

Three New Species of the Genus *Dissomphalus* (Hymenoptera: Bethyliidae) from Asia

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Abstract Three new species of wasps belonging to the genus *Dissomphalus* ASHMEAD, 1893, are described based on the females; *kinabarensis* from Borneo, *khaoyaiensis* from Thailand, and *chipenensis* from Taiwan. These three species are distinguishable from the other Asian congeners by the shape of anterior clypeal margin, the number of mandibular teeth, and the punctate head.

Introduction

The bethylid wasp genus *Dissomphalus* ASHMEAD, 1893, belonging to the subfamily Pristocerinae, is represented by 79 species: 8 from the Nearctic, 51 from the Neotropical, 5 from the Palaearctic, 12 from the Ethiopian, and 3 from the Oriental Regions. All the *Dissomphalus* species are strongly sexually dimorphic, fully winged in males and completely apterous in females. The females are extremely rare and are collected with Berlese funnels from leaf litter or found in rotten wood or in leaf litter layer.

In the course of my study on the bethylid fauna of Asia, I have examined several specimens of the genus including females. In this paper, I am going to describe three new species of this genus based on the females, all of which are collected with Berlese funnels from leaf litter or found in leaf litter layer.

Measurements, indices and special terms used in this paper follow those in EVANS (1964, 1978).

Dissomphalus kinabarensis sp. nov.

(Figs. 4, 6)

Holotype. Female. HL (head length) 0.40 mm; HW (head width) 0.31 mm; LA (length of alitrunk) 0.65 mm; LP (length of propodeum) 0.40 mm; WPD (width of propodeal disc) 0.17 mm; TL (total length) 2.0 mm.

Color brown; mandibles, antennae and legs yellow.

Head 1.29 x as long as wide, with slightly concave posterior border in frontal view, microreticulate with scattered shallow punctures. Mandibles with acute apical and preapical teeth and 2 small basal teeth. Anterior border of clypeus trapezoidal, with two obtuse angles.

Antennae with 13 segments; scape broadest at posteriormost, 2.3 x as long as wide; 2nd segment slightly longer than wide; 3rd to 12th segments each wider than long; terminal segment 1.2 x as long as wide. Eyes each consisting of 6 ommatidia.

Pronotum 1.20 x as long as wide excluding collar in dorsal view, microreticulate. Mesonotum 0.40 x as long as wide. Propodeum 2.35 x as long as wide in dorsal view; maximum width 1.16 x minimum width; surface microreticulate, but microreticulum weaker than that on pronotum.

Maximum width of gaster 0.43 mm in dorsal view.

Holotype. Female, Kota Kinabaru, Sabah, Borneo, 16. VIII. 1989, N. ISHII leg.

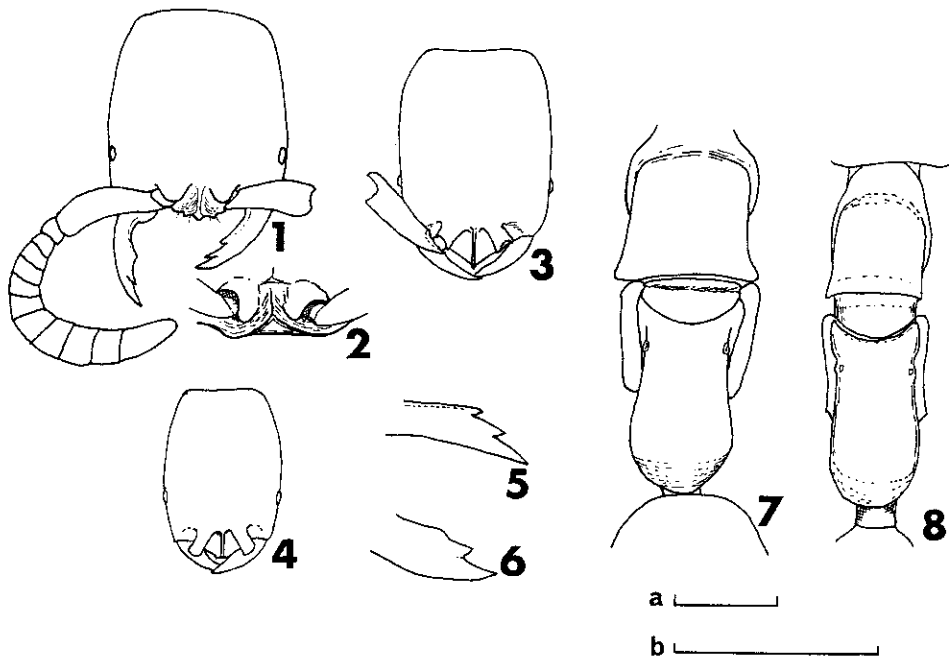
Type depository. National Institute of Agro-Environmental Sciences, Tsukuba, Japan.

Remarks. This species is distinguished from *D. fuscus* (KIEFFER, 1904) from Sumatra by the punctate head. The holotype was taken by a Berlese funnel from leaf litter.

Dissomphalus khaoyaiensis sp. nov.

(Figs. 3, 8)

Holotype. Female. HL 0.55 mm; HW 0.40 mm; LA 0.88 mm; LP 0.44 mm; WPD 0.23 mm; TL 2.5 mm.



