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Cover photograph: *Parasipyloidea nigrimarginata* Ho **sp. nov.**, male, photo by George Ho Wai-Chun.

A new species of the genus *Parasipyloidea* Redtenbacher, 1908 (Phasmida: Diapheromeridae: Necrosciinae) from Yunnan, China

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ABSTRACT

A new species, *Parasipyloidea nigrimarginata* **sp. nov.**, from Yunnan, China is described.

Key words: Phasmida, *Neohirasea*, new subspecies, Guangxi, China

中國雲南無齒股蝽屬一新種 (蝽目: 笛蝽科: 長角枝蝽亞科)

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摘要: 本文記述中國雲南無齒股蝽屬1新種: 黑緣無齒股蝽 *Parasipyloidea nigrimarginata* **sp. nov.**。

關鍵字: 蝽目, 無齒股蝽屬, 新種, 雲南, 中國

INTRODUCTION

The genus *Parasipyloidea* Redtenbacher, 1908 consists of 17 species and six species are recognized in the Mainland China (Otte and Brock, 2005; Chen and He, 2008; Hennemann et al., 2008; Ho, 2013 & 2015; Brock et al., 2017). In China, all six species are restricted to southern to southwestern regions including Guangxi, Jiangxi, Sichuan and Yunnan Provinces. The present author recently collected several *Parasipyloidea* specimens during a collecting trip in the southern part of Yunnan and described them as *Parasipyloidea nigrimarginata* **sp. nov.**. A checklist of Chinese species and a key to species included from China are provided.

MATERIALS AND METHOD

Illustrations are based on the type material which is dried and pinned after the collecting trip. No food plant eaten by the collected specimens was observed. Measurements of adults are given in mm. The type material is deposited in the Hong Kong Entomological Society, Hong Kong.

RESULTS

Genus *Parasipyloidea* Redtenbacher, 1908

Type-species: *Parasipyloidea aenea* Redtenbacher, 1908: 479, by subsequent designation by Vickery, 1983: 9.

Description: Medium-sized. Body cylindrical, tapering posteriorly. Head oval, unarmed. Thorax smooth or wrinkled or/and granulated. Mesonotum longer than combined length of metanotum and median segment. Abdomen smooth or wrinkled or/and granulated. Seventh sternum lacking praeopercular organ in female. Female anal segment elongated posteriorly, apically rounded or pointed, lacking posterior emargination. Female subgenital plate scoop-shaped. Male poculum cup-shaped. Supra-anal plate absent. Cerci short. Legs slender, unarmed. Apterous or with minute and scale-like tegmina and alae.

Distributions: China (Guangxi, Jiangxi, Sichuan and Yunnan), Vietnam, India, Sri Lanka, Indonesia and Papua New Guinea.

Notes: Currently, seven species are recognized in China (Ho, 2013 & 2015).

Species included from China

1. *Parasipyloidea carinata* Ho, 2013: 817, fig. 1. [China (Guangxi)]

2. *Parasipyloidea emeiensis* Chen & He, 1994: 121, figs. 1-2. [China (Sichuan)]

3. *Parasipyloidea galbina* Ho, 2013: 817, figs. 2-3. [China (Yunnan)]

4. *Parasipyloidea jinggangshanensis* Ho, in Ho & Zhang, 2015: 96, fig. 1. [China (Jiangxi)]

5. *Parasipyloidea nigrimarginata* **sp. nov.** [China (Yunnan)]

6. *Parasipyloidea rugulosa* Chen & He, 2008: 166, figs. 132. [China (Yunnan)]

7. *Parasipyloidea sinensis* Ho, 2013: 818, figs. 4-7. [China (Guangxi)]

Key to the species of *Parasipyloidea* from China

Female:

1. Posterior apex of subgenital plate not surpassing anterior margin of anal abdominal segment. **2**
- Posterior apex of subgenital plate surpassing anterior margin of anal abdominal segment. **3**

2. Anal abdominal segment longer than ninth abdominal tergum. . . *P. sinensis*
Anal abdominal segment shorter than ninth abdominal tergum. . *P. emeiensis*

3. Anal abdominal segment shorter than eighth abdominal tergum. . *P. jinggangshanensis*
- Anal abdominal segment longer than eighth abdominal tergum. . . **4**

4. Mesonotum smooth. . . *P. galbina*
- Mesonotum granulated. *P. nigrimarginata* **sp. nov.**

Male:

