spot at costal 2P5; valva with a spine at apical margin and aedeagus long in the male genitalia.

Etymology: The specific name refers to the similarity of the species with *C. vespertina*.

Cryptolechia zhengi **Wang, sp. nov.** (Figs. 7 - 8)

Wing expanse 14.0 - 15.5 mm. Head lutescent. Labial palpus lutescent, second segment with scattered brown scales at outside, third segment about 2P3 of second. Antenna blackish brown. Thorax, tegula and forewing blackish brown. Forewing with a yellowish blotch at costal 1P2 and a larger inverted subtriangular yellowish spot near costal end; white spot at 2P3 of cell and 3P4 of fold respectively, black scales scattered along inside margin of

each spot; a larger black spot set at end of cell, with white scales at inside; cilia brown except for basal part yellow on tornus. Hindwing and cilia grayish brown. Legs grayish white; tibiae and tarsi grayish brown at outside, with pale rings.

Male genitalia (Fig. 7, GSN: L95403): Uncus elongate, somewhat cone-shaped. Tegmen narrow, slightly band-shaped. Valva basally narrowed, distal portion inflated; ventral margin slightly concave inward near end, apically with a thin spine. Saccus large and broad at base, narrowed to 2P3, distal 1P2 elliptical. Saccus small, anterior margin blunt. Aedeagus with basal portion nearly parallel-sided, distal 1P3 roughly divided into two branches: one branch thicker, with rounded apex; another branch thinner, with pointed apex.

Figs. 7 - 8 *Cryptolechia zhengi* Wang, sp. nov.
7. Male genitalia; 8. female genitalia (Scales = 0.5 mm).

Female genitalia (Fig. 8, GSN: W98349): Papilla analis large and broad, setose. Both apophyses stout. 8th sternite finely spined. Lamella an2tevaginalis somewhat cap2like. Ductus bursae membranous. Corpus bursae large, membranous. Signum irregularly rounded, with small teeth.

Holotype, Zhouzhi County (34.1°N, 108.2°E), Shaanxi Province, 1750 m, July 18, 1987, coll. Houzhun Li. Paratypes: 2, Tianshui (34.6°N, 105.7°E), Gansu Province, Aug. 11-12, 1988, coll. Xingyu Wu; 4, Neixiang County (33.0°N, 111.8°E), Henan Province, 1350 m, July 13-15, 1998, coll. Houzhun Li.

This new species is related to *Cryptolechia vespertina* Meyrick, but can be easily separated from the latter by the forewing having two distinct pale spots; sacculus with distal portion elliptically dilated and aedeagus distally divided into two branches in the male genitalia.

Etymology: This new species is dedicated to Professor Zhe2min Zheng, a famous Chinese taxonomist.

Cryptolechia neargometra Wang, sp. nov. (Figs. 9-10)

Wing expanse 11.0-11.5 mm. Head fuscous except for vertex yellowish white. Labial palpus yellowish white, second segment with distal end blackish brown, third segment with scattered brown scales, about 1/3 of second. Antenna black. Thorax, tegula and forewing black. Forewing with a yellowish white fascia at middle, gradually widened to posterior margin; costa with an inverted triangular blotch; cilia black. Hindwing black, cilia grayish. Legs with coxa and femora grayish white, tibiae and tarsi black, tarsi with white rings, hind tibia covered with long blackish hairs, distally with yellowish hairs.

Male genitalia (Fig. 9, GSN: L94031): Uncus somewhat triangular, wider at base, narrowed

toward apex, caudal margin roundly pointed. Tegmen well developed. Valva with basal IP3 relatively narrow, distal portion slightly broadened, with dorsal and ventral margins nearly parallel, apical margin blunt; costa curved at basal IP3. Sacculus short, broader at base; ventral margin concave inward near apex, forming a rounded process bending downward. Saccus wide and short. Aedeagus with basal portion thickened, distal portion with sclerotized curving bands.

Female genitalia (Fig. 10, GSN: W98004): Papilla analis well defined, caudal margin bluntly rounded. Anterior apophyses slightly shorter than posterior apophyses. Ostium bursae developed. Lamella antevaginalis large and broad, sclerotized, with two sclerotized plates. Lamella postvaginalis irregularly shaped, with fine spines. Ductus bursae mostly sclerotized, membranous at connection with corpus bursae. Corpus bursae longer than ductus bursae, posteriorly with a sclerotized irregular plate. Signum very small, anteriorly with teeth.

