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Review of the genus *Periacma* Meyrick (Lepidoptera, Oecophoridae) from China, with descriptions of four new species

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Abstract

The species of *Periacma* Meyrick from China are reviewed. Thirty-two species are treated, including four new species (*P. latizona* sp. nov., *P. leyensis* sp. nov., *P. spinivalvula* sp. nov. and *P. rectignatha* sp. nov.). Females of four species (*P. iodesma vietnamica* Lvovsky, *P. zhouzhiensis* Wang & Zheng, *P. binchuanensis* Wang & Zheng and *P. equivalvata* Wang, Li & Liu) are described for the first time. *Periacma chengchengensis* Wang & Zheng is synonymized with *P. delegate* Meyrick, and *Periacma plumbea* Meyrick is newly recorded from China. Photographs of the adults treated here and the genital structures of the new species are provided. A distribution map of *Periacma* Meyrick in China and a key to all the Chinese species, except *P. isanensis* Moriuti et al., are given based on the male genitalia.

Keywords: *Lepidoptera*, *Oecophoridae*, *Periacma*, new species, China

Introduction

Periacma Meyrick was proposed in 1894 with *P. ferialis* Meyrick as its type species. It is characterized by having two-segmented labial palpus in the male, a dorso-proximal process of the valva in the male genitalia and developed apophysis anterioris in the female genitalia. Species of the genus are somewhat difficult to distinguish superficially; fore wing ground colour ranges from light yellow to ochreous yellow, with brown or dark brown fascia or marks. However, members of the genus can be easily differentiated by both male and female genital structures.

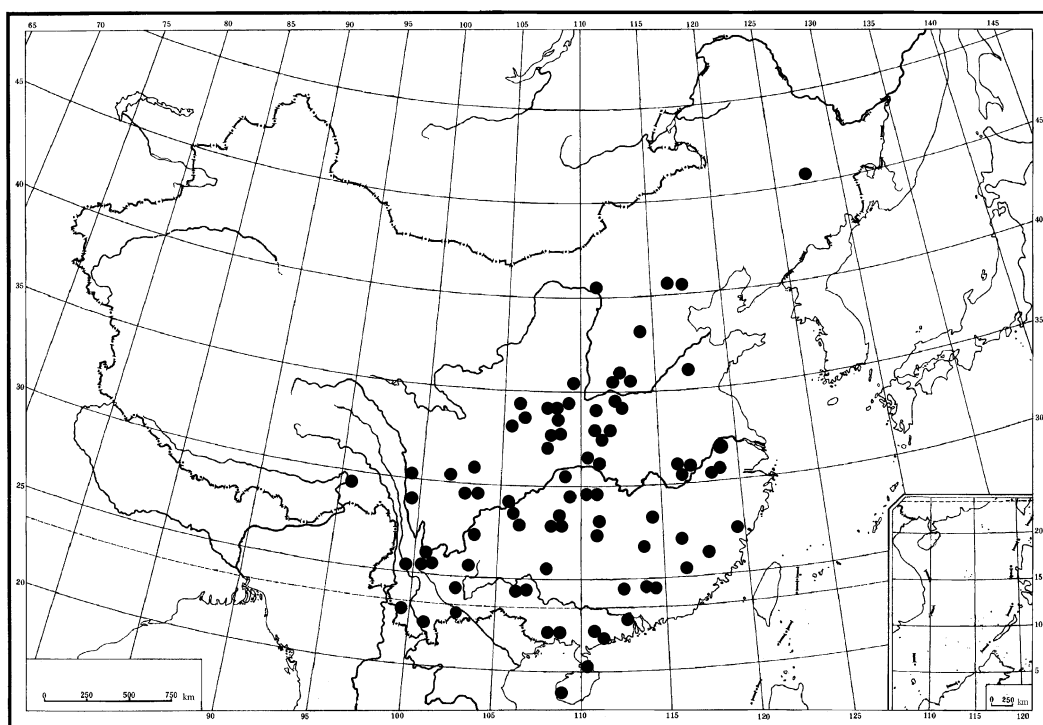
Periacma is distributed mainly in the Oriental and Palearctic Regions. Meyrick (1894, 1910, 1914, 1916, 1919, 1922, 1923, 1930, 1931, 1932, 1936, 1939) reported 24 species from India, four from Burma, one from the Chinese mainland and five from Taiwan. Moriuti et al. (1985, 1987, 1989) described 14 species from Thailand. Lvovsky (1988, 1990) described one subspecies from Vietnam and one species from Korea. Ueda and Moriuti (1996) recognized three species from Nepal. Wang et al. (1995, 1996, 2001, 2002) described 19 species from China. Including the four new species described herein, 32

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Map 1. Distribution of the genus *Periacma* Meyrick in China.

species have been recorded from China, excluding four species endemic to Taiwan. The distribution of the genus is provided in Map 1.

Since the 1990s, a few species previously included in *Periacma* Meyrick have been transferred to the related genera *Irepacma* Moriuti, Saito & Lewvanich and *Ripeacma* Moriuti, Saito & Lewvanich. To date, 72 species of the genus are known from the world. However, a few species currently placed in *Periacma* may need to be transferred to related genera, which can be achieved only after careful examination of the types.

In the present paper, we review the species that occur in China and present descriptions of new species. The study is based on the examination of *Periacma* and the related genera. As the adults are hardly distinguishable superficially in most species, and the females of some species treated here are unknown, a key to *Periacma* is given based on the male genitalia only. All the specimens we examined, unless stated otherwise, are deposited in the Insect Collection, College of Life Sciences, Nankai University, Tianjin, China.

Material and methods

Specimens examined were collected by light traps from different localities in China spanning nearly half a century. Preparation of genitalia followed the methods described by Li and Zheng (1996).

The following abbreviations are used to indicate the deposition of the specimens:

BMNH, The Natural History Museum, London, UK.

IZCAS, The Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

Systematic account

Genus *Periacma* Meyrick, 1894

Periacma Meyrick, 1894: 21; Gaede, 1939: 380; Clarke, 1963: 349; Moriuti et al. 1985: 21.
Type species: *Periacma ferialis* Meyrick, 1894, by original designation.

Diagnosis: Head with loosely appressed scales. Labial palpus recurved, thickened with appressed scales, two-segmented in male; three-segmented in female, with third segment thinner and shorter than second. Antenna filiform, about 4/5 length of fore wing; without pecten. Fore wing broad, with brown or dark brown fascia in most species; twelve veins present: R_1 arising from before middle, R_4 and R_5 stalked, R_5 reaching costa or apex; M_3 nearer to M_2 than to CuA_1 ; CuA_1 arising from angle, CuA_2 from before angle, CuP absent. Hind wing elongate-ovate; M_3 and CuA_1 connate from angle. Abdomen with tergites spined.

Male genitalia: Uncus large and usually dilated distally. Gnathos with mesal spatulate plate. Valva with a dorso-proximal process at base of costa. Sacculus developed. Aedeagus short, varied in shape; cornutus present or absent.

Female genitalia: Apophysis posterioris longer than apophysis anterioris. Signum present or absent.

Remarks: *Periacma* Meyrick is closely related to *Ripeacma* Moriuti et al. and *Irepacma* Moriuti et al. It can be separated from *Ripeacma* by the absence of the transtilla and the presence of a dorso-proximal process of the valva in the male genitalia; in *Ripeacma*, the transtilla is well developed and the valva lacks dorso-proximal process. It can be distinguished from *Irepacma* by the dorso-proximal process of the valva being shorter than half the length of the valva in the male genitalia and by the apophysis anterioris developed in the female genitalia. In *Irepacma*, the dorso-proximal process usually far exceeds half of the valva length, if present, and the apophysis anterioris is completely absent.

Key to the Chinese species of *Periacma* Meyrick based on male genitalia
(excluding *P. isanensis* Moriuti, Saito & Lewvanich)

1. Uncus somewhat trapezoidal or elongate, but not conspicuously dilated 2
Uncus with distal portion conspicuously dilated 9
2. Unucus trapezoidal 3
Uncus elongate. 4
3. Valva nearly parallel-sided from base to distal 2/3, then gradually narrowed, dorsally with a spine at apex; aedeagus with four apex-blunted processes distally (Figure 36) *spinivalvula* sp. nov.
Valva wide basally, narrow medially, dilated distally, without spine at apex; aedeagus with one pointed process distally (Figure 37) *rectignatha* sp. nov.
4. Gnathos with ventral plate pointed distally; aedeagus distally divided into two longer branches 5
Gnathos with ventral plate concave inward or rounded anteriorly 6
5. Aedeagus without process in both branches (Figure 33) *plumbea*
Aedeagus with two processes in dorsal branch and several processes in ventral branch *acutignatha*

