



A new species of *Phanerotoma* Wesmael (Hymenoptera: Braconidae: Cheloninae) from the Andaman Islands, India

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Abstract

A new species *Phanerotoma andamanensis* Gupta & van Achterberg **sp. nov.** is described from the Andaman Islands, India. Differences of the new species from the other Oriental species are discussed. *Phanerotoma agarwali* Varshney & Shujauddin, 1999, is a junior synonym of *P. syleptae* Zettel, 1990, **syn. nov.**

Key words: *Phanerotoma*, parasitoid, new species, Andaman Islands

Introduction

The cosmopolitan genus *Phanerotoma* Wesmael (1838) was named with *Chelonus dentatus* Panzer as the type species. From India nine species are documented (Shenefelt 1973, Zettel 1990, Varshney and Shujauddin 1999, Ahmad and Shujauddin 2004, and Sheeba and Narendran 2008). From India and Malaysia the biology of some species is known, viz., *Phanerotoma divergens* van Achterberg is reared from a host in Dipterocarpaceae seeds (van Achterberg *et al.* 2009), *P. syleptae* Zettel, 1990 from *Diaphania indica* (Saunders), *Haritalodes derogata* (Fabricius), *Hendecasis duplifascialis* (Hampson) and *Palpita machaeralis* (Walker), its synonym *P. agarwali* Varshney & Shujauddin, 1999 from *Haritalodes derogata* (Fabricius), *P. buchneri* Fahringer, 1932 from *Pseudohypatopa pulvereae* (Meyrick), *P. noyesi* Zettel, 1990 from *Glyphodes pulverulentalis* Hampson and *P. hendecasisella* Cameron, 1905 has been reared from 21 hosts (Yu *et al.* 2013). In this paper we describe a new species of *Phanerotoma* from the Andaman Islands, India associated with *