1. Mesonotum smooth. . . *P. emeiensis*
- Mesonotum granulated. . . . **2**

2. Posterior margin of anal abdominal segment truncate. . . . . *P. rugulosa*
- Posterior margin of anal abdominal segment emarginated. **3**

3. Dorsal surface of abdomen carinate. . *P. carinata*
- Dorsal surface of abdomen smooth. . **4**

4. Mesonotum and metanotum lacking black lateral margins. . . . *P. sinensis*
- Mesonotum and metanotum with black lateral margins . . *P. nigrimarginata* **sp. nov.**

***Parasipyloidea nigrimarginata* sp. nov.** (Figs. 1-9)

Types: Holotype, ♀, Fenshuiling, Jinping, Yunnan, China, 4.IX.2016, George Wai-Chun Ho; Paratypes, 1♂ & 6 eggs (naturally laid by holotype ♀), same data as holotype.

Differentiation: *Parasipyloidea nigrimarginata* **sp. nov.** [China (Yunnan)] is similar to *P. sinensis* Ho, 2013 [China (Guangxi)], but can be separated by posterior apex of subgenital plate surpassing anterior margin of anal abdominal segment in female and sparsely granulated mesonotum in male.

Etymology: The name of this new species is derived from the feature of the black lateral margins on mesonotum and metanotum in the male.

Description of female (Figs. 1-3, 8): Body slender, distinctly larger and more robust than male. General colouration of body green.

Head: Oval, longer than pronotum. Vertex flat. Occiput gently convex, with faint median and lateral longitudinal furrows, lacking posterior swellings. Compound eyes elliptical, its length about two times length in that of genae. Antennae long and filiform, apices surpassing apices of protarsi; scapus longer than pedicellus, shorter than third segment.

Thorax: Pronotum trapezoidal, gently constricted posteriorly, sparsely and inconspicuously covered with very small granules; anterior margin incurved, posterior margin truncate, transverse and longitudinal sulci just crossing before middle area. Mesonotum slender and elongate, longer than combined length of metanotum and median segment, mediolongitudinally carinate, sparsely covered with small granules. Metanotum slightly longer than median segment, with very sparse and inconspicuous small granules. Mesopleurae and metapleurae with very sparse and inconspicuous small granules. Mesosternum and metasternum lacking granulation.

Abdomen: Cylindrical, tapering posteriorly. Lacking granulation, only with a few small pits marginally. Seventh sternum lacking praeopercular organ. Eighth tergum longer than ninth tergum. Anal segment longer than ninth tergum, constricted posteriorly, posterior margin with a small indistinct notch. Subgenital plate scoop-shaped, tapering posteriorly, apex pointed and surpassing anterior margin of anal segment. Cerci cylindrical and straight, apices pointed and not surpassing posterior margin of anal segment.

Legs: Slender and long. Unarmed, sparsely covered with short bristles. All femora roughly as long as corresponding tibiae. Profemora curved basally, roughly as long as metafemora. Mesofemora shorter than profemora.

Wings: Tegmina and alae very small, scale-like.

Male (Figs. 4-5, 9): Medium-sized. Body slender, slimmer and smaller than female. General colouration of body and legs green.

Head: Oval, lacking granulation, longer than pronotum. Compound eyes elliptical, its length about two times length in that of genae. Posterior margin of occiput with eight indistinct swellings. Antennae long and filiform, apices surpassing apices of protarsi; scapus longer than pedicellus; third segment almost as long as scapus.

Thorax: Pronotum rectangular, anterior margin weakly incurved, posterior margin truncate, transverse and longitudinal sulci crossing before middle area, lacking granulation. Mesonotum slender and elongate, parallel-sided, sparsely covered with small granules, median longitudinal line faint, with black longitudinal stripe marginally. Metanotum with inconspicuous and small granules, roughly as long as median segment, with black stripe marginally. Mesopleurae and metapleurae with a few small granules. Mesosternum and metasternum lacking granulation.

Abdomen: Lacking granulation. Eighth tergum longer than ninth tergum. Anal segment as long as ninth tergum, with a small V-shaped emargination on posterior margin. Poculum cup-shaped, posterior margin rounded, reaching anterior margin of anal segment. Cerci cylindrical, gently curved inwards, apices rounded and surpassing posterior margin of anal segment.

Legs: Slender and long. Unarmed, sparsely covered with short bristles. Profemora curved basally.

Wings: Tegmina and alae very small, scale-like.

Measurements: See Table 1.