6.	Gnathos with ventral plate concave inward anteriorly	7
	Gnathos with ventral plate rounded anteriorly	8
7.	Aedeagus with three short processes apically	<i>tridentata</i>
	Aedeagus with two long processes apically	<i>simaensis</i>
8.	Aedeagus distally produced into two large hairy parts; valva with ventral margin projected outward at about 3/5	<i>equivalvata</i>
	Aedeagus distally pointed, not divided into two parts; valva with ventral margin gently arched	<i>ferialia</i>
9.	Uncus with one or two small tooth-like processes caudally	10
	Uncus without such process	13
10.	Uncus with one small tooth-like process caudally; sacculus without distal process	<i>acriuncata</i>
	Uncus with two processes caudally; sacculus with distinct distal process	11
11.	Gnathos with anterior margin slightly concave at middle; sacculus with ventral margin smooth dorsally	<i>novella</i>
	Gnathos with anterior margin rounded; sacculus with ventral margin toothed dorsally	12
12.	Aedeagus with two pointed processes at apex	<i>sacculidens</i>
	Aedeagus with a spiniform process medially	<i>qujingensis</i>
13.	Gnathos with ventral plate spinulate in anterior portion	14
	Gnathos with ventral plate not spinulate	23
14.	Gnathos with ventral plate not roundly dilated	15
	Gnathos with ventral plate roundly dilated	17
15.	Gnathos with anterior margin concave at middle; sacculus without any process	<i>siamensis</i>
	Gnathos with anterior margin rounded; sacculus with processes distally	16
16.	Aedeagus distally produced into two processes	<i>angkhangensis</i>
	Aedeagus distally rounded, not produced into distinct processes	<i>weishana</i>
17.	Sacculus with distal process	18
	Sacculus without distal process	20
18.	Valva expanded distally; aedeagus laterally with process at about middle	19
	Valva parallel-sided in distal 3/5; aedeagus without process at middle	<i>sinica</i>
19.	Uncus with caudal margin rounded; aedeagus with several minute tooth-like spines in medial portion	<i>iodesma vienamica</i>
	Uncus with caudal margin somewhat straight; aedeagus without tooth-like spines in medial portion	<i>iodesma</i>
20.	Uncus projected caudally	21
	Uncus blunt caudally	22
21.	Gnathos with anterior margin blunt; sacculus with apex truncate	<i>absaccula</i>
	Gnathos with anterior margin rounded; sacculus with apex curved upward (Figure 35)	<i>latizona</i> sp. nov.

22. Sacculus dorsally with a small process at apex directing upward; aedeagus with basal portion narrowed (Figure 34) *leyensis* sp. nov.
Sacculus dorsally without process at apex; aedeagus with basal portion about same thickness as remainder *orthiodes*
23. Gnathos with ventral plate broad and somewhat semicircular 24
Gnathos with ventral plate narrow, extended outward laterally 27
24. Valva with dorso-proximal process short and hairy, somewhat rounded 25
Valva with dorso-proximal process long, roundly dilated distally 26
25. Sacculus distally expanded; aedeagus with three pointed, spine-shaped processes apically *immaculata*
Sacculus distally pointed; aedeagus without process apically. *delegata*
26. Sacculus with distal portion bifurcate; aedeagus irregularly triangular . . . *bifurcata*
Sacculus with distal portion gradually narrowed; aedeagus somewhat long, distally with one side dentate *tianshuiensis*
27. Costa with a digitate process at basal 1/5 *binchuanensis*
Costa without any process 28
28. Sacculus with a process near end dorsally 29
Sacculus without process dorsally 30
29. Aedeagus with a band-like process at middle, apex serrate *ziyangensis*
Aedeagus with a small process near apex, apex pointed *zhouzhiensis*
30. Gnathos with ventral plate straight anteriorly; valva with dorso-proximal process distally dilated *fengxianensis*
Gnathos with ventral plate arched anteriorly; valva with dorso-proximal process not obviously dilated distally *kangdingensis*

***Periacma orthiodes* Meyrick, 1894**

(Figure 1)

Periacma orthiodes Meyrick, 1894: 22; Gaede, 1939, 92: 382; Clarke, 1963: 361; Moriuti et al., 1985: 21; Wang and Zheng, 1995: 5.

Wing expanse: 15.0–16.0 mm.

Material examined: 3 ♂♂, 7 ♀♀, Shuangjiang (23°29'N, 99°49'E), Yunnan Province, 1–4 June 1980, coll. Fen Liu.

Distribution: China (Yunnan), Thailand, Burma.

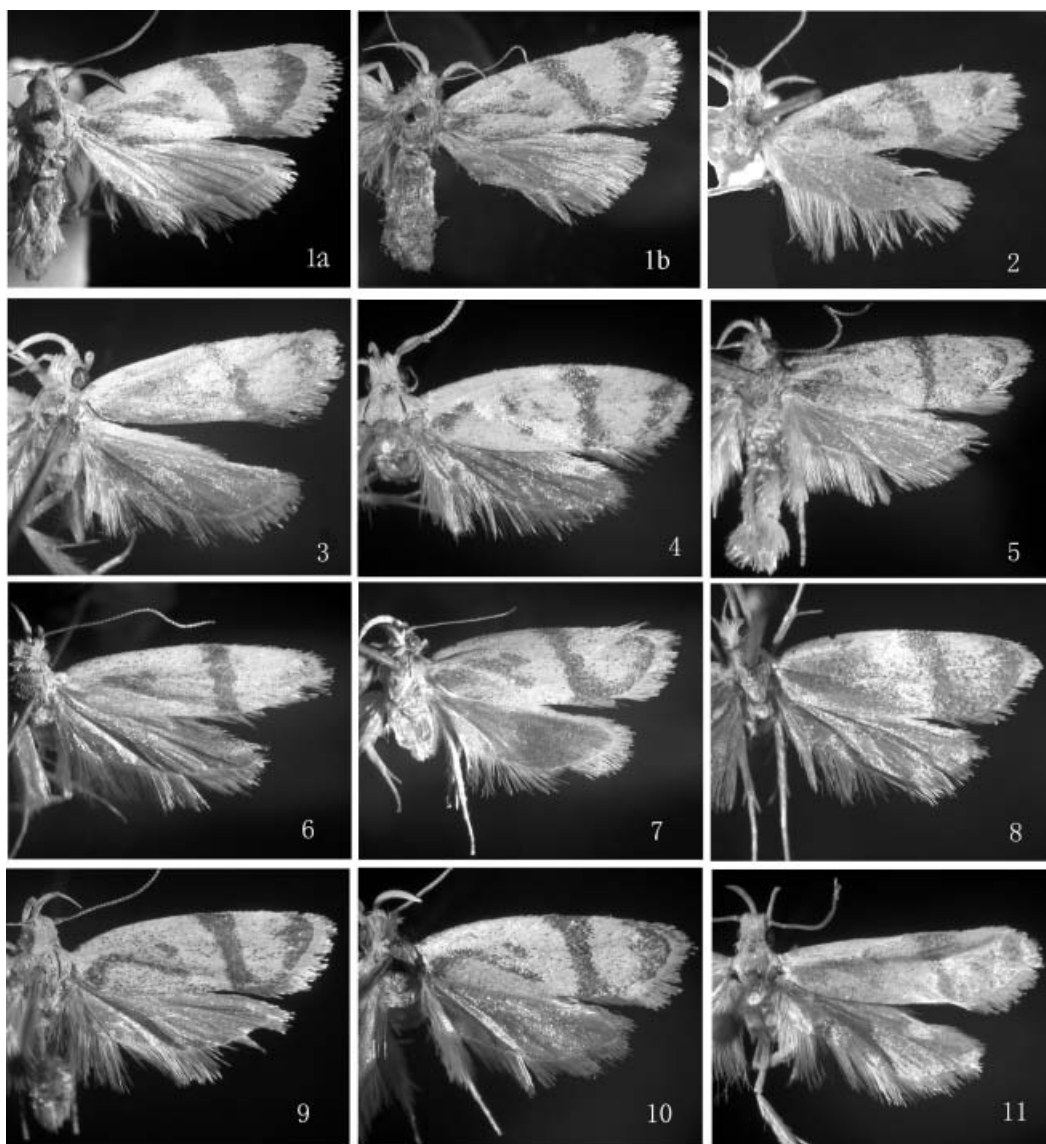
Remarks: *Periacma orthiodes* is characterized by both uncus and gnathos roundly dilated distally. It is closely related to *P. kanchanaburiensis* Moriuti et al., but distinguishable from it by the gnathos anteriorly blunt and the aedeagus with only one short small spine near apex.

***Periacma ferialis* Meyrick, 1894**

(Figure 2)

Periacma ferialis Meyrick, 1894: 21; Caradja and Meyrick, 1935: 81; Gaede, 1939: 381; Clarke, 1963: 349.

Wing expanse: 13–14.0 mm.



Figures 1–11. Adults of *Periacma* spp. (1a) *P. orthiodes* Meyrick, ♂; (1b) *P. orthiodes* Meyrick, ♀; (2) *P. ferialis* Meyrick, ♂; (3) *P. iodesma* Meyrick, ♂; (4) *P. delegata* Meyrick, ♂; (5) *P. siamensis* Moriuti, Saito & Lewvanich, ♂; (6) *P. angkhangensis* Moriuti, Saito & Lewvanich, ♂; (7) *P. iodesma vietnamica* Lvovsky, ♂; (8) *P. isanensis* Moriuti, Saito & Lewvanich, ♀; (9) *P. ziyangensis* Wang & Zheng, ♀; (10) *P. zhoushiensis* Wang & Zheng, ♂; (11) *P. tianshuiensis* Wang & Zheng, ♂.

Material examined: Lectotype: ♂(BMNH), “Koni, Shan States. /88.” Slide No. 7875.

Distribution: China (Jangsu), Burma.

Remarks: This is the type species of the genus. It is characterized by the gnathos semicircular in shape and the valva ventrally with a projection at middle.