Holotype, Ningshan County (33.3°N, 108.3°E), Shaanxi Province, 880 m, June 17, 1987, coll. Houzhun Li. Paratypes: 2, June 17-18, 1987, other same data as holotype; 2, Kangxian (33.4°N, 105.5°E), Gansu Province, 800 m, June 6-7, 1995, coll. Aisihaer.

This species is much similar to *Cryptolechia argometra* Meyrick in the characters displayed on the forewing and thorax, but can be separated from it by vertex and labial palpus yellowish white, sacculus developed and aedeagus with more complex sclerotization in the male genitalia.

Etymology: This specific name is derived from Greek *neo* (new) and *argometra* (name of another species), indicating the similarity of the new species with *C. argometra*.

Cryptolechia paranthaedeaga Wang, sp. nov. (Fig. 11)

Wing expanse 16.5 - 18.0 mm. Head fuscos, with sparsely appressed scales; frons yellowish white. Labial palpus with second segment blackish brown, inner side yellowish white; third

segment yellowish white, mixed with black scales, acute, about 1P2 of second in length. Antenna black. Thorax, tegula and forewing deep brown. Forewing with creamy spot at costal 2P5 and 4P5 respectively, the former larger, the latter triangular; cell with black spot at base and middle respectively, the latter larger; cilia brown. Hindwing and cilia grayish brown. Fore and mid legs grayish brown, tibiae and tarsi with white spots or rings; hind leg grayish white, tibia clothed with long hairs, tarsus with gray spots.

Male genitalia (Fig. 11, GSN: L89322): Uncus large, basal portion slightly wider, caudal margin somewhat sinuate. Tegmen clearly in inverted 'V' shape. Valva well produced, distal portion widened, apical margin truncate, densely setose; costa with sclerotized process at base; apex with two sclerotized teeth near ventral margin. Sacculus more or less sclerotized; distal process heavily sclerotized, with dense teeth and setae, apically with a large strong tooth and some small teeth. Saccus large and broad, anterior margin blunt. Aedeagus extremely elongate, curved, with rounded apex.

Female: Unknown.

Holotype, Yushan County (28.6°N, 118.2°E), Jiangxi Province, 1120 m, Aug. 19, 1985, coll. Guangpu Shen. Paratypes: 1, Aug. 20, 1985, other same data as holotype; 1, Tianshui (34.5°N, 105.9°E), Gansu Province, Aug. 11, 1988, coll. Xingyu Wu.

The new species is similar to *Cryptolechia anthaedeaga* sp. nov., but can be easily distinguished from it by the unique structures in the male genitalia, which are quite different from those of the latter species.

Etymology: The new specific name is derived from the Greek *para* (near) and *anthaedeaga* (name of another species) to indicate the similarity of the new species with *C. anthaedeaga*.

Cryptolechia cornutivalvata Wang, sp. nov. (Fig. 12)

Wing expanse 16.0 mm. Head brown, vertex slightly yellowish. Labial palpus pale light; second segment thick and long, densely with brown scales

Figs. 11 - 12 Male genitalia of *Cryptolechia* spp. (Scales = 0.5 mm)

11. *Cryptolechia paranthaedeaga* Wang, sp. nov. ; **12.** *Cryptolechia cornutivalvata* Wang, sp. nov.

on outside; third segment thin and short, median portion densely with brown scales, end pointed. Antenna with scape brown on dorsal surface, yellowish white on ventral surface; flagellum brown. Thorax, tegula and forewing brown. Forewing with costa arched; cell with a black dot at 2P3, an orange yellow dot set at inside of the black dot, another black dot set at end of cell; an irregular, orange yellow spot at 2P3 of posterior margin; apex roundly pointed; cilia brown. Hindwing and cilia grayish brown. Fore and mid legs grayish white on inside, black on outside; apex of tibiae and tarsi with white spots; hind leg brown, tarsus with white rings.

