

Short Communication

New record of the genus *Discoelius* Latreille (Hymenoptera: Vespidae: Eumeninae) from Kerala

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Abstract

The genus *Discoelius* is reported here for the first time from Kerala with the species, *D. vasukii* Pannure and Carpenter, 2017. Symbiotic association with mites is observed and a key to species of India and an updated checklist of Oriental species are also provided.

Keywords: *Discoelius vasukii*, Eumeninae, Ethology, Kerala, New Record

Introduction

Latreille (1809) described the potter wasp genus *Discoelius* as a subgenus of *Eumenes* Latreille based on the type species *Vespa zonalis* Panzer, 1801. The nest of this species is in wood cavities or in hollow stems of plants such as reed and bamboo, and the brood cells are partitioned by plant material (Tsuneki, 1970; Kim, 2005). *Discoelius* is distributed in Oriental and Palaearctic regions. It is a solitary wasp with 11 species with an additional subspecies were reported from worldwide, of which, nine species were reported from the Oriental Region and two species from India (Pannure *et al.*, 2017). In India, two species (*D. turneri* (Meade-Waldo, 1910) and *D. vasukii* Pannure and Carpenter, 2017) were reported. *Discoelius turneri* described from Shillong (Meghalaya) (Meade-Waldo, 1910) and later recorded from Sikkim (Giordani Soika, 1960). *D. vasukii* described from Valparai (Tamil Nadu) (Pannure *et al.*, 2017). In this paper, *Discoelius* is reported for the first time from Kerala with the species *D. vasukii*. Symbiotic association with mites with the wasp is observed. A key

to species of India and an updated checklist of Oriental species are also provided.

Material and Methods

The specimen was collected by using an insect net specially made for the purpose at the bank of a small natural pond inside the dense evergreen forest of Western Ghats at Victoria, Nelliampathy in Palakkad district of Kerala, India. The specimen was studied and photographed by using a Leica Stereozoom microscope (Model DFC 500) with LAS software version 3.8.0. The identified specimen was registered and deposited at the 'National Zoological Collections' of the Western Ghats Regional Centre, Zoological Survey of India, Kozhikode, Kerala, India.

Abbreviations used for the terms: H = Head; M = Mesosoma; T = Metasomal terga.

Results and Discussion

Discoelius vasukii Pannure and Carpenter, 2017
(Figures 1-12)

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2017. *Discoelius vasukii* Pannure and Carpenter, 583-586, Holotype ♀, Valparai, Tamil Nadu (Department of Entomology, University of Agricultural Sciences, Gandhi Krishi Vignana Kendra, Bengaluru).

Diagnosis: Female. Clypeus with truncate anterior margin and straight basal margin; posterior face of propodeum strongly reticulate with a high median carina running whole length of propodeum from a short and nearly rounded propodeal fovea; T2 with a narrow median apical lamella, T3 and T4 without apical lamellae; antennal scape depressed with dense punctation; pronotal carina complete and raised; mesoscutum with median longitudinal carina between notauli in anterior one-third of disc; notauli well developed, especially wide and deep towards posterior portion of mesoscutum, obscure and diverging near pronotum; parapsidal line weak; tegula much longer than broad with few scattered punctures except at middle and with distinct emargination on its posterior inner margin where it adjoins parategula, outer margin weakly rounded and posterior lobe narrowly defined; scuto-scutellar suture crenate; T1 coarsely punctate dorsally.

Colour description: Body completely black. Mandible, scape below in part, tegula, propodeal valvula, apex of tibia and all tarsi with brownish tinge. Body covered with dense erect white setae.

Body length (H+M+T1+T2): 11.5 mm; Forewing length: 9.80 mm.

Male: Unknown.

Material examined: India: Kerala, Palakkad district, Nelliampathy; Victoria forest, 27.ii.2017, Coll. P. Girish Kumar, Regd. No. ZSI/WGRC/I.R-INV.9319.

Distribution: India: Tamil Nadu (Pannure *et al.*, 2017), Kerala (**new record**).

Ethology: Symbiotic association with mites is observed in the wasp specimen. All the cavities of mesosoma housed with mites.

References

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Key to the Indian species of *Discoelius* Latreille (based on females)

(Modified from Pannure *et al.*, 2017)

1. Clypeus with straight basal margin; posterior face of propodeum strongly reticulate with a high median carina running whole length of propodeum from a short and nearly rounded propodeal fovea; T2 with a narrow median apical lamella, T3 and T4 without apical lamellae; two small round ferruginous spots on each side of pronotum absent.....
.....*D. vasukii* Pannure and Carpenter, 2017
- Clypeus with basal margin emarginate; posterior face of propodeum weakly reticulate and propodeal fovea elongate; T2 and T3 with well developed apical lamellae, T4 with apical lamella only at lateral corners; two small round ferruginous spots on each side of pronotum present.....
.....*D. turneri* (Meade-Waldo, 1910)

Checklist of Oriental species of *Discoelius* Latreille

1. *D. aurantiacus* Nguyen, 2016- Vietnam.
2. *D. emeishanensis* Zhou & Li, 2013- China: Sichuan.
3. *D. esakii* Yasumatsu, 1934- Taiwan.
4. *D. longinodus* Yamane, 1996- Taiwan.
5. *D. nigriclypeus* Zhou & Li, 2013- China: Hunan.
6. *D. turneri* (Meade-Waldo, 1910)- India: Meghalaya, Sikkim.
7. *D. vasukii* Pannure & Carpenter, 2017- India: Kerala (**new record**), Tamil Nadu.
8. *D. wangi* Yamane, 1996- Taiwan.
9. *D. zonalis* (Panzer, 1801)- France; Germany; Austria; Belarus; Bulgaria; Russia: Ussuri and Sakhalin; Turkey; China; Korea; Japan including Ryūkyū Islands.

