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DESCRIPTIONS OF FIVE NEW SPECIES OF TRIBE GRAPHOLITINI (LEPIDOPTERA: TORTRICIDAE)

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Abstract: The present paper describes 5 new species of Tribe Grapholitini, viz. *Grapholita curviphalla* Liu et Yan, sp. nov., *G. dactyla* Liu et Yan, sp. nov., *G. globovalva* Liu et Yan, sp. nov., *G. globella* Liu et Yan, sp. nov. and *Cydia curvivalva* Liu et Yan, sp. nov.. All the types specimens are deposited in the Institute of Zoology, Academia Sinica.

Key words: Lepidoptera, Tortricidae, Grapholitini, new species

1. ***Grapholita curviphalla*** Liu et Yan, sp. nov. (Figs. 1, 6, 10)

Wing expanse: 19 mm～21 mm. Body blackish fuscous. Labial palpus extended forward; second segment pale brown, widely dilated apically, terminal segment dake brown and descending. Forewing blackish fuscous, oblong subtruncate, costal fold absent, costa gently curved, with more than fifteen pairs of yellowish white strigulae, apex obtusely pointed. Forewing (Fig. 6) with 12 veins, all veins separated; R_1 from 1/3 of discal cell; R_2 with equal distance between veins R_1 and R_3 basally, stem of R_{4+5} (chorda) from middle of R_2, R_3, end at the base of R_4; M-stem stoped at the base of M_3. Hind wing greyish fuscous, with M_3 and Cu_1 veins stalked, vein 1A indistinct.

Male genitalia (Fig. 1): Tegumen broad; uncus rudimentary; socius reduced; aedeagus long, cylindrical, strongly curved downward in apical 1/5. Valva concaved between sacculus and cucullus. Cucullus oval, with 5 strong spines on ventral ends. In central area of valva with a small digitoid process of ampulla.

Female genitalia (Fig. 10): Posterior apophysis nearly the same length with the anterior apophysis. Sterigma and antrum sclerotized. Two signa horn-shaped, different in size.

Holotype: ♂, Emei Mt., Sichuan Province, 25—V—1979. Paratypes: 15 ♂♂, 15♀♀, same data as holotype.

Host plant: Unknown.

Biological note: In April and May, the adults emerged in Emei Mt.

Etymology: The specific name is derived from its long, cylindrical curved aedeagus of male genitalia.

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Remarks. This new species differs from all the congeners by its special long wing expanse and long, cylindrical curved aedeagus of male genitalia.

2. ***Grapholita globella*** Liu et Yan, sp. nov. (Fig. 2)

Wing expanse: 11 mm. Head, thorax and forewing dark brown, antennae brown. Labial palpus light brown, ascending, close together with the commond eyes; second segment undilated apically; terminal segment small, blunt. Forewing with a series of white pairs strigulae, more distinct apically; submarginal line with a series of black spots between veins; ocelloid patch indistinct. Hindwing light brown.

Male genitalia (Fig. 2): Tegumen extended, slightly sclerotized; uncus, socius and gnathos reduced; valva slender; cucullus expanded and flat, haired; aedeagus short and thick, pistal-shaped.

Holotype: ♂, Changbai Mt. (800 m), Jilin Province, 10—VII—1974, Youqiao Liu.

Etymology: The specific name is derived from its flat, haired cucullus of male genitalia.

Remarks. This new species differs from all the congeners by its special flat, haired cucullus of male genitalia.

3. ***Grapholita dactyla*** Liu et Yan, sp. nov. (Figs. 3,7,11)

Wing expanse: 9 mm～11 mm. Head, thorax and antennae dark fuscous, forewing dark ochreous. Labial palpus pale fuscous, ventral part greyish-white, extended forward; second segment slightly dilated apically; terminal segment fuscous, small and blunt. Forewing dark fuscous, nearly triangular, with complicated striation; costa with a series of whitish pairs strigulae; two black lines mixed with lead from 1/2 and 3/4 of costa obliguly toward termen; submarginal line with a series of black spots between veins; ocelloid patch indistinct. Hindwing greyish brown. Forewing (Fig. 7) with 12 veins separated, R_1 from middle of discal cell; R_2 from 5/6, nearer to R_3 than R_1, R_4 from upper angle of discal cell, to costa; R_5 to termen; chorda vein and M-stem developed; M_1, M_2 and M_3 parallel; Cu_2 from about 2/3 of discal cell. Hindwing with 8 veins: Rs and M_1 separated; M_3 and Cu_1 started at the same point.

