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## Species of *Periacma*, *Irepacma* and *Epiracma* from Taiwan (Lepidoptera: Oecophoridae)

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### Abstract

Six oecophorid species in three genera are recognized in Taiwan, including four new species: *Periacma aduncata* Wang, **sp. nov.**, *Irepacma flagellata* Wang, **sp. nov.**, *Epiracma longicaudata* Wang, **sp. nov.**, and *Epiracma annularis* Wang, **sp. nov.** *Irepacma conioxantha* (Meyrick, 1931) **comb. nov.** is transferred from *Periacma*. Images of adults and genitalia are provided.

**Key words:** Taxonomy, new species, China

### Introduction

The genus *Periacma* was erected by Meyrick in 1894. *Irepacma*, *Ripeacma* and *Epiracma* were developed from *Periacma*, sharing a two-segmented labial palpus in male. Moriuti, Satio *et* Lewvanich (1985) erected *Irepacma* based on the lack of a dorso-proximal process on the valva in the male genitalia and the absence of the apophysis anterioris in the female genitalia, and erected *Ripeacma* based on the presence of the developed transtilla. Wang *et* Li (2005) proposed *Epiracma* based on the lack of the uncus and the absence of the lateral arms of the gnathos in the male genitalia as well as on the presence of the thick thorn-like apophysis anterioris in the female genitalia. The four genera are mainly distributed in the Oriental and Palearctic regions. In this study, we recognized six species from Taiwan, including four new species that are described in detail. The type specimens are deposited in the Museum für Naturkunde der Humboldt Universität, Berlin, Germany (MNHU), and in the National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A. (USNM).

### Taxonomy

#### Key to species of *Periacma*, *Irepacma* and *Epiracma* from Taiwan

1	Valva in male with a dorso-proximal process .....	2
-	Valva in male without dorso-proximal process .....	3
2	Aedeagus with a hooked process medially .....	<i>Periacma aduncata</i> <b>sp. nov.</b>
-	Aedeagus without a hooked process .....	<i>Periacma delegata</i>
3	Apophysis anterioris in female absent .....	4
-	Apophysis anterioris in female present .....	5
4	Gnathos weakly sclerotized, nearly membranous .....	<i>Irepacma conioxantha</i>
-	Gnathos heavily sclerotized .....	<i>Irepacma flagellata</i> <b>sp. nov.</b>
5	Gnathos broadly subtriangular .....	<i>Epiracma longicaudata</i> <b>sp. nov.</b>
-	Gnathos annular. ....	<i>Epiracma annularis</i> <b>sp. nov.</b>

Female. Unknown.

**Distribution.** China (Taiwan).

**Etymology.** The specific name is from the Latin *longicaudatus*, referring to long aedeagus rattailed distally.

***Epiracma annularis* Wang, sp. nov.**

(Figs. 6, 11, 15)

**Type material.** Holotype ♂, Taiwan: Daigyurin, 16 III 1925, coll. S. Issiki, genitalia slide No. 142403. Paratype: 1 ♀, same data as holotype (USNM).

**Diagnosis.** *Epiracma annularis* can be separated from its congeners by the costa having a trifurcate basal process in the male genitalia. It is similar to *E. aedeagifera* in appearance and in genitalia, but can be distinguished by the lutescent forewing, the valva with distal 1/2 roundly dilated, and the aedeagus bearing tufted long setae medially. In *E. aedeagifera*, the forewing is yellowish gray, the valva is elliptically dilated in distal 1/3, and the aedeagus is absent of setae medially.

**Description.** Imago (Fig. 6). Wingspan 19.0 mm. Head lutescent. Labial palpus pale yellow, second segment with scattered brown scales. Antenna lutescent, with pale brown rings on dorsal surface of flagellum. Thorax, tegula and forewing lutescent. Forewing with scattered pale yellowish brown scales; costal margin arched, apex pointed, termen oblique; pale yellowish brown stripe extending from upper angle of cell to tornus; dim brown spot set at middle of cell and fold, respectively; cilia lutescent, tinged with brown. Hindwing and cilia lutescent; cilia lined with pale brown at basal 1/4. Legs lutescent.

Male genitalia (Fig. 11). Gnathos a circular ring, with dense spinules. Tegumen with each branch gradually widened anteriorly. Valva narrow basally, gradually widened to middle, distal 1/2 roundly expanded, with long dense setae; costa with a trifurcate basal process, dentate on dorsal margin. Sacculus narrowly band shaped, curved upward in S shape, acute apically. Saccus broad triangular, rounded anteriorly. Juxta with basal half semicircular; distal half broadly concave inward at middle, forming two triangular lateral lobes, each lobe acuminate. Aedeagus slightly shorter than valva, basal 1/3 thin, near middle arched and tufted with dense long setae dorsally; distal half even, parallel sided, bearing a row of sparse long setae, with tuft of long setae apically.

Female genitalia (Fig. 15). Papilla analis wide, conical, setose. Apophysis anterioris stout, less than half length of apophysis posterioris. Lamella postvaginalis mound-like, concave inwardly at middle, with stout long setae; lamella antevaginalis consisting of two arched sclerotized plates. Antrum with posterior half expanded in triangle laterally, anterior half parallel sided. Ductus bursae with posterior 1/3 sclerotized, anterior 2/3 membranous. Corpus bursae elliptical, shorter than ductus bursae; signum small elliptical, with dense tiny teeth, bearing a larger spinous process anteriorly.

**Distribution.** China (Taiwan).

**Etymology.** The specific name is from the Latin *annularis*, referring to the shape of the gnathos.

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