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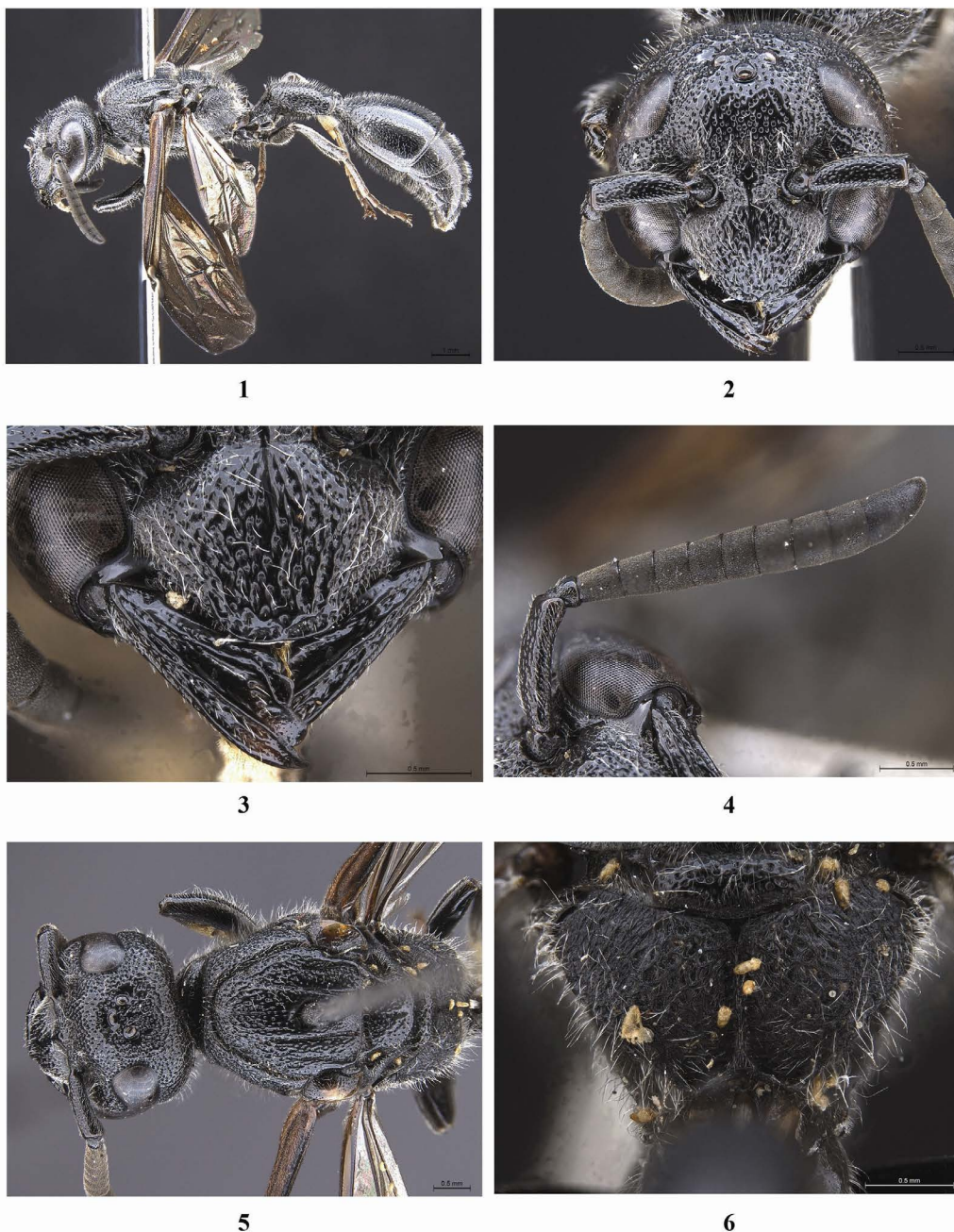
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Plate I



Figures 1-6. *Discoelius vasukii* Pannure & Carpenter, female. 1. Body profile; 2. Head, frontal view; 3. Clypeus and mandible; 4. Antenna; 5. Head and mesosoma, dorsal view; 6. Propodeum.

Plate II



7



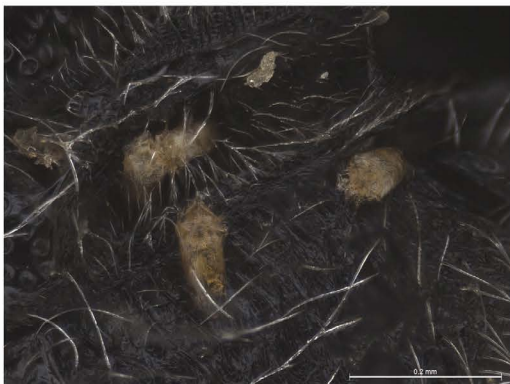
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Figures 7-12. *Discoelius vasukii* Pannure & Carpenter, female. 7. Propodeum, lateral view; 8. Apical half of forewing; 9. T1, dorsal view; 10. T2 and remaining metasomal segments; 11. mesosomal cavities housing mites; 12. Collection locality.