Male genitalia (Fig. 12, GSN: W98061): Uncus wide and short, triangularly shaped. Valva long and narrow, distal half densely with long setae, apex rounded; costa straight; ventral margin roundly projected at about 1P3, distal 2P3 straight. Sacculus sclerotized, wide at base, distal part more

or less dilated, hairy, apex rounded. Saccus short, slightly shorter than half length of sacculus. Aedeagus with basal portion thin, distal portion expanded, with reticulum.

Female: Unknown.

Holotype, Quannan (24.7°N, 114.5°E), Jiangxi Province, May 18, 1984.

This new species is closely allied to *Cryptolechia jigongshanica* sp. nov., but can be distinguished from the latter by the forewing having an irregular, orange yellow spot at 2P3 of posterior margin; male genitalia with ventral margin of valva roundly projected at about 2P3, sacculus with distal part slightly dilated and aedeagus different from the latter species in shape.

Etymology: This new specific name is from Latin *cornutus* (horn) and *valvatus* (valvule), referring to the shape of valva in the male genitalia.

Cryptolechia fascirupta Wang, sp. nov. (Figs. 13

- 14)

Wing expanse 15.0 - 16.0 mm. Head yellowish gray, with erect long tufts. Labial palpus yellowish white, third segment grayish brown at outside, distal part black; third segment about half as long as second, with scattered black scales. Antenna brown, ventral surface of scape grayish white. Thorax, tegula and forewing brown. A wide yellowish fascia at about middle of forewing extending from costa to posterior margin, wider in anterior portion, with slight break at middle; an inverted triangular blotch near apex; small black spot set at middle of cell and fold respectively, a larger black blotch at end of cell; cilia brown. Hindwing and

cilia grayish brown. Fore and mid legs brown, tarsi with pale rings. Hind leg gray, tibia covered with long hairs, tarsus with brown spots.

Male genitalia (Fig. 13, GSN: L93026): Uncus moderate, laterally parallel-sided, with blunt caudal margin. Valva narrow in basal half, distal half expanded, cucullus with dorsal margin gently arched, ventral margin deeply concave inward near apex. Sacculus sclerotized, without distal process, ventral margin straight. Saccus short and broad, anterior margin blunt. Aedeagus somewhat curved, with several spine-like contents; distal portion gradually thinned, apex pointed.

Figs. 13 - 14 *Cryptolechia fascirupta* Wang, sp. nov.
13. Male genitalia; 14. female genitalia (Scales = 0.5 mm).

Female genitalia (Fig. 14, GSN: W95017): Papilla analis somewhat squarely shaped, caudal margin straight. Anterior apophyses short, about 1/3 of posterior apophyses. Ductus bursae with basal 2/3 strongly sclerotized, distal 1/3 membranous. Corpus bursae small, not distinctly separated from ductus bursae. Signum relatively small, curved,

edged with teeth.

Holotype, Mt. Qingcheng (30.9°N, 103.5°E), Sichuan Province, Aug. 12, 1990, coll. Xiaosong Ge. Paratypes: 4, 1, Aug. 9 - 14, 1990, other same data as holotype.

This species is allied to *Cryptolechia torophanes* Meyrick in appearance, but can be dif-

differentiated from the latter by the following characters: media fascia irregular, with slight break at middle; ductus bursae without sclerotized ringlike band and signum not spine-like in the female genitalia.

Etymology: The specific name is derived from the Latin *fascia* (band) and *ruptus* (broken), in reference to the media fascia on the forewing.

Cryptolechia stictifascia **Wang, sp. nov.** (Figs. 15 - 16)

Wing expanse 13.0 - 14.0 mm. Head whitish yellow, with sparse tufts. Labial palpus yellow, dorsal surface of second segment and distal half of third segment with brown spots. Antenna with scape whitish yellow, flagellum ringed with brown. Thorax and tegula yellow, with brown scales at base.

Forewing brown; a yellowish fascia at 2P₃ stretching from costal margin to posterior margin, narrow anteriorly; a large yellowish blotch near apex; cell and fold with dark dot at middle respectively; a larger black blotch set at end of cell; cilia brown. Hindwing and cilia grayish brown. Legs grayish white, tibiae and tarsi with pale brown spots, hind tibia clothed with long hairs.

Male genitalia (Fig. 15, GSN: W95052): Uncus somewhat bottle-like, its basal 2P₃ wider, distal 1P₃ narrowed, caudal margin rounded. Valva narrowed at base, expanded distally, apical margin with a long spine; costa with a long sclerotized process at base, extending upward to base of uncus. Sacculus simple. Saccus short, anterior margin rounded. Aedeagus basally thin, distally thickened, apically with a very long, curved, sclerotized

band.