***Periacma iodesma* Meyrick, 1910**

(Figure 3)

Periacma iodesma Meyrick, 1910: 161; Caradja and Meyrick, 1935: 81; Gaede, 1939: 381; Clarke, 1963: 357.

Wing expanse: 16.0–18.0 mm.

Material examined: 2 ♂♂, Hefei (31°52'N, 117°17'E), Anhui Province, 15 August 1978 and 11 June 1979, collector unknown.

Distribution: China (Anhui, Hunan, Jiangsu, Shanghai, Sichuan), India, Vietnam.

Remarks: *Periacma iodesma* is closely allied to *P. orthiodes* Meyrick both superficially and in genitalia. It can be differentiated from the latter by the uncus with the caudal margin nearly straight, the gnathos with the anterior margin bluntly rounded, and the aedeagus with more than two tooth-like spines in the male genitalia.

***Periacma delegata* Meyrick, 1914**

(Figure 4)

Periacma delegata Meyrick, 1914: 52; Gaede, 1939: 194; Moriuti, 1982: 205.

Periacma chengchengensis Wang & Zheng, 1995: 5. **syn. nov.**

Wing expanse: 12.0–14.0 mm.

Material examined: 3 ♂♂, 2 ♀♀, Neixiang (33°02'N, 111°50'E), Henan Province, 650 m, 12 July 1998, coll. Houhun Li; 32 ♂♂, 12 ♀♀, Huixian (35.27°N, 113.47°E), Henan Province, 780 m, 12–15 July 2002, coll. Xinpui Wang; 3 ♂♂, 4 ♀♀, Huangpu (30°32'N, 116°50'E), Anhui Province, 24 June 1965; 2 ♂♂, Xuancheng (30°57'N, 118°44'E), Anhui Province, 10 June 1979, coll. Ju Huang; 4 ♂♂, Badaling (40°22'N, 116°01'E), Beijing, 700 m, 13 July 1972; 2 ♂♂, Sanbao (40°19'N, 116°02'E), Beijing, 13 July 1972, other data unknown; 11 ♂♂, 2 ♀♀, Jixian (40°02'N, 117°24'E), Tianjin, 170 m, 20 July 2004, coll. Houhun Li et al.; 2 ♂♂, Mt. Maoer (45°16'N, 127°30'E), Heilongjiang Province, 19 August 1964; 100 ♂♂, 32 ♀♀, Jingxing (38°02'N, 114°08'E), Hebei Province, 1200 m, 23–24 July 2000, coll. Haili Yu et al.; 1 ♂, Mt. Tai (36°22'N, 117°05'E), Shandong Province, 12 July 1988; 1 ♂, 10 August 1993, 1 ♂, 20 July 1996; 1 ♂, 7 July 1987, Chengcheng (35°11'N, 109°56'E), Shaanxi Province, 1000 m, coll. Houhun Li; 2 ♀♀, 26 June 1993, Yangling (34°17'N, 108°04'E), Shaanxi Province, 450 m, coll. Houhun Li.

Distribution: China (Anhui, Beijing, Hebei, Henan, Heilongjiang, Shaanxi, Shangdong, Taiwan, Tianjin), Japan, Korea.

Remarks: The male genitalia of this species are distinguished by the gnathos somewhat large subtrapezoidal, and blunt apically, and the aedeagus simple, without any ornamentation. The female genitalia are distinguished by the ductus bursae extremely long and not distinctly separated from corpus bursae. Species *P. chengchenngensis* Wang & Zheng, collected from Shaanxi Province, varies only slightly from this species by sacculus a little longer and with a process somewhat pointed at apex dorsally. We here synonymize *P. chengchenngensis* Wang & Zheng on the basis of a careful examination of many specimens.

***Periacma siamensis* Moriuti, Saito & Lewvanich, 1985**

(Figure 5)

Periacma siamensis Moriuti, Saito & Lewvanich, 1985: 25; Wang and Li, 2002: 570.

Wing expanse: 13.0–15.0 mm.

Material examined: 3 ♂♂, 1 ♀, Chishui (28°34'N, 105°42'E), Guizhou Province, 29–30 May 2000, coll. Yanli Du; 4 ♂♂, 4 ♀♀, Xishui (28°19'N, 106°12'E), Guizhou Province, 31 May–3 June 2000, coll. Yanli Du; 4 ♂♂, 3 ♀♀, Shangsi (22°09'N, 107°58'E), Guangxi Zhuangzu Autonomous Region, 550 m, 3 April 2002, coll. Shulian Hao & Huaijun Xue; 1 ♂, Jinxiu (28°34'N, 105°42'E), 550 m, 13 April 2002, coll. Shulian Hao & Huaijun Xue; 14 ♂♂, 6 ♀♀, Xinhua (27°44'N, 111°18'E), Hunan Province, 3–8 August 2004, coll. Yunli Xiao; 2 ♂♂, 4 ♀♀, Xinyi (22°21'N, 110°56'E), Guangdong Province, 7–13 August 2003.

Distribution: China (Guangxi, Guizhou), Thailand.

Remarks: This species resembles *P. orthiodes*, but can be distinguished from the latter by the male genitalia with the gnathos slightly concave at middle of the anterior margin and the sacculus apically rounded.

***Periacma angkhangensis* Moriuti, Saito & Lewvanich, 1985**

(Figure 6)

Periacma angkhangensis Moriuti, Saito & Lewvanich, 1985: 27; Wang and Li, 2002: 570.

Wing expanse: 15.0 mm.

Material examined: 1 ♂, Mt. Weishan (25°14'N, 100°18'E), Yunnan Province, 20 July 2001, coll. Houhun Li and Xipu Wang.

Distribution: China (Yunnan), Thailand.

Remarks: This species is characterized by the gnathos narrowly band-shaped, forming a somewhat circle, and the valva with costa and ventral margin nearly parallel-sided in the male genitalia.

***Periacma iodesma vietnamica* Lvovsky, 1988**

(Figures 7 and 38)

Periacma iodesma vietnamica Lvovsky, 1988: 127; Wang and Li, 2001: 276.

Wing expanse: 15.0–16.0 mm.

Female genitalia (Figure 38): Papilla analis caudally rounded, setose. Apophysis posterioris more than three times length of apophysis anterioris. Lamella postvaginalis caudally rounded, spinulate. Ostium bursae laterally with small, sclerotized plate. Ductus bursae almost as long as corpus bursae; signum small, anteriorly with a minute curved thorn.

Material examined: 1 ♂, Mengla (21°29'N, 101°33'E), Yunnan Province, 20 April 1982; 1 ♂, 2 ♀♀, Fangcheng (21°37'N, 108°20'E), Guangxi Zhuangzu Autonomous Region, 370 m, 9 April 2002, coll. Shulian Hao and Huaijun Xue; 1 ♂, Shanghang (25°03'N, 116°24'E), Fujian Province, 600 m, 31 May 2004, coll. Haili Yu.

Distribution: China (Guangxi, Yunnan), Vietnam.

Remarks: The slight differences between *Periacma iodesma vietnamica* Meyrick and *P. iodesma* Meyrick lie in: uncus rounded caudally, gnathos roundly protruded forward and aedeagus with more tooth-like spines throughout in the former subspecies; while uncus straight caudally, gnathos bluntly rounded anteriorly and aedeagus with fewer tooth-like spines in the nominate subspecies.

The female of this species is described for the first time.

***Periacma isanensis* Moriuti, Saito & Lewvanich, 1989**

(Figure 8)

Periacma isanensis Moriuti, Saito & Lewvanich, 1989: 127; Wang et al. 2001: 276.

Wing expanse: 14.0–16.0 mm.

Material examined: 3 ♀♀, Mengla (21°29'N, 101°33'E), Yunnan Province, 870 m, 22 May 1962, 1 ♀, 15 May 1974, coll. Yao Zhou and Feng Yuan, 1 ♀, Shilin (24°41'N, 103°22'E), Yunnan Province, 14 July 1974, coll. Yao Zhou and Feng Yuan.

Distribution: China (Yunnan), Thailand.

Remarks: This species is similar to *P. orthiodes* Meyrick and *P. kunai* Moriuti et al. in appearance. It can be separated easily from them by the presence of two signa rather than one in the corpus bursae.

***Periacma ziyangensis* Wang & Zheng, 1995**

(Figure 9)

Periacma ziyangensis Wang & Zheng, 1995: 7.

Wing expanse: 15.0–17.0 mm.

Material examined: Holotype: ♂, Ziyang (32°33'N, 108°32'E), Shaanxi Province, 350 m, 21 May 1994, coll. Jin Zhou. Allotype: ♀, 22 May 1994, same location data as holotype.

Additional material: 1 ♂, 3 ♀♀, Ziyang, Shaanxi Province, 7 June 1973, coll. Feng Yuan and Chou Tian; 1 ♂, Ankang (32°41'N, 109°01'E), Shaanxi Province, 800 m, 5 July 2003, coll. Haili Yu; 10 ♂♂, 11 ♀♀, Mt. Emei (29°32'N, 103°19'E), Sichuan Province, 24 May–12 June 1979; 46 ♂♂, 18 ♀♀, Chishui (28°34'N, 105°42'E), Guizhou Province, 390–500 m, 27–31 May 2000, coll. Yanli Du.