Male genitalia (Fig. 3): Tegumen generally, with long hairs dorsally; uncus, socius and gnathos reduced; valva with a thumb-like protruding between sacculus and cucullus; aedeagus long and thin.

Female genitalia (Fig. 11): Papillae anales narrow; anterior apophysis longer than posterior apophysis; ostium small, funnel-shaped; ductus bursae slender; signum 2, small, horn-shaped.

Holotype: ♂, Guangzhou, Guangdong Province, 1—VI—1978. Paratypes: 5♂♂, 15♀♀, same data as holotype.

Biological note: From 18th. April to 12th. June, the adults emerged from Guanzhou Botanical Gardon.

Etymology: The specific name is derived from its long thumb-like protruding between sacculus and cucullus in male genitalia.

Remarks. This new species differs from all the congeners by the special protruding in male genitalia.

4. ***Grapholita globovalva*** Liu et Yan, sp. nov. (Figs. 4,8)

Wing expanse: 11 mm. Head, thorax and forewing greyish brown, antennae dark brown. Labial palpus greyish-white, pale brown dorsally; ascending, close together with compound eyes, second segment undilated apically; terminal segment small, blunt. Forewing (Fig. 8) R_1 from middle of discal cell; R_2 from 7/8, quite nearer to R_3 than R_1. R_4 from upper angle of discal cell; R_5 to termen; chorda vein and M-stem developed; M_1 and M_2 parallel; M_3 nearer to M_2 than Cu_1; Cu_2 from 2/3 of discal cell. Hindwing with Rs and M_1 separated; M_3 and Cu_1 started at the same point.

Male genitalia (Fig. 4): Tegumen extended; uncus, socius and gnathos reduced; sacculus with deep invagination in the middle; cucullus round, with long seta; aedeagus short, cone-shaped.

Holotype: ♂, Mt. Tai, Shangdong Province, 18—VIII—1988, Jing Liu. Paratype: 1♂, Mt. Tai, Shangdong Province, 13—VI—1988. Xiuxin Lu.

Biological note: June and August, the adults emerged in Zhulin Temple, Mt. Tai, Shangdong Province.

Etymology: The specific name is derived from its round cucullus in valva of male genitalia.

Remarks. This new species differs from all the congeners by its round cucullus of male genitalia.

5. ***Cydia curvivalva*** Liu et Yan, sp. nov. (Figs. 5,9,12)

Wing expanse: 11 mm. Head, thorax and forewing dark greyish brown. Vertex with tufts hairs. Labial palpus pale greyish brown, ascending, close together with compound eyes. Forewing costa with a series of whitish pairs strigulaes mixed with brown and lead; two dark brown lines from 3/5 and 4/5 of costa obliquely toward termen; submarginal line with a series of black spots between veins; ocelloid patch indistinct. Hindwing brown. Forewing (Fig. 9) with 12 veins, all veins separated. R_1 from middle of discal cell; R_2 from 5/6, nearer to R_3 than R_1; R_4 from the upper angle of discal cell; R_5 to termen, parallel with M_1, M_2; Cu_2 of discal cell.

Male genitalia (Fig. 5): Tegumen slightly protruded; vinculum developed; uncus, socius and gnathos reduced; valva boots-shaped, saculus without invagination; costa and sacculus curved upward from the middle.

Female genitalia (Fig. 12): Papillae anales stripe-like; posterior apophysis nearly the same length with the anterior apophysis; lamella postvaginalis weakly sclerotized; ostium round; two signa horn-shaped.