Female genitalia (Fig. 16, GSN: W95051): Papilla analis well produced. Anterior apophyses much shorter than posterior apophyses. Ductus bursae relatively thick and long, more sclerotized. Corpus bursae small, not distinctly separated from ductus bursae. Signum absent.

Holotype, Ningshan County (33.3°N, 108.3°E), Shaanxi Province, 880 m, June 17, 1987, coll. Houzhun Li. Paratypes: 1, 1, other same data as holotype.

This new species resembles *Cryptolechia torophanes* Meyrick externally, but can be distinguished from the latter by cell with a black dot at middle, female genitalia with ductus bursae long and sclerotized, signum absent.

Etymology: This name is derived from the Latin

in *stictus* (macular) and *fascia* (band), in reference to the maculations on the forewing.

Cryptolechia jigongshanica Wang, sp. nov. (Figs. 17 - 18)

Wing expanse 18.0 mm. Head grayish brown. Labial palpus yellowish white, outside with brown scales; third segment thin and pointed, about 1/2 of second segment. Antenna gray. Thorax and tegula deep gray. Forewing broad, costal margin gently arched, apex roundly pointed; ground colour deep gray, with scattered brown scales, but without distinct patterns. Legs grayish white, tarsi with brown spots.

Male genitalia (Fig. 17, GSN: W95052): Uncus much wide at base, gradually narrowed to about 2/3, then suddenly thinned to a small

process. Valva narrowed at base, ventrally expanded outward in middle portion, distally narrowed, apical margin rounded. Sacculus short, distal portion lobe-like, pointed at apex. Saccus very large, wide at base, narrowed to apex, apex rounded. Aedeagus extremely long, dilated at base, distal portion thin band-like, curved, with small teeth.

Female genitalia (Fig. 18, GSN: W95051): Papilla analis broad. Anterior apophyses about 1/2 of posterior apophyses in length. Antrum sclerotized, posterior margin deeply concave, laterally protruded and pointed distally. Ductus bursae more or less sclerotized. Corpus bursae large, membranous, without signum.

Holotype ♂, Mt. Jigong (31.8°N, 114.1°E), Henan Province, 700 m, July 11, 1997, coll. Hu Chun Li. Paratypes: 1 ♂, 1 ♀, July 10 - 11,

1997, other same data as holotype.

This new species resembles *Cryptolechia isomichla* Meyrick in the external characters, but can be separated from the latter by valva large and broad, not truncate apically in the male genitalia.

Etymology: The specific name refers to the type locality of the species (Jigongshan).

Cryptolechia mirabilis Wang, sp. nov. (Figs. 19 - 20)

Wing expanse 13.0 - 15.0 mm. Head yellowish brown, posteriorly with erect hairs. Labial palpus yellowish white, outside with dense brown scales; second segment slightly longer than third segment; third segment thin and pointed, ending in point. Antenna with scape yellowish brown, flagellum yellowish white on ventral surface, brown on

dorsal surface. Thorax and tegula brown, mixed with ochreous yellow scales. Forewing brown, somewhat ochreous yellow; a dim fascia at middle extending from costal margin to posterior margin; costa with two pale spots, inside one usually diffused downward to cell; middle and end of cell as well as 2P3 of fold with dark brown dot respectively; cilia ochreous yellow, mixed with brown. Hindwing and cilia deep gray. Fore and mid legs yellowish white at inside, dark brown at outside, tibiae yellowish white at end, tarsi with yellowish white rings. Hind leg grayish white, tarsus with brown spots.

Male genitalia (Fig. 19, GSN: L97211): Uncus being a pair of long processes, with pointed apex. Valva narrowed at base, ventral margin concave inward near base and forming an angle at about 1P3; distal 2P3 upturned, apex rounded; costal gently arched inward. Sacculus wide and short, sclerotized, with two sclerotized distal processes: upper process long, curved, apex pointed; lower process short and thick, apically with a sclerotized tooth. Saccus relatively small, with anterior margin rounded. Aedeagus developed, nearly as long as valva, basal portion thin, expanded at about 1P3, medial portion with several small teeth, near apex with a sclerotized process.