Figs. 1-8. —1, 2, 5, 7, *Dissomphalus chipenensis* sp. nov., female; 1, head, frontal view; 2, anterior border of clypeus, adaxial view; 5, right mandible; 7, alitrunk, dorsal view. —3, 8, *Dissomphalus khaoyaiensis* sp. nov., female; 3, head, frontal view; 8, alitrunk, dorsal view. —4, 6, *Dissomphalus kinabarensis* sp. nov., female; 4, head, frontal view; 6, right mandible. Scale bars: a; 0.5 mm for 1, 3, 4, 7-8, b; 0.5 mm for 2, 5, 6.

Color reddish brown; petiole and most part of 1st and 2nd gastral tergites blackish brown; mandibles, antennae and legs yellow.

Head 1.28 x as long as wide, with straight posterior border in frontal view, microreticulate and moderately punctate. Mandibles with 2 acute teeth. Anterior border of clypeus triangular with a distinct angle medially. Antennae with 13 segments; scape 3.0 x as long as wide; 2nd segment slightly wider than long; 3rd to 12th segments each wider than long; apical segment 1.2 x as long as wide. Eyes each consisting of 5 ommatidia.

Pronotum 1.02 x as long as wide excluding collar in dorsal view, strongly microreticulate. Mesonotum microreticulate, 0.43 x as long as wide. Propodeum 1.91 x as long as wide; maximum width 1.12 x minimum width in dorsal view.

Gaster smooth and shining, maximum width 0.53 mm in dorsal view.

Holotype. Female, 180 km N. E. Bangkok, Khao Yai N. P., 780 m, Thailand, 11-18. IV. 1990, B. V. BROWN leg.

Type depository. Provincial Museum of Alberta, Canada.

Remarks. This species is separated from the other Asian congeners by the 2-toothed mandibles, the punctate head, and the triangular anterior border of clypeus. This is a new record of this genus from Thailand.

Dissomphalus chipenensis sp. nov.

(Figs. 1, 2, 5, 7)

Holotype. Female. HL 0.65 mm; HW 0.53 mm; LA 1.05 mm; LP 0.53 mm; WPD 0.30 mm; TL 3.0 mm.

Color brown, with reddish tinge; mandibles brown; antennae and legs yellow.

Head rectangular, 1.23 x as long as wide, with a weakly convex posterior border in frontal view; frons and vertex weakly microreticulate with shallow but relatively large punctures. Anterior border of clypeus with 3 pairs of small blunt teeth and a median weak projection; outermost pair smallest. Mandibles with 3 teeth; apical tooth acute and longest; basalmost blunt and smallest. Antennae with 13 segments; scape 3.4 x as long as wide; 2nd segment as long as wide; 3rd to 12th wider than long; terminal segment 1.4 x as long as wide. Eyes each consisting of 7 ommatidia.

Pronotum 1.02 x as long as wide excluding collar in dorsal view, strongly microreticulate with large but relatively weak punctures. Mesonotum microreticulate, 0.39 x as long as wide. Propodeum 1.77 x as long as wide; maximum width 1.23 x minimum width; disc strongly microreticulate.

Gaster smooth, maximum width 0.70 mm in dorsal view.

Holotype. Female, Chipen, Taitong Hsien, Taiwan, 10.VIII.1980, M. TERAYAMA leg.

Type depository. National Science Museum, Tokyo, Japan.

Remarks. The present species is easily distinguished from the other Asian congeners by the 3-toothed mandibles and 7-toothed clypeus. This is a new record of this genus from Taiwan.

A tentative key to the Oriental species of *Dissomphalus* (Female)

1. Head impunctate2
- Head distinctly punctate.....3
2. Body black; tibiae and tarsi yellowish white*tibialis* ASHMEAD [the Philippines]

- Body light brown; legs pale yellow*fuscus* (KIEFFER) [Sumatra]
- 3. Mandibles with 4 teeth; small species, head ca. 0.31 mm in width.....
.....*kinabarensis* sp. nov. [Borneo]
- Mandibles with less than 4 teeth; larger species, head wider than 0.40 mm4
- 4. Anterior border of clypeus with 7 small teeth; mandibles with 3 teeth
.....*chipenensis* sp. nov. [Taiwan]
- Anterior border of clypeus angulated medially, but without any tooth; mandibles with 2
teeth.....*khaoyaiensis* sp. nov. [Thailand]

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摘 要

寺山 守 (東京大学教養学部生物学教室 〒153 東京都目黒区駒場 3-8-1) : アジア産 *Dissomphalus* 属 (ハチ目, アリガタバチ科) の 3 新種.

Edaphologia, No. 54: 9-12, 1995.

アリガタバチ科の *Dissomphalus* 属は、雄は有翅、雌は無翅のハチで、特に雌は採集記録が少なく、落葉層からまれに採集される他、落葉層をベルレーゼ装置にかけることによっても採集されている。本属はこれまでにアジアから 3 種のみが記録されていた。この度、アジア各地産のアリガタバチ類を分類整理して行く過程で、本属の雌個体を点検することができた。これらはいずれも新種と判断され、ボルネオ産のものに *D. kinabarensis*、タイ産のものに *D. khaoyaiensis*、台湾産のものに *D. chipenensis* の学名を与えて記載した。

References

- EVANS, H. E., 1964. A synopsis of the American Bethyridae (Hymenoptera, Bethyridae). *Bull. Mus. comp. Zool.*, **132**: 1-222.
- EVANS, H. E., 1978. The Bethyridae of America North of Mexico. *Mem. Amer. ent. Inst.*, **27**: 1-332.
- KIEFFER, J. J., 1914. Bethyridae. In: *Das Tierreich*, **41**: 228-595. R. Friedlander und Sohn, Berlin.