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A review of *Trachusoides* Michener and Griswold (Hymenoptera: Megachilidae)

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Abstract

The rare genus *Trachusoides*, previously known only from a single species inhabiting the Western Ghats of India, is reviewed. *Trachusoides elsieae*, new species, is described from Laos, additional records for *T. simplex* are documented, and a key to separate the species is provided.

Key words: taxonomy, resin bee, Indo-Malaysian Region

Introduction

The Anthidiini (Megachilidae) of the Indo-Malaysian region, (<http://bioscience.oxfordjournals.org/content/62/3/260/F2.expansion.html>); though distinctive, remain little known. Pasteels (1972) revised the species of the region, including 30 species in seven genera (later reduced to six; Michener and Griswold 1994). A generic revision of the Eastern Hemisphere Anthidiini (Michener & Griswold 1994), added three new endemic genera to the region, *Acedanthidium* Michener (= *Acanthidium* Michener & Griswold), *Indanthidium* Michener & Griswold, and *Trachusoides* Michener & Griswold, and two new species, *I. crenulaticauda* Michener & Griswold and *T. simplex* Michener & Griswold, to the fauna. There have been few subsequent additions to the known fauna: two cleptoparasites of the genus *Euaspiis* Gerstaecker described from India, Sri Lanka and Philippines (Baker 1995), two species of *Anthidiellum* Cockerell from Sri Lanka (Griswold 2001), and *Anthidiellum (Ranthidiellum) ignotum* Engel (2009) from Thailand. Details are found at: http://www.discoverlife.org/mp/20q?guide=Apoidea_species.

The Indo-Malaysian endemic genus *Trachusoides* is an example of how little is known of the fauna of the region. The genus has been known from a single female from southern India (Michener 2007). A second, recently discovered species expands the generic concept and the distribution of the genus. Herein this new species is described, the diagnosis for the genus refined, a key to the species provided, and additional records of *T. simplex* documented.

Material and methods

Morphological terminology follows that of Michener (2007). The description of the new species follows the format of *T. simplex* to facilitate comparisons between the two species. Metasomal segments are abbreviated as T1, T2, ... for terga and S1, S2, ... for sterna. Measurements and photomicrographs were taken using a Keyence® VHX-500F Digital Imaging System.

Systematics

Trachusoides Michener and Griswold, 1994: 324

Type species: *Trachusoides simplex* Michener & Griswold 1994

margins. *Punctuation*: Dense throughout, finer on clypeus, lower paraocular, genal areas than rest of head, thorax; foveolate on frons, scutum; propodeum impunctate on ventral half of posterior face; tibiae not more coarsely punctate than body, surfaces not tuberculate; posterior margins of T3 to T5, all of T6 more finely punctate than clypeus; sterna with basal, apical zones impunctate. *Pubescence*: Mixture of pallid, dark on lower half of face; dusky on remainder of head, all mesosoma; T1 to T3 dark, T4 mixture dark and yellow, T5 and T6 yellow; scopa entirely yellow. Pubescence of clypeus mostly erect, mostly very short, scattered longer hairs; bristles of clypeal apex yellow, labral apex amber; lower margin of mandible with series of about six widely spaced long, erect bristles. Rest of head with pubescence rather sparse (where not worn off); mesosoma with pubescence dense (where not worn off), slightly longer on sides, venter, propodeum. Metasoma with pubescence of terga short, dense, obliquely directed posteriorly except longer, sparser on T1 dorsally, not particularly denser on posterior zones. Scopa dense, long on S2 to S5. *Integument*: Black on head (except clypeus dark brown), mesosoma, T1 to T4 (except brownish apically). Flagellar segments four to ten grayish. Fore, mid legs dark brownish. Wings yellowish, darker near costal margin, distal veins amber to yellow. T5, T6 yellow.

Male: Unknown.

Etymology. It is a great pleasure to recognize my third grade teacher, Elsie Williams of Bowman, California, who inspired me with a love of learning, whose adventurous spirit has taken her to several continents, including a teaching assignment in Lesotho in “retirement”, and who, at age 98 still inspires me with her exuberant interest in the world around her.

Comments. The type location is actually Ban Van Heue, 20 km E of Phou-kow-kuei in Vientiane Province (Evenhuis 2006).

***Trachusoides simplex* Michener and Griswold**

This inhabitant of Western Ghats is rarely encountered. It has been known only from the holotype female from Karnataka State, India. Here two specimens, one only 40 km from the type locality, the other extending the range south to the adjacent state of Tamil Nadu, are recorded. The latter specimen differs slightly from the type in the presence of a poorly defined, oval, yellow integumental marking in the lower paraocular area.

New record. 1 female, “S. INDIA: Mysore State [Karnataka], Coorg Distr. Mercara [Madikeri] 4000ft. V 1973 Nathan” (SEMC); 1 female, “S. INDIA Nilgiri Hills, Devala [Tamil Nadu] V-61 P.S.Nathan Collector” (AMNH).

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References

- Baker, D.B. (1995) A review of Asian species of the genus *Euasps* Gerstacker. *Zoologische Mededelingen*, 69, 281–302.
- Engel, M.S. (2009) A new species of *Ranthidiellum* from Thailand, with a key to the species (Hymenoptera: Megachilidae). *Acta Entomologica Slovenica*, 17, 29–35.
- Evenhuis, N.L. (2006) New species of *Isoneuromyia* Brunetti (Diptera: Keroplatidae) from the Oriental Region. *Zootaxa*, 1140, 1–29.
- Griswold, T. (2001) Two new trap-nesting Anthidiini from Sri Lanka. *Proceedings of the Entomological Society of Washington*, 103, 269–273.
- Michener, C.D. (2007) *The Bees of the World*. Johns Hopkins University Press, Baltimore, MD, xvi + 953 pp.
- Michener, C.D. & Griswold, T.L. (1994) The classification of Old World Anthidiini (Hymenoptera, Megachilidae). *The University of Kansas Science Bulletin*, 55, 299–327.
- Pasteels, J.J. (1972) Revision des Anthidiinae (Hymenoptera Apoidea) de la region indo-malaise. *Bulletin et Annales de la Societe Royale Belge d’Entomologie*, 108, 72–128.