Female genitalia (Fig. 20, GSN: L97212): Papilla analis irregularly rounded. Anterior apophyses much shorter than posterior apophyses. Antrum sclerotized, both sides posteriorly protruded outward. Ductus bursae wide, basal half sclerotized, distal half membranous. Corpus bursae more or less oval, with dense minute spines. Signum triangularly shaped, with a number of sclerotized teeth.

Holotype, Mt. Jigong (31.8°N, 114.1°E), Henan Province, 700 m, July 10, 1997, coll. Houzhun Li; Paratypes: 7, 13, July 10 - 11, 1997, other same data as holotype; Lushan (25.9°N, 106.5°E), Jiangxi Province: 1, Aug. 1, 1985, 1, July 30, 1985, 1, July 23, 1985; 1, Mt. Wuyi (26.4°N, 116.4°E), Jiangxi Province, July 30, 1980.

This new species is similar to *Cryptolechia ves2*

pertina Meyrick, but can be easily separated by the following points: costal margin of forewing with two pale spots, inside one sometimes diffused to cell; male genitalia with uncus being a pair of long processes, which is unique in the genus.

Etymology: This name is derived from Latin *mirabilis* (miraculous), referring to the unique characters of the male genitalia.

Cryptolechia anthaedeaga Wang, sp. nov. (Figs. 21 - 22)

Wing expanse 17.0 - 18.0 mm. Head blackish gray, frons and vertex white, with broad leaflike scales. Labial palpus with second segment stout, outside and ventral surface black, inside and dorsal surface yellowish white, mixed with brown scales; third segment yellowish white, outside in medial portion and ventral surface black, acutely distally. Antenna stout, black. Thorax, tegula and forewing black. Forewing with pale yellow nebulous blotch at costal 1P2 and 1P3 respectively; black spot set at middle of cell and 3P4 of fold respectively, each dotted with grayish white scales along outside; apex blunt; termen oblique; cilia black. Hindwing and cilia gray. Legs grayish white; fore and mid legs grayish brown ventrally, with yellowish white rings; hind tibia clothed with long hairs, tarsus grayish brown, with yellowish white rings.

Male genitalia (Fig. 21, GSN: W98266): Uncus shrunk at about basal 1P3, then slightly widened toward apex, caudal margin rounded. Tegumen relatively narrow. Valva slightly narrow at base, distal portion expanded, apical margin with two sclerotized teeth; a plate with dentate set near posterior margin extending from base to about 2P5. Sacculus broad and short, with long setae ventrally. Saccus relatively large, with anterior margin rounded. Aedeagus developed, longer than valva, distally pistil-like, with long spines and short sclerotized bands, apex pointed.

Female genitalia (Fig. 22, GSN: W98267): Papilla analis short and broad, with a pile of spine-like or linear contents. Anterior apophyses shorter than 1P3 of posterior apophyses in length. Ductus bursae long and wide, sclerotized, distal half with

Figs. 21 - 22 *Cryptolechia anthaedeaga* Wang, sp. nov.
21. Male genitalia ; **22.** female genitalia (Scales = 0.5 mm) .

minute spines. Corpus bursae small, rounded; signum large, anteriorly spine-shaped, medially with a sclerotized carina.

Holotype, Neixiang County (33.0°N, 111.8°E), Henan Province, 1350 m, July 15, 1998, coll. Houzhun Li. Paratypes: 26, 9, July 13 - 15, 1998, other same data as holotype.

This new species is related to *Cryptolechia vespertina* Meyrick, but differs from the latter in the forewing with two pale yellow nebulous blotches; valva longer, apex with two teeth, aedeagus pistillate like in the distal portion.

Etymology: This specific name is derived from the Greek *anthos* (flower) and *aedeagus* (aedeagal), in reference to the character of the distal portion in the aedeagus.

Cryptolechia gei Wang, sp. nov. (Fig. 23)

Wing expanse 11.5 mm. Head brown, frons

yellowish white. Labial palpus yellowish white, second segment black distally, third segment black ventrally, slender and pointed. Antenna black. Thorax, tegula and forewing black. Forewing with yellowish white spot at middle and near apex of costal margin respectively, the former larger and the latter triangularly shaped; cilia black. Hindwing and cilia black. Legs grayish white, tarsi with black spots.

