

A new species of *Phamartes* Bresseel & Constant (Phasmatoidea: Diapheromeridae: Necrosciinae) from Vietnam

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Abstract: This article describes one new species, *Phamartes elongatus* sp. nov. from Cát Tiên National Park, Vietnam. Photographs of the adult and genitalia are provided and a key to the two known species is provided based on the female.

Key words: stick insects; taxonomy; key

越南翅异蝻属一新种记述（蝻目：笛蝻科：长角枝蝻亚科）

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摘要：记述越南翅异蝻1新种——长翅翅异蝻*Phamartes elongatus* sp. nov.，提供了成虫及生殖节照片，编制了该属的世界分种检索表。

关键词：竹节虫；分类；检索表

Introduction

The genus *Phamartes* Bresseel & Constant, 2013 belongs to the family Diapheromeridae (Phasmatoidea: Verophasmatoidea: Anareolatae) and has been comprised only one species in Vietnam: the type species, *Phamartes coronatus* Bresseel & Constant, 2013. Herein a new species, *Phamartes elongatus* sp. nov., is described from Vietnam.

Taxonomy

Genus *Phamartes* Bresseel & Constant, 2013

Phamartes Bresseel & Constant, 2013:141.

Type species. *Phamartes coronatus*, 2013, by original designation.

Re-description. Body surface dull with a wrinkled appearance and winged. Head with large spinose elevation or not. Eyes large and strongly projecting hemispherically. Scapus flattened, antennae filiform, but thick for the subfamily. Lateral edges of pronotum spinose. Mesosternum with blunt tubercles. Femora and tibiae of same colouration as body. Profemora short, compressed and curved basally. Tegmina and costal area of wings coloured as body.

Accepted 19 April 2019. Published 25 September 2019. Published online 7 September 2019.

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Tegmina rounded apically and possibly with strong humps in females. Anal segment flattened and irregularly notched and subgenital plate spoon-like, not projecting over apex of anal segment.

Notes. This genus has previously consisting of one species and is only know in Vietnam. The new species can be easily identified as *Phamartes* by: (1) the presence of fully developed alae, and (2) tegmina rounded apically and possibly with strong humps.

Key to the species of *Phamartes* (female)

1. Praeopercular organ large and tapered; alae reaching apex of segment III *P. coronatus*
 -. Praeopercular organ not obvious, alae surpassing hind margin of segment V *P. elongatus* **sp. nov.**

Phamartes elongatus **sp. nov.** (Figs. 1–8)

Holotype. ♀, **Vietnam**, Cát Tiên National Park, 11.430° N 107.427° E, 03-VI-2018, coll. Runxi WANG. Deposited in the insect collection, Institute of Entomology, Nankai University, Tianjin, China.

Female. Medium-sized (body length 87.4 mm). General color of body, wings and legs mottled brown, grey and black. Body small and robust. (Figs. 1, 2)

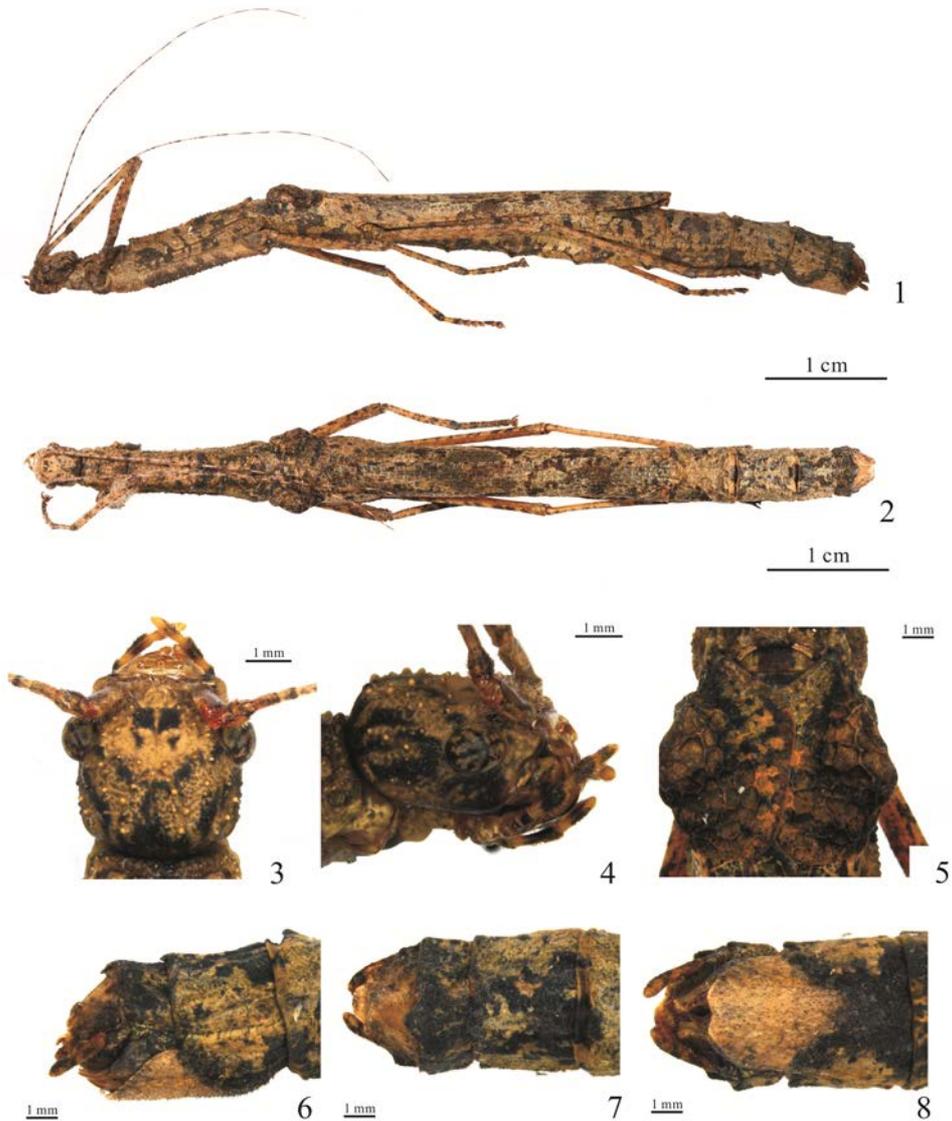
Head. Longer than wide (Fig. 3). Compound eyes large, length about 1.6 times that of genae, circular and projecting hemispherically; light yellow with crossing black stripe (Fig. 4). Between the compound eyes, large sub-circular depressions, two black patches on the bottom of the depressions. Vertex slight elevation, with black markings and bright yellow granulations, median furrows distinct, anterior end of the median furrow reaching the anterior margin of the depressions, posterior end of the median furrow reaching the hind margin of head. Antennae filiform and reaching posterior half of second abdominal tergum; yellowish brown and irregular dark patches, densely covered with setae.