Distribution: China (Beijing, Heilongjiang, Guizhou, Shaanxi, Sichuan)

Remarks: This species is characterized by the gnathos with the ventral plate somewhat axe-like, the sacculus roundly projected near distal end, and the aedeagus with a narrow band at middle in the male genitalia; and the corpus bursae without signum but with two slightly sclerotized areas in the female genitalia.

***Periacma zhouzhiensis* Wang & Zheng, 1995**

(Figures 10 and 39)

Periacma zhouzhiensis Wang & Zheng, 1995: 9.

Wing expanse: 14.0–16.0 mm.

Female genitalia (Figure 39): Papilla analis caudally rounded. Apophysis posterioris thicker and longer than apophysis anterioris. Lamella postvaginalis wrinkly, caudally with median 1/3 protruded backward. Ostium bursae small. Antrum anteriorly produced into two triangular processes; caudal margin rounded, concave at middle. Ductus bursae a little longer than corpus bursae. Corpus bursae elliptical; signum a minute thorn.

Material examined: Holotype: ♂, Zhouzhi (34°10'N, 108°12'E), Shaanxi Province, 1000 m, 13 July 1987, coll. Houhun Li.

Additional material: 3 ♂♂, Neixiang (33°02'N, 111°50'E), Henan Province, 1350 m, 13 July 1998, coll. Houhun Li; 2 ♂♂, Xixia (33°18'N, 111°29'E), Henan Province, 890 m, 16–17 July 1998, coll. Houhun Li; 1 ♂, Lushi (34°03'N, 111°02'E), Henan Province, 650 m, 12 July 1998, coll. Dandan Zhang; 1 ♂, 2 ♀♀, Dengfeng (34°27'N, 113.02°E), Henan Province, 700–800 m, 9–15 June 2000, coll. Haili Yu; 1 ♂, Jiyuan (35°04'N,

112°35'E), Henan Province, 700 m, 7 June 2000, coll. Haili Yu; 2 ♂♂, 4 ♀♀, Huixian (35°27'N, 113°47'E), Henan Province, 780 m, 12–13 July 2002, coll. Xipu Wang; 2 ♂♂, Songxian (34°28'N, 112°55'E), Henan Province, 580 m, 18–20 July 2002, coll. Xipu Wang; 1 ♂, 1 ♀, Shennongjia (31°45'N, 110°40'E), Hubei Province, 950 m, 3–4 July 1980, collector unknown; 1 ♂, 1 ♀, Shennongjia, Hubei Province, 1100–1200 m, 17–19 July 2003.

Distribution: China (Henan, Hubei, Shaanxi).

Remarks: This species is distinguished by the gnathos more or less T-shaped, the valva with distal two-thirds nearly parallel-sided and the dorso-proximal process distally bulbous in the male genitalia.

The female of this species is described for the first time.

***Periacma tianshuiensis* Wang & Zheng, 1995**

(Figure 11)

Periacma tianshuiensis Wang & Zheng, 1995: 9.

Wing expanse: 12.0–18.0 mm.

Material examined: Holotype: ♂, Fengxian (33°55'N, 106°31'E), Shaanxi Province, 1600 m, 9 July 1988, coll. Houhun Li. Allotype: ♀, Tianshui (34°37'N, 105°42'E), Gansu Province, 11 August 1988, coll. Xingyu Wu. Paratypes: 1 ♂, 10 July 1998, same locality data as holotype; 3 ♂♂, 1 ♀, 9–10 July 1988, same locality data as allotype.

Distribution: China (Gansu, Shaanxi).

Remarks: This species is characterized by the sacculus not curved. It is related to *P. orthiodes*, but can be distinguished by the gnathos apically blunt and the sacculus much longer in the male genitalia; and the signum absent in the female genitalia.

***Periacma fengxianensis* Wang & Zheng, 1995**

(Figure 12)

Periacma fengxianensis Wang & Zheng, 1995: 12.

Wing expanse: male 12.0–14.0 mm.

Material examined: Holotype: ♂, Zhouzhi (34°10'N, 108°12'E), Shaanxi Province, 1750 m, 20 July 1987, coll. Houhun Li. Allotype: ♀, Fengxian (33°55'N, 106°31'E), Shaanxi Province, 1600 m, 13 July 1988, coll. Houhun Li. Paratypes: 1 ♂, 2 ♀♀, 16–20 July 1987, other same data as holotype; 1 ♂, 14 July 1988, same locality data as allotype.

Additional material: 2 ♂♂, Ningshan (33°19'N, 108°20'E), Shaanxi Province, 3 July 1995, coll. Hongyan Qin.

Distribution: China (Shaanxi).

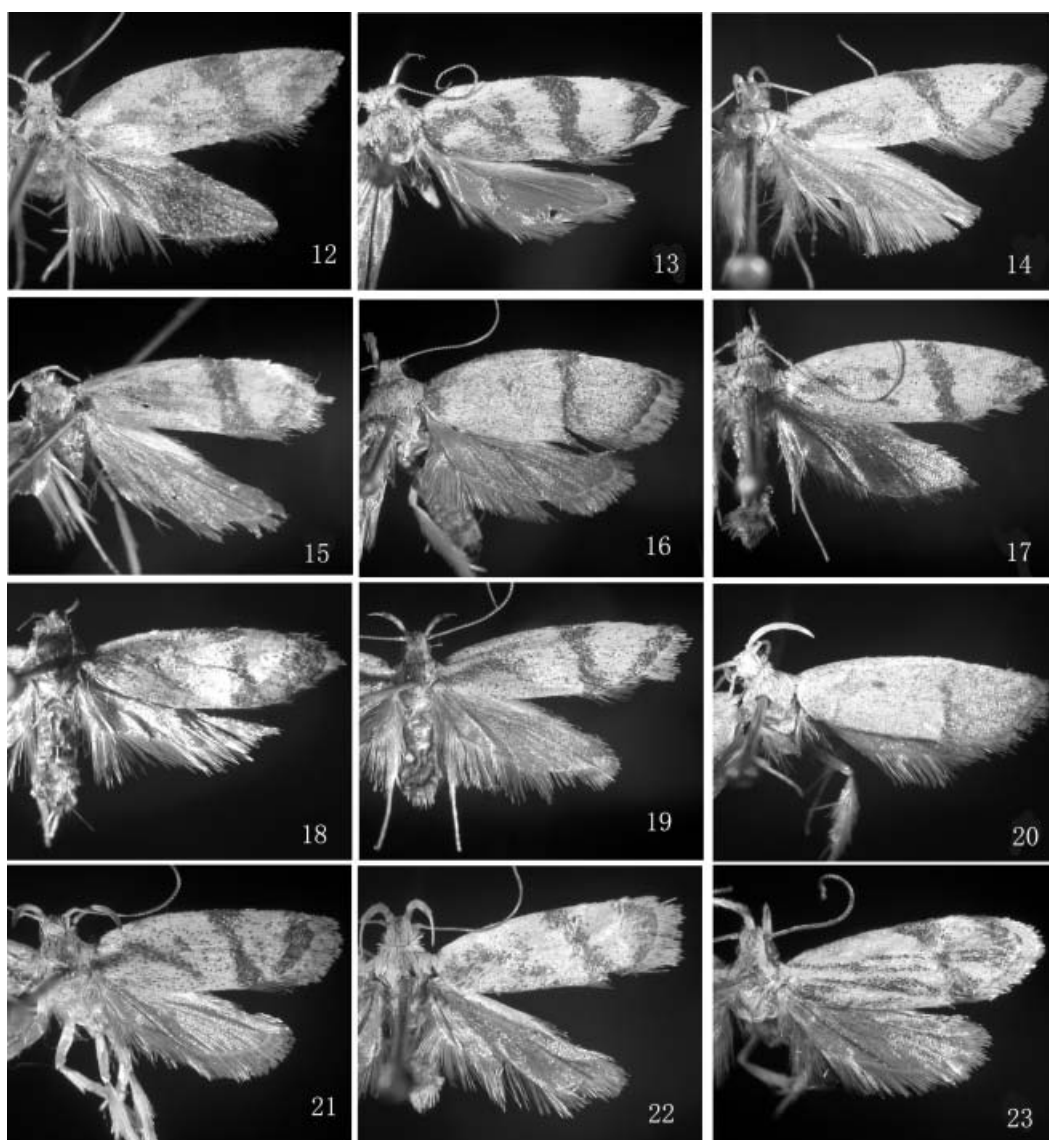
Remarks: This species is characterized by the gnathos with the ventral margin straight and the aedeagus with the distal portion dentate at both sides in the male genitalia; and the corpus bursae with two differently shaped signa in the female genitalia.

***Periacma binchuanensis* Wang & Zheng, 1996**

(Figures 13 and 40)

Periacma binchuanensis Wang & Zheng, 1996: 32.

Wing expanse: 17.0–18.0 mm.



Figures 12–23. Adults of *Periacma* spp. (12) *P. fengxianensis* Wang & Zheng, ♂; (13) *P. binchuanensis* Wang & Zheng, ♀; (14) *P. simaoensis* Li, Wang & Yan, ♂; (15) *P. qujingensis* Wang, Li & Liu, ♂; (16) *P. absaccula* Wang, Li & Liu, ♀; (17) *P. novella* Wang, Li & Liu, ♂; (18) *P. sacculidens* Wang, Li & Liu, ♀; (19) *P. tridentata* Wang, Li & Liu, ♀; (20) *P. acriuncta* Wang, Li & Liu, ♂; (21) *P. equivalvata* Wang, Li & Liu, ♂; (22) *P. sinica* Wang, Li & Liu, ♀; (23) *P. acutignatha* Wang, Li & Liu, ♂.