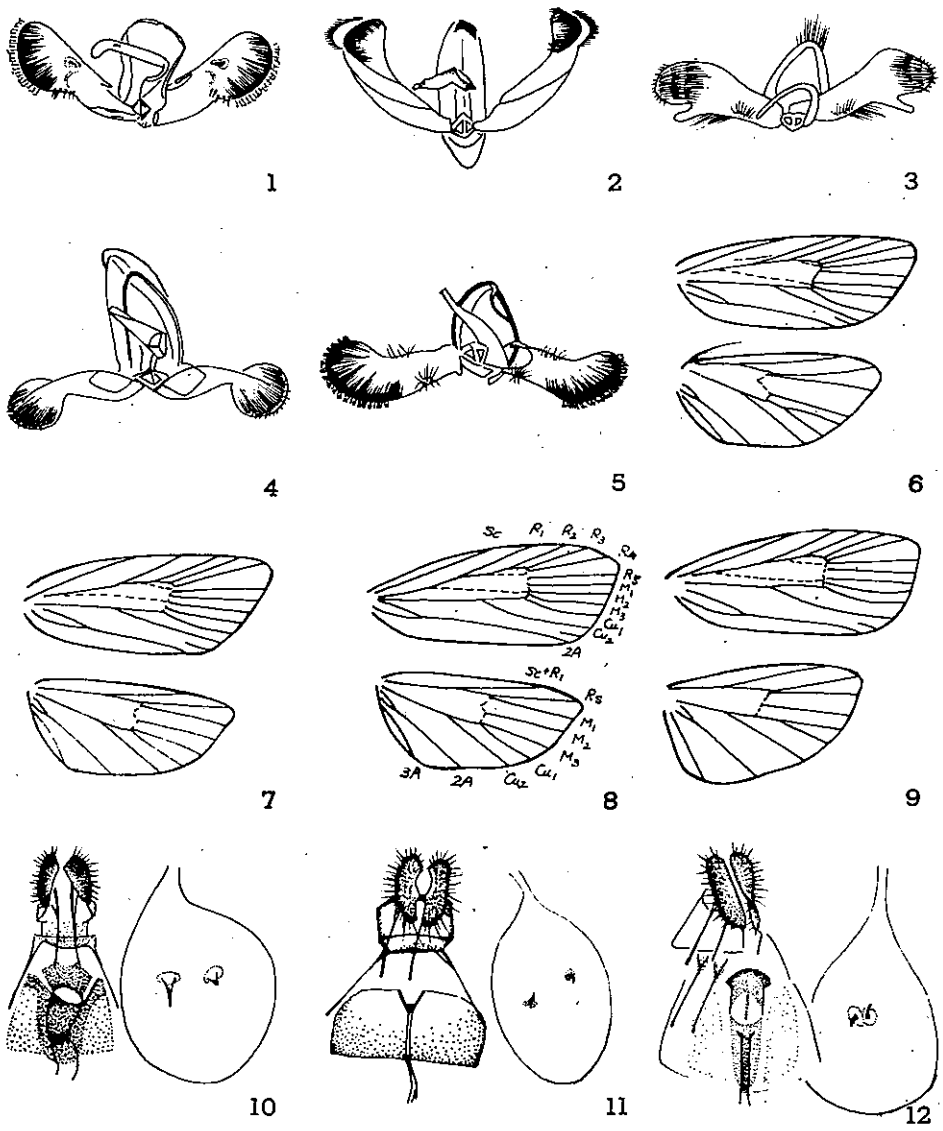
Holotype: ♂, Hangzhou, Zhejiang Province, 25 — VII — 1972, Youqiao Liu. Paratypes: 1♂2♀♀, Hangzhou, Zhejiang Province, 19～25 — VII — 1972; 1♂1♀, Lushan, Jiangxi Province, 6 — VIII — 1975, 26 — VIII — 1976; 1♀, Nanchang, Jiangxi Province, 17—VII—1975; 1♂, Fengxin, Jiangxi Province, 20—VII—1975.

Biological note: Every year, the adults emerged in July and August across the Yangze River.

Etymology: The specific name is derived from the curved valva of male genitalia.

Remarks. This new species differs from all the congeners by the curved valva of male

genitalia.



Figs. 1—12: 1—5. Male genitalia; 6—9. Wing venation; 10—12. Female genitalia. 1. 6. 10. *Grapholita curviphalla*; 2. *G. globella*; 3. 7. 11. *G. dactyla*; 4. 8. *G. globovalva*; 5. 9. 12. *Cydia curvivalva*

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中国小卷蛾族五新种记述

(鳞翅目:卷蛾科)

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作者系统研究了中国小卷蛾族标本,发现了五个新种:(1)曲茎小食心虫 *Grapholita curviphalla* Liu et Yan,因其雄性外生殖器阳茎长而端部弯曲命名,分布在四川峨眉山;(2)顶平小食心虫 *G. globella* Liu et Yan,因其雄性外生殖器的抱器顶端平截而命名,分布在吉林长白山;(3)手指小食心虫 *G. dactyla* Liu et Yan,因其雄性外生殖器的抱器腹有手指状突起而命名,分布在广东广州植物园;(4)球小食心虫 *G. globovalva* Liu et Yan,因其雄性外生殖器的抱器端呈圆球形而命名;分布在山东泰山;(5)弯瓣小卷蛾 *Cydia curvivalva* Liu et Yan,因其雄性外生殖器的抱器瓣从中部开始强烈向上弯曲而命名,分布在浙江,江西。新种的所有模式标本保存在中国科学院动物研究所。

关键词　鳞翅目　卷蛾科　小卷蛾族　新种

中图分类号　Q969.429.2