Thorax. Pronotum shorter and narrower than the head, with granulations and dark marking. Pronotum with anterior edge slightly incurved. Longitudinal sulci over anterior 2/3 length of pronotum and short transverse sulci crossing before middle. Mesonotum moderately expanded posteriorly, 2.7 times longer than pronotum; densely covered with small granules and dark marking; medial and lateral carina indistinct. Mesosternum and metasternum with edge yellow and the middle black.

Abdomen. About 1.8 times the length of head and complete thorax combined. Abdomen dorsally yellow-gray with irregular dark markings, smooth and robust. Ventral surface yellow-gray, covered with dark brown wings. From second to seventh tergites gradually slightly thickening; from seventh tergites to anal segment gradually slightly thinning. The ventral center of second to seventh tergites posterior margin with small swellings. Seventh sternum lacking distinct praeopercular organ. The center posterior margin of ninth tergum with big swellings reaching anterior margin of anal segment. Supra-anal plate distinct, posterior margin rounded. Operculum posterior margin with a small emargination, reaching middle area of anal segment (Figs. 6, 7, 8). Cerci flattened, apices rounded, curved inward.

Legs. All slightly short, covered with irregular patches and bristles. Profemora shorter than pronotum and mesonotum combined, reaching 4/5 the way along mesonotum. Mesofemora almost as long as metanotum (including median segment). Metafemora reaching to before middle area of fourth abdominal tergum and antero-ventral carina of metafemora with two to three slightly wave-liked subapical elevations, not distinct. Tibiae unarmed.

Wings. Tegmina brown, almost as long as head, longer pronotum, hind margin truncate and elytra strongly humped (Fig. 5). Alae long, slightly surpassing hind margin of fifth tergum.



Figures 1–8. *Phamartes elongatus* sp. nov. 1. Habitus of female, lateral view; 2. Habitus of female, dorsal view; 3. Female, head, dorsal view; 4. Female, head, lateral view; 5. Tegmina, dorsal view; 6. Female, terminal end of abdomen, lateral view; 7. Female, terminal end of abdomen, dorsal view; 8. Female, terminal end of abdomen, ventral view.

Male. Unknown.

Distribution. Vietnam (Cát Tiên National Park).

Diagnosis. This new species is distinguished from *Phamartes coronatus* by: (1)

praeopercular organ not obvious, (2) alae long and surpassing hind margin of segment V, (3) vertex slightly elevated, lacking a prominent crown shaped elevation.

Etymology. This specific epithet refers to the long alae.

Table 1. Measurements of *P. elongatus* sp. nov. ♀ and comparison with *P. coronatus* ♀ (mm)

| | <i>P. elongatus</i> sp. nov. | <i>P. coronatus</i> | | <i>P. elongatus</i> sp. nov. | <i>P. coronatus</i> |
|---|---------------------------------|---------------------|-----------|---------------------------------|---------------------|
| Body | 74.3 | 128.6 | Metafemur | 13.9 | 25.6 |
| Head | 4.6 | 10.7 | Protibia | 6.6 | 28.8 |
| Pronotum | 4.1 | 8.1 | Mesotibia | 5.5 | 19.1 |
| Mesonotum | 11.2 | 23.5 | Metatibia | 5.7 | 26.2 |
| Metanotum (includes median segment) | 8.1 | 20.6 | Tegmen | 4.9 | 11.2 |
| Profemur | 11.1 | 28.1 | Alae | 31.4 | 35.4 |
| Mesofemur | 9.4 | 19.7 | | | |

Acknowledgements

We thank Mr. Runxi WANG (The University of Hong Kong) for providing the specimen. We thank Dr. Zhen YE (Nankai University) and Mr. Jiuyang LUO (Nankai University) for their help in photography. This project is supported by the National Natural Science Foundation of China (31430079).

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