Female genitalia (Figure 40): Papilla analis relatively small. Apophysis posterioris about four times length of apophysis anterioris. Lamella postvaginalis densely spinulate. Antrum dorso-laterally extended outward. Ductus bursae thick, almost as long as corpus bursae. Corpus bursae long oval, without signum.

Material examined: Holotype: ♂, Binchuan (25°49'N, 100°32'E), Yunnan Province, 2300 m, 13 June 1982, coll. Ruxing Ma.

Additional material: 1 ♀, Binchuan, Yunnan Province, 1900, 22 June 1982, collector unknown; 1 ♀, Baoshan (25°08'N, 99°10'E), Yunnan Province, 31 May 1951, collector unknown.

Distribution: China (Yunnan).

Remarks: This species can be easily separated from other species of the genus by the digitate process at basal 1/5 of the costa of the valva.

The female genitalia of this species are described for the first time.

***Periacma simaoensis* Li, Wang & Yan, 1996**

(Figure 14)

Periacma simaoensis Li, Wang & Yan, 1996: 205.

Wing expanse: 16.5 mm.

Material examined: Holotype: ♂, Simao (22°48'N, 100°58'E), Yunnan Province, 1325 m, 24 April 1995, coll. Guangyun Yan.

Distribution: China (Yunnan).

Remarks: This species resembles *P. fengxianensis*, but can be distinguished from the latter by the uncus not dilated apically, the sacculus heavily sclerotized distally, and the aedeagus with distal 1/6 divided into two parts.

***Periacma qujingensis* Wang, Li & Liu, 2001**

(Figure 15)

Periacma qujingensis Wang, Li & Liu, 2001: 266.

Wing expanse: 15.0–16.5 mm.

Material examined: Holotype: ♂, Qujing (25°30'N, 103°48'E), Yunnan Province, 9 July 1982. Paratypes: 1 ♂, 1 ♀, same data as holotype; 1 ♂, 1 ♀, Jinping (22°47'N, 103°12'E), Yunnan Province, 22 May 1956, coll. Keren Huang (IZCAS).

Distribution: China (Yunnan)

Remarks: This species is similar to *P. ziyangensis* and *P. changkhianensis*. It can be separated from *P. ziyangensis* by the sacculus with a sclerotized plate at middle of the ventral margin and a small process near distal process in the male genitalia; and the signum present in the female genitalia. It can be distinguished from *P. changkhianensis* by the female lamella postvaginalis with the posterior margin not concave at middle but blunt, and the anterior margin heavily sclerotized.

***Periacma absacula* Wang, Li & Liu, 2001**

(Figure 16)

Periacma absacula Wang, Li & Liu, 2001: 268.

Wing expanse: 20.0–25.0 mm.

Material examined: Holotype: ♂, Mt. Qingcheng (30°58'N, 103°31'E), Sichuan Province, 19 June 1980. Paratypes: 1 ♂, Jianfengling (18°42'N, 108°47'E), Hainan Province, 25 March 1982, coll. Lingqing Chen (IZCAS); 1 ♂, Mt. Huang (30°08'N, 118°10'E), Anhui Province, 1 June 1987; 7 ♀♀, 19–21 June 1980, same locality data as holotype (2 ♀♀, in IZCAS).

Additional material: 1 ♀, Mt. Huang, Anhui Province, 20 May 1986.

Distribution: China (Anhui, Hainan, Sichuan).

Remarks: This species is characterized by the uncus distally rhomboid and the sacculus apically truncate in the male genitalia; and the lamella antevaginalis laterally forming two large plates in the female genitalia.

***Periacma novella* Wang, Li & Liu, 2001**

(Figure 17)

Periacma novella Wang, Li & Liu, 2001: 269.

Wing expanse: 15.0–18.0 mm.

Material examined: Holotype: ♂, Mt. Wuyi (26°54'N, 116°42'E), Fujian Province, 2 July 1982, coll. Fan Jiang. Paratypes: 1 ♀, 10 July 1982, coll. Kechi Zhang, same locality as holotype; 1 ♂, Sangang (27°45'N, 117°40'E), Fujian Province, 14 June 1981, coll. Shicheng Qi (IZCAS).

Additional material: 2 ♂♂, Lianzhou (24°48'N, 112°23'E), Guangdong Province, 650 m, 21–22 June 2004, coll. Dandan Zhang.

Distribution: China (Fujian), Guangdong.

Remarks: This species is characterized by the uncus posteriorly with two short tooth-like spines and the sacculus dorsally with a process at apex.

***Periacma sacculidens* Wang, Li & Liu, 2001**

(Figure 18)

Periacma sacculidens Wang, Li & Liu, 2001: 270.

Wing expanse: 15.0–16.0 mm.

Material examined: Holotype: ♂, Daguan (27°44'N, 103°55'E), Yunnan Province, 1250 m, 5 July 1982, coll. Zhengjun Luo. Paratypes: 8 ♂♂, 14 ♀♀, same data as holotype (2 ♂♂, 2 ♀♀, in IZCAS).

Additional material: 1 ♂, 2 ♀♀, Daguan, Yunnan Province, 1250 m, 5 July 1982, coll. Zhengjun Luo.

Distribution: China (Yunnan).

Remarks: This species is distinguished by the sacculus with the ventral margin dentate dorsally and the aedeagus with two spine-shaped processes apically.

***Periacma tridentata* Wang, Li & Liu, 2001**

(Figure 19)

Periacma tridentata Wang, Li & Liu, 2001: 271.

Wing expanse: 15.0–18.0 mm.

Material examined: Holotype: ♂, Mt. Qingcheng (30°58'N, 103°31'E), Sichuan Province, 29 May 1979. Paratypes: 4 ♂♂, 2 ♀♀, 22 May–3 June 1979, same locality as holotype (1 ♂, 1 ♀, in IZCAS).

Additional material: 1 ♂, Mt. Fanjing (27°55'N, 108°41'E), Guizhou Province, 1390 m, 28 May 2002, coll. Xipu Wang; 1 ♂, 2 ♀♀, Mt. Wuyi (26°54'N, 116°42'E), 740 m, 17 May 2004, coll. Haili Yu.

Distribution: China (Fujian, Guizhou, Sichuan).

Remarks: This species is characterized by the gnathos with ventral plate spined along posterior margin and the aedeagus having three pointed processes apically in the male genitalia.

***Periacma acriuncta* Wang, Li & Liu, 2001**

(Figure 20)

Periacma acriuncta Wang, Li & Liu, 2001: 272.

Wing expanse: 17.0–19.0 mm.

Material examined: Holotype: ♂, Mt. Qingchen (30°58'N, 103°31'E), Sichuan Province, 11 July 1980.

Additional material: 1 ♂, Xianfeng (29°40'N, 109°08'E), Hubei Province, 1280 m, 22 July 1999, coll. Houhun Li et al.

Distribution: China, Hubei (Sichuan).

Remarks: This species is distinguished by the uncus with a pointed process at the apex, the valva gradually narrowed from the base to the apex, and the sacculus without a distinct distal process.

***Periacma equivalvata* Wang, Li & Liu, 2001**

(Figures 21 and 41)

Periacma equivalvata Wang, Li & Liu, 2001: 273.

Wing expanse: 15.0–16.0 mm.

Female genitalia (Figure 41): Papilla analis bluntly rounded caudally, with strong setae. Apophysis posterioris about three times as long as apophysis anterioris. Lamella postvaginalis with caudal margin concave at middle, forming two rounded processes. Ductus bursae well developed, shorter than corpus bursae. Corpus bursae irregularly oval; signum minute, with a tiny anterior spine.

Material examined: Holotype: ♂, Mt. Jiulian (24°38'N, 114°33'E), Jiangxi Province, 24 May 1977.

Additional material: 1 ♂, 1 ♀, 22 May 1977, same locality data as holotype; 1 ♀, Guangzhou (23°08'N, 113°14'E), Guangdong Province, 1 May 1978.

Distribution: China (Guangdong, Jiangxi).

Remarks: This species can be separated from other members of the genus by the gnathos nearly annular, the valva nearly parallel-sided from the base to the apex, and the aedeagus with distal portion produced into two large, densely spined processes.

The female genitalia of this species are described for the first time.

***Periacma sinica* Wang, Li & Liu, 2001**

(Figure 22)

Periacma sinica Wang, Li & Liu, 2001: 274.

Wing expanse: 16.0–19.5 mm.

Material examined: Holotype: ♂, Mt. Jiulianshan (24°38'N, 114°33'E), Jiangxi Province, 21. May 1977. Paratypes: 2 ♂♂, 1 ♀, 21–24 May 1977, same locality data as holotype; 1 ♂, Guangzhou (23°08'N, 113°14'E), Guangdong Province, 17 August 1968 (IZCAS); 1 ♂, 1 ♀, Shaxian (26°24'N, 117°46'E), Fujian Province, 24 August 1979; 1 ♂, Yichun (28°23'N, 114°47'E), Jiangxi Province, 11 June 1978; 2 ♂♂, Mt. Jinggangshan (26°33'N, 114°10'E), Jiangxi Province, 19–23 June 1978; 8 ♂♂, 17 ♀♀, Jianfengling (18°42'N, 108°47'E), Hainan Province, 7–21 May 1978 (3 ♂♂, 6 ♀♀, in IZCAS).