Male genitalia (Fig. 23, GSN: W95050): Uncus large, rectangular, caudal margin slightly concave at middle, lateral side with long setae. Valva narrow at base, gradually widened toward apex, distal half densely with long hairs, apex rounded, with a tooth-like spine ventrally. Saccus large, long triangularly shaped. Saccus subtriangular in shape, anterior margin roundly pointed. Aedeagus nearly same thickness, distally with a large pile of sclerotized spines.

Female : Unknown.

Holotype , Mt. Qingcheng (30.9°N, 103.5°E), Sichuan Province, July 15, 1990, coll. Xiaosong Ge.

This new species resembles *Cryptolechia vespertina* Meyrick, but can be distinguished from the latter by the forewing with a yellowish white spot at costal 1P2; valva narrow at base, with spine at apex larger and sacculus long triangular in the male genitalia.

Etymology: This species is named after Mr. Xiaosong Ge, the collector of the type specimen.

Cryptolechia varifasciupta Wang, sp. nov. (Fig. 24)

Wing expanse 14.0 mm. Head yellowish brown. Labial palpus grayish white; second segment pale brown at outside; third segment diffused with pale brown scales, slender, ending in point. Antenna brown. Thorax, tegula and forewing grayish brown. Forewing with basal half grayish brown, costal margin medially arched; pale yellow fascia from middle of costa extending to 2P3 of posterior

margin; small pale yellow spots set near apex; cilia brown. Hindwing and cilia grayish white, with scattered brown scales; tibiae covered with long hairs, tarsi with grayish white spots.

Male genitalia (Fig. 24, GSN: W98053): Uncus laterally shrunk inward at middle. Valva large, distal portion expanded, with fine hairs; apex rectangularly concave inward, forming sharp toothlike process dorsally and ventrally. Sacculus well produced, about 1P2 of valva in length, apex blunt. Saccus triangularly shaped, anterior margin roundly pointed. Juxta thin, sclerotized, in wide 'U' shape. Aedeagus with distal half curved, partially reticulous, with a small process near apex.

Female : Unknown.

Holotype , Mt. Qingcheng (30.9°N, 103.5°E), Sichuan Province, July 14, 1990, coll. Xiaosong Ge.

This species is allied to *Cryptolechia fasciupta* sp. nov. in the male genitalia, but can be separated from it by the forewing with basal half pale in color, valva with apex shallowly concave and aede-

Figs. 23 - 24 Male genitalia of *Cryptolechia* spp. (Scales = 0.5 mm).

23. *Cryptolechia gei* Wang, sp. nov. ; **24.** *Cryptolechia varifasciupta* Wang, sp. nov.

agus differently shaped from that of the latter species.

Etymology: This specific name is derived from the Latin *vari2*(different) and *fascirupta* (name of another species), referring to the similarity of the species with *C. fascirupta*.

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中国隐织蛾属研究(鳞翅目:织蛾科)(I):十五新种记述

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报道了中国隐织蛾属 *Cryptolechia* Zeller 三十三种昆虫,包括十五新种:湾隐织蛾 *C. deflecta* sp. nov., 康县隐织蛾 *C. kangxianensis* sp. nov., 小袋隐织蛾 *C. microbyrsa* sp. nov., 伪黄昏隐织蛾 *C. falsivespertina* sp. nov., 郑氏隐织蛾 *C. zhengi* sp. nov., 新白芯隐织蛾 *C. neargometra* sp. nov., 拟花茎隐织蛾 *C. paranthaedeaga* sp. nov., 角瓣隐织蛾 *C. comutivalvata* sp. nov., 断带隐织蛾 *C. fascirupta* sp. nov., 点带隐织蛾 *C. stictifascia* sp. nov., 鸡公山隐织蛾 *C. jigongshanica* sp. nov., 奇异隐织蛾 *C. mirabilis* sp. nov., 花茎隐织蛾 *C. anthaedeaga* sp. nov., 葛氏隐织蛾 *C. gei* sp. nov. 以及伪断带隐织蛾 *C. varifascirupta* sp. nov.。文中提供了新种的外生殖器特征图。模式标本保存在南开大学生物系。

关键词 鳞翅目 织蛾科 隐织蛾属 新种 中国

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