Egg (Figs. 6-7): Capsule brownish green, oval, densely covered with minute granulations, also sparsely covered with short spine-like bristles. Micropylar plate oblong, anterior and posterior margins rounded. Micropylar cup placed near posterior margin of micropylar plate. Operculum with closed capitulum.

Measurements: Length, 2.0; width, 1.6; height, 1.8.

Distribution: Yunnan, China.

CONCLUSION

In China, seven species of *Parasipyloidea* are currently recognized (Ho, 2013 & 2015). A new species, *Parasipyloidea nigrimarginata* **sp. nov.**, from Yunnan, China is described and illustrated in this study. *P. nigrimarginata* **sp. nov.** can be separated from other Chinese species by greenish colouration and sparsely granulated mesonotum in both sexes; elongate anal abdominal segment and subgenital plate in female; and sparsely granulated thorax and black longitudinal strips on lateral margins on mesonotum in male. A checklist and revised key to Chinese species are provided

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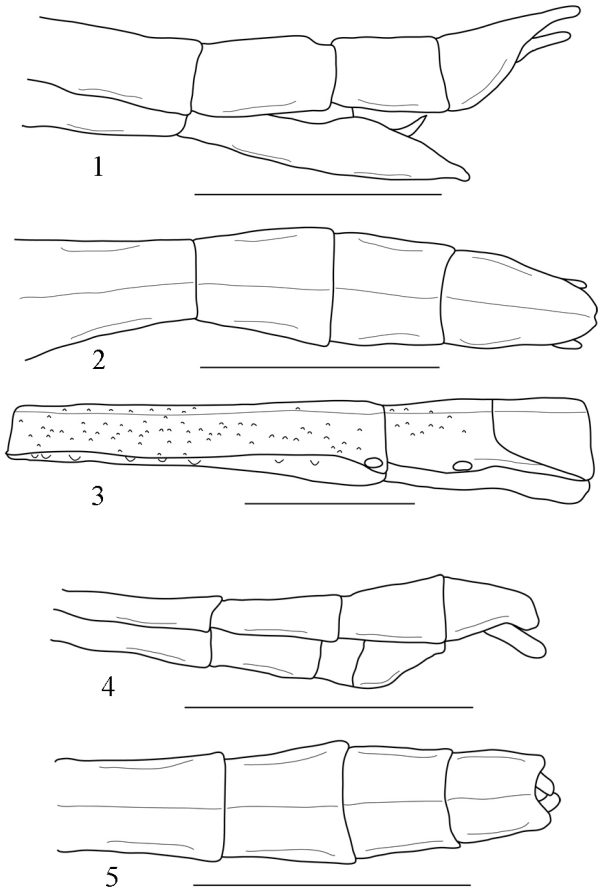
TABLE

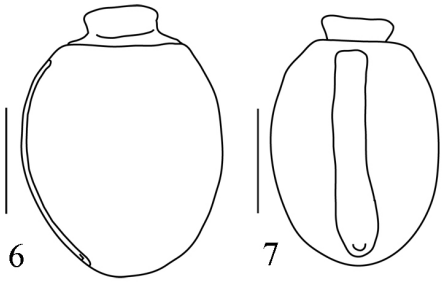
	Holotype female	Paratype male
Body	56.0	47.0
Head	4.0	3.0
Antennae	45.0	45.0
Pronotum	3.0	2.5
Mesonotum	11.0	9.0
Metanotum	3.5	3.0
Median segment	3.0	2.5
Profemur	15.0	15.0
Mesofemur	10.5	11.0
Metafemur	15.5	16.0
Protibia	15.0	17.0
Mesotibia	10.0	11.0
Metatibia	15.0	17.0

Table 1. Measurements of *Parasipyloidea nigrimarginata* **sp. nov.** (mm)

FIGURES



Figures 1-5. *Parasipyloidea nigrimarginata* **sp. nov.** [scale bar 5 mm] (Drawings by author). 1. Female, end of abdomen, lateral view. 2. Female, end of abdomen, dorsal view. 3. Female, mesothorax, metathorax and median segment, lateral view. 4. Male, end of abdomen, lateral view. 5. Male, end of abdomen, dorsal view.



Figures 6-7. *Parasipyloidea nigrimarginata* **sp. nov.** [scale bar 1 mm] (Drawings by author). 6. Egg, lateral view. 7. Egg, dorsal view.

Figures 8-9. Habitus of *Parasipyloidea nigrimarginata* **sp. nov.** [scale bar 5 mm] (Photo by author). 8. Female. 9. Male.