Additional material: 1 ♂, Mt. Jinggang, Jiangxi Province, 23 June 1978.

Distribution: China (Fujian, Guangdong, Hainan, Jiangxi)

Remarks: This species is allied to *P. iodesma*, but can be separated from the latter by the distal saccular process without the dorsal process near the base, and the aedeagus distally without teeth at one side and lacking lateral process in the male genitalia.

***Periacma acutignatha* Wang, Li & Liu, 2001**

(Figure 23)

Periacma acutignatha Wang, Li & Liu, 2001: 275.

Wing expanse: 12.5–14.5 mm.

Material examined: Holotype: ♂, Neixiang (33°02'N, 111°50'E), Henan Province, 650 m, 12 July 1998, coll. Houhun Li. Paratypes: 4 ♂♂, 3 ♀♀, 10–12 July 1998, same locality data as holotype (1 ♂, 1 ♀, in IZCAS).

Distribution: China (Henan).

Remarks: This species is related to *P. erawanensis*, but can be separated by the shape of the fore wing maculation, and the aedeagus with several sclerotized tooth-like distal spines in the male genitalia.

***Periacma weishana* Wang & Li, 2002**

(Figure 24)

Periacma weishana Wang, Li & Liu, 2002: 565.

Wing expanse: 13.0–15.0 mm.

Material examined: Holotype: ♂, Mt. Weishan (25°14'N, 100°18'E), Yunnan Province, 20 July 2001, coll. Houhun Li and Xipu Wang. Paratypes: 15 ♂♂, 11 ♀♀, 20–21 July 2001, same locality data as holotype.

Additional material: 1 ♀, same data as holotype.

Distribution: China (Yunnan).

Remarks: This species can be separated from other species of the genus by its gnathos with a row of tip-rounded strong spines near the ventral margin, its sacculus rounded distally; and its lamella antevaginalis somewhat square-shaped.

***Periacma kangdingensis* Wang & Li, 2002**

(Figure 25)

Periacma kangdingensis Wang, Li & Liu, 2002: 566.

Wing expanse: 16.0–18.0 mm.

Material examined: Holotype: ♂, Kangding (30°04'N, 101°57'E), Sichuan Province, 8 July 2001, coll. Houhun Li and Xipu Wang. Paratype: 1 ♀, same data as holotype.

Additional material: 7 ♀♀, same data as holotype.

Distribution: China (Sichuan).

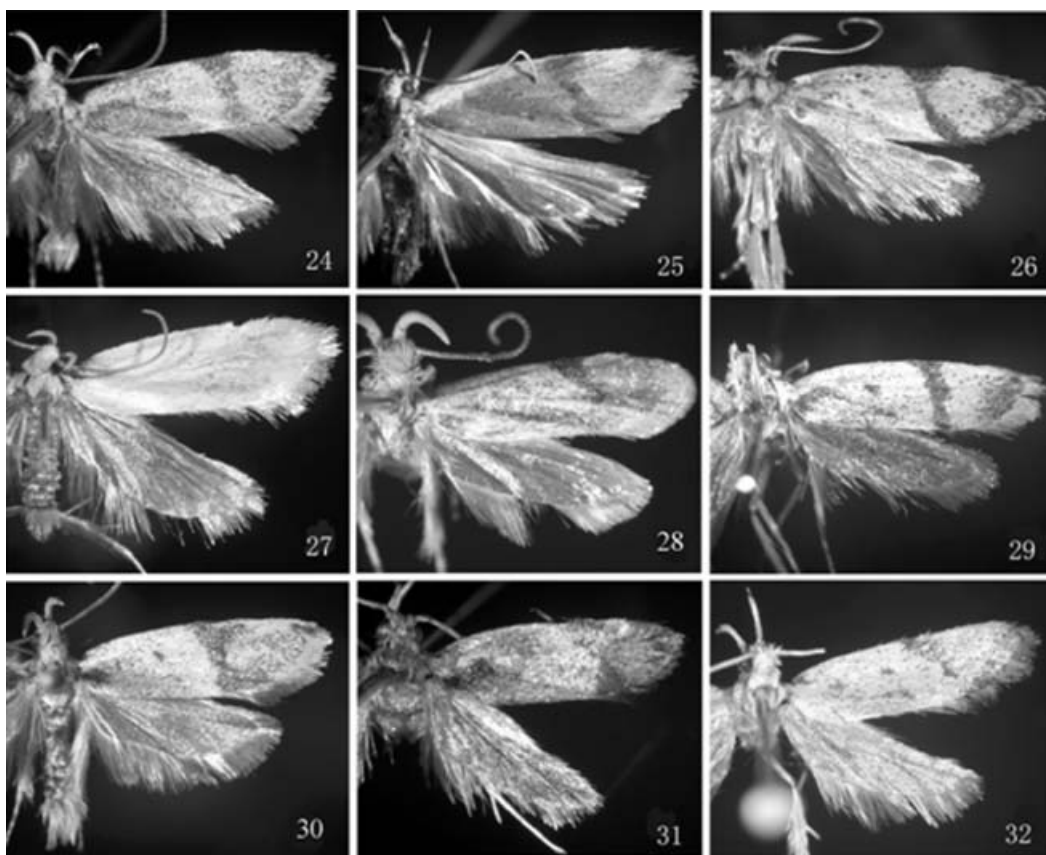
Remarks: This species is distinguished by the uncus large and blunt posteriorly, and the sacculus elongate, thin, and pointed distally in the male genitalia.

***Periacma bifurcata* Wang & Li, 2002**

(Figure 26)

Periacma bifurcata Wang, Li & Liu, 2002: 568.

Wing expanse: 13.5 mm.



Figures 24–32. Adults of *Periacma* spp. (24) *P. weishana* Wang & Li, ♂; (25) *P. kangdingensis* Wang & Li, ♀; (26) *P. bifurcata* Wang & Li, ♂; (27) *P. immaculata* Wang & Li, ♂; (28) *P. plumbea* Meyrick, ♂; (29) *P. leyensis* Wang & Li, sp. n., ♂; (30) *P. latizona* Wang & Li, sp. n., ♂; (31) *P. spinivalvula* Wang & Li, sp. n., ♂; (32) *P. rectignatha* Wang & Li, sp. n., ♂.

Material examined: Holotype: ♂, Jiangkou (27°41'N, 108°50'E), Guizhou Province, 600 m, 28 July 2001, coll. Houhun Li and Xinpu Wang. Paratype: 1 ♂, Mt. Fanjing (27°55'N, 108°41'E), Guizhou Province, 2100 m, 31 July 2001, same collector as holotype.

Distribution: China (Guizhou).

Remarks: This species can be separated from other species of the genus by its gnathos being semi-annular and its succulus with the distal process bifurcate.

***Periacma immaculata* Wang & Li, 2002**

(Figure 27)

Periacma immaculata Wang, Li & Liu, 2002: 569.

Wing expanse: 17.0 mm.

Material examined: Holotype: ♂, Xiangcheng (28°55'N, 99°47'E), Sichuan Province, 2800 m, 13 July 2001, coll. Houhun Li and Xinpu Wang. Paratype: 1 ♂, Batang (30°00'N, 99°09'E), Sichuan Province, 2500 m, 11 July 2001, same collector as holotype.

Distribution: China (Sichuan).

Remarks: This species is characterized by the uniform orange color of the fore wing lacking any maculation.

***Periacma plumbea* Meyrick, 1919** New record for China

(Figures 28, 33 and 42)

Periacma plumbea Meyrick, 1919: 238.

Redescription: Wing expanse 11.0–12.0 mm. Head ochreous yellow. Labial palpus ochreous yellow except second segment whitish on dorsal surface. Antenna pale orange yellow on ventral surface, brown on dorsal surface. Thorax and tegula ochreous yellow mixed with ochreous brown. Fore wing ochreous yellow, with ochreous brown scales throughout, somewhat erect and denser in distal third; with three distinct tufts of dark brown scales: one at middle of cell, other two placed one above another near end of cell; costa with a triangular dark brown spot just beyond middle; dorsum with a dark brown spot at base; elongate streak from near base extending along fold; cilia ochreous yellow tinged with grayish brown. Hind wing and cilia deep gray. Fore and mid legs ochreous brown, with dark brown spots; hind leg grayish yellow, with dark brown spots on tarsi.

Male genitalia (Figure 33): Uncus elongate, somewhat narrowly contracted medially, rounded at apex. Gnathos longer than uncus, curved, heavily sclerotized, pointed apically. Valva narrow, nearly same width from base to apex, rounded at apex, with a row of large setae from near base and costa obliquely extending to 2/5 of dorsum; costa concave, with an elongate projection beyond middle; dorso-proximal process with long hairs distally. Saccus somewhat broad triangular, about half as long as costa, apically produced to a hooked process directing upward. Saccus triangular. Aedeagus strong, divided into two branches from middle: ventral one strong and curved downward; dorsal one thin, slightly arched, pointed distally.

Female genitalia (Figure 42): Papilla analis triangular, margined with long setae. Apophysis posterioris about 2.5 times length of apophysis anterioris. Lamella postvaginalis wide and spiculate; lamella antevaginalis protruding laterally. Ductus bursae short, about half length of corpus bursae. Corpus bursae large, elongate ovate; signum small, irregularly rounded.

Material examined: 7 ♂♂, 8 ♀♀, Xinhua (27°44'N, 111°18'E), Hunan Province, 10–11 August 2004, coll. Yunli Xiao.

Distribution: China (Hunan), India.

Remarks: This species is closely related to *P. erawanensis*, but can be distinguished by the somewhat finger-like gnathos, the valva not expanded distally, and the aedeagus divided into two distal processes. In the latter species, the gnathos is triangularly shaped, the valva is medially expanded and the aedeagus bears three distal processes.

This species is reported from China for the first time.

Description of new species

***Periacma leyensis* Wang & Li, sp. nov.**

(Figures 29, 34 and 43)

Holotype: ♂, China: Leye (24°47'N, 106°34'E), Guangxi Zhuangzu Autonomous Region, 1160 m, 26 July 2004, coll. Jiasheng Xu, genitalia slide No. W04091.

Paratype: 1 ♀, same data as holotype.

Description: Wing expanse 11.0–12.0 mm. Head whitish yellow. Labial palpus mostly ochreous in male, whitish yellow in female; male second segment dorsally with dark brown scales, forming a somewhat longitudinal dark line in distal 3/5; female second segment with dark brown scales near end, forming a dark ring, third segment about 3/5 as long as second, long and thin, pointed apically. Antenna mostly brown. Thorax, tegula, and fore wing light yellow, with scattered brown scales throughout. Fore wing lanceolate (Figure 29); apex rounded; termen gently oblique; dark brown blotch extending from base of posterior margin obliquely upward to base of cell at middle, forming a somewhat arched band; brown spot at middle of cell and at 3/5 of fold; brown fascia from distal 1/3 of costa extending outward to before tornus; apex with large brown patch; cilia whitish yellow, gray around tornus. Hind wing and cilia gray. Legs light grayish white, tibiae and tarsi with brown speckles; spurs light ochreous yellow.

Male genitalia (Figure 34): Uncus narrow in basal half, parallel-sided, laterally with strong setae near base; distal half roundly dilated. Gnathos with lateral arm somewhat triangular in shape, about 1/2 length of ventral plate; ventral plate with posterior half narrow, gradually widened from about middle to anterior margin, spinulate in anterior 1/3; anterior margin blunt. Valva narrow, slightly widened toward apex; apex rounded; dorso-proximal process long, narrow in basal 1/3, distal 2/3 wider. Sacculus about half as long as valva, irregularly triangular, dorsally with a sclerotized process at apex directing upward; ventral margin sinuate, with sclerotized edge. Saccus large, semicircular. Aedeagus narrow in basal 1/6, expanded from 1/6 to about 1/2; distal half strongly curved, with processes at about 5/6 and at apex.

Female genitalia (Figure 43): Papilla analis somewhat triangular. Apophysis posterioris about twice as long as apophysis anterioris. Lamella postvaginalis large; posterior margin slightly concave at middle, sparsely lined with strong setae; anterior margin sclerotized, gently concave inward, laterally with sclerotized leaf-like process extending forward; lamella antevaginalis large, irregularly rectangular, weakly sclerotized. Ostium bursae with anterior margin sclerotized. Ductus bursae membranous, shorter than corpus bursae. Corpus bursae irregularly elliptical, membranous; signum quite small, with sclerotized spines, anteriorly with two large distinct thorns.

Remarks: This species is closely related to *Periacma maekhongensis*, but can be distinguished by the lamella postvaginalis anteriorly possessing two sclerotized leaf-like processes extending downward from the anterior angles in the female genitalia.

Etymology: The specific name is from the type locality, Leye, Guangxi Zhuangzu Autonomous Region.

***Periacma latizona* Wang & Li, sp. nov.**

(Figures 30, 35 and 44)

Holotype: ♂, China: Mt. Fanjing (27°55'N, 108°41'E), Guizhou Province, 1390 m, 28 May 2002, coll. Xinpun Wang, genitalia slide No. W01262.

Paratypes: 14 ♂♂, 2 ♀♀, 1390–2200 m, 28–30 May 2002, same locality data as holotype.

Description: Wing expanse: 17.0–20.0 mm. Head orange yellow, somewhat ochreous, tinged with black scales laterally. Labial palpus orange yellow; in male basal segment with black scales on outside, second segment with black scales on ventral surface near apex, apex pointed; in female basal and second segments thick, with scattered black scales on outside, third segment much thinner, about 2/3 length of second, point apically. Antenna yellowish brown, with deep brownish rings. Thorax, tegula and fore wing orange yellow, somewhat ochreous; thorax posteriorly with a grayish black spot, tegula with grayish black spot at

base. Fore wing broad (Figure 30), suffused with grayish black scales; costal margin gently arched, with an elongate grayish black blotch at base; ventral margin with a large blackish blotch at base, more or less diffused upward and exceeding fold to near middle of cell; dim dot set at middle of cell near upper margin; broad grayish fascia extending from costal 3/5 to 2/3 of dorsum, widest at costal margin, gradually narrowed to middle, then widened again at dorsum; large grayish fascia extending from apex along termen to before tornus, where joined with the first fascia, forming a “V” with pointed apex; termen oblique; cilia grayish yellow, tinged with grayish black. Hind wing and cilia deep gray. Fore leg with femur whitish gray, with black scales, tibia and tarsus orange yellow, with black patches or spots; mid leg with femur whitish yellow, tibia and tarsus black, with whitish yellow spots; hind leg whitish yellow, tarsus with gray spots. Abdomen brown on dorsal surface, apical portion and ventral surface whitish yellow. Abdomen brown, yellow in distal portion.

Male genitalia (Figure 35): Uncus narrow, distal 1/3 dilated, apex rounded, strong setae on both sides near base. Gnathos with anterior portion roundly dilated and spined, apex rounded; lateral arms relatively strong, about 1/2 of entire length. Valva medially expanded outward, ventral margin gently arched, costa more or less concave near apex, apex rounded. Dorso-proximal process very small, hairy. Sacculus short, broad, curved upward distally. Vinculum a narrow band. Saccus short, broad, with somewhat rounded anterior margin. Aedeagus narrow at base, gradually expanded toward apex; apex bluntly rounded; large spine arising from near apex exceeding end of aedeagus.

Female genitalia (Figure 44): Papilla analis large and broad. Apophysis posterioris about twice as long as apophysis anterioris. Lamella antevaginalis a sclerotized band; lamella postvaginalis with posterior margin concave at middle, lined with setae. Ostium bursae weakly sclerotized. Signum small, with strong short spines.

Remarks: This species is similar to *Periacma wongsirii*, but can be separated from it by the following characters: two fore wing fasciae joined at tornus forming a distinct “V”; gnathos anteriorly spined, sacculus without distinct process, and aedeagus with a large distal spine.

Etymology: The specific name is derived from the Latin *latizonus*, in reference to the wide fascia of the fore wing.

***Periacma spinivalvula* Wang & Li, sp. nov.**

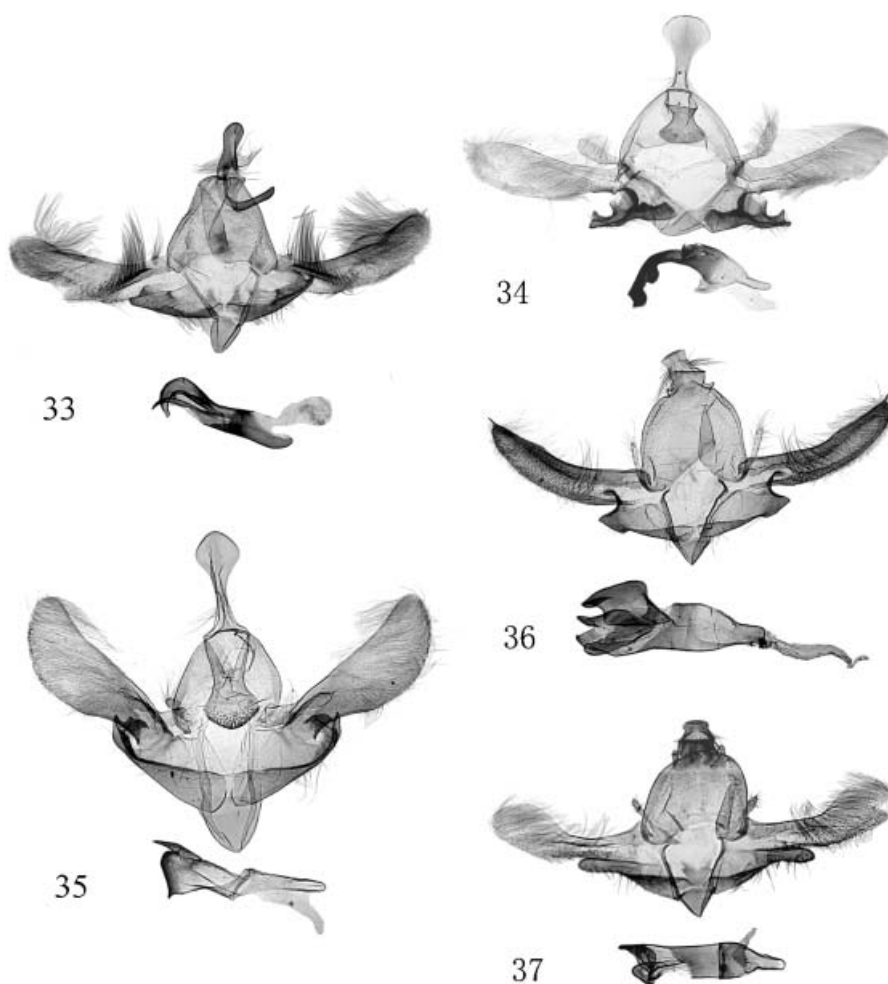
(Figures 31, 36 and 45)

Holotype: ♂, China: Mêdog (29°13'N, 95°18'E), Tibet Autonomous Region, 12 August 2003, coll. Xipu Wang and Huaijun Xue, genitalia slide No. W03133.

Paratypes: 3 ♂♂, 5 ♀♀, 10–14 August 2003, same locality data as holotype.

Description: Wing expanse: 9.0–11.0 mm. Head whitish yellow. Labial palpus light yellow; in both male and female second segment with a black ring near end; in female third segment thin and pointed. Antenna yellow; scape black on dorsal surface; flagellum ringed with brown. Thorax, tegula, and fore wing light yellow, with scattered brown scales. Fore wing lanceolate (Figure 31); costal margin gently arched; apex roundly pointed; termen oblique; dark brown blotch from base of posterior margin extending to 1/3 of fore wing at middle; brown fascia from about costal 2/3 to before tornus, broader in anterior and posterior portion, median portion narrow; cilia light yellow except brown on tornus. Hind wing and cilia gray. Legs whitish yellow, tinged with brown on tibiae and tarsi.

Male genitalia (Figure 36): Uncus short, somewhat trapezoidal, laterally with long setae in basal 2/3; caudal margin almost straight. Gnathos with lateral arms and ventral plate short; ventral plate with straight anterior margin. Tegumen large and broad. Valva narrow,



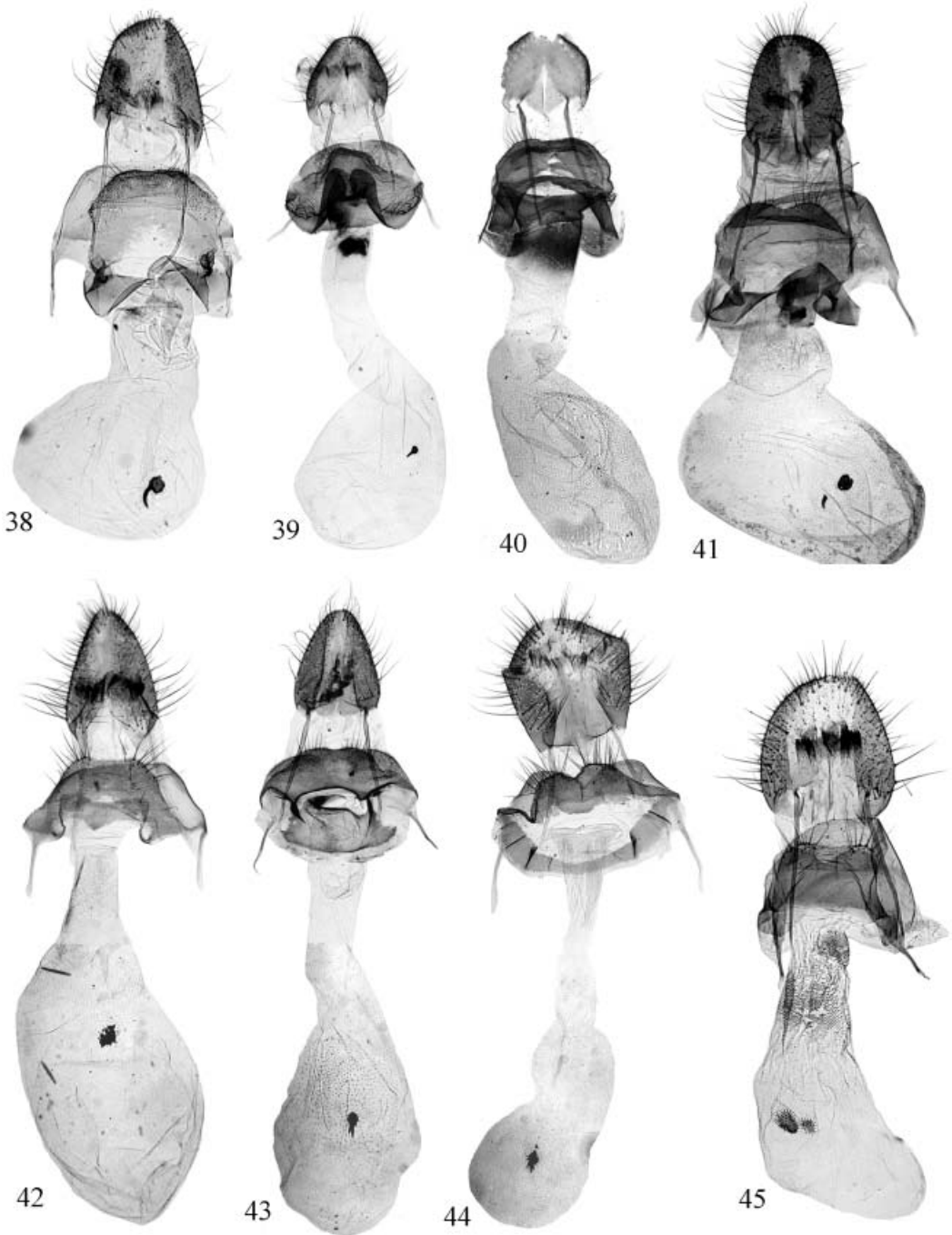
Figures 33–37. Male genitalia of *Periacma* spp. (33) *P. plumbea* Meyrick; (34) *P. leyensis* Wang & Li, sp. n.; (35) *P. latizona* Wang & Li, sp. n.; (36) *P. spinivalvula* Wang & Li, sp. n.; (37) *P. rectignatha* Wang & Li, sp. n.

nearly parallel-sided from base to distal 2/3, then gradually narrowed to apex; apex with a spine; dorso-proximal process slender, stick-like. Sacculus broad, less than half of valva, with pointed apex. Vinculum narrow. Saccus short, more or less triangular. Aedeagus stout, distally with four apically blunt processes.

Female genitalia (Figure 45): Papilla analis large, broad, somewhat rounded. Apophysis posterioris about four times length of apophysis anterioris. Lamella postvaginalis with caudal margin concave at middle. Ductus bursae thick, not distinctly separated from corpus bursae. Corpus bursae large, with two gear-like signa.

Remarks: This species can be distinguished from its congener by the dorsal spine at the apex of the valva, the dorsally pointed process at the apex of the sacculus, and the four short processes at the distal end of the aedeagus.

Etymology: The specific name is from the Latin prefix *spin-* (spine) and *valvulus* (valva), in reference to valva with a spine at apex.



Figures 38–43. Female genitalia of *Periacma* spp. (38) *P. iodesma vietnamica* Lvovsky; (39) *P. zhouzhiensis* Wang & Zheng; (40) *P. binchuanensis* Wang & Zheng; (41) *P. equivalvata* Wang, Li & Liu; (42) *P. plumbea* Meyrick; (43) *P. leyensis* Wang & Li, sp. n.; (44) *P. latizona* Wang & Li, sp. n.; (45) *P. spinivalvula* Wang & Li, sp. n.

***Periacma rectignatha* Wang & Li, sp. nov.**

(Figures 32 and 37)

Holotype: ♂, China: Mêdog (29°13'N, 95°18'E), Tibet Autonomous Region, 14 August 2003, coll. Xinpu Wang and Huaijun Xue, genitalia slide No. W03093.

Description: Male wing expanse: 10.0 mm. Head light yellow. Labial palpus light yellow, second segment with a black ring near end; in female third segment thin and pointed. Antenna yellow; flagellum yellow and brown. Thorax, tegula, and fore wing light yellow, with scattered dark brown scales; tegula with black spot at base. Fore wing lanceolate (Figure 32); costal margin gently arched, with a dark brown patch at base; apex rounded; brown dot at middle and end of cell, and at 2/3 of fold; brown fascia extending from costal 2/3 to tornus; cilia light yellow, mixed with brown at tornus. Hind wing and cilia light gray. Legs whitish, with brown speckles on outside of tibiae and tarsi.

Male genitalia (Figure 37): Uncus short, somewhat trapezoidal, with long setae in basal 2/3; caudal margin almost straight, protruded outward laterally. Gnathos wide, short, with straight anterior margin. Tegumen large, broad, trapezoidal. Valva wide basally, narrow medially, slightly dilated distally, rounded at apex; dorso-proximal process thin, short clubbed. Sacculus simple, wide at base, narrowed to about 2/3; distal 1/3 finger-like, with rounded termination. Vinculum narrow. Saccus triangular. Aedeagus almost parallel-sided except for basal 1/5, with a pointed process distally.

Female: Unknown.

Remarks: This species resembles *Periacma spinivalvula* sp. nov., but can be separated by the fore wing with three brown dots, the valva without spine at apex, and the aedeagus with only one pointed process distally.

Etymology: The specific name is from the Latin *rect-* (straight) and *gnathus* (gnathos), in reference to the straight anterior margin of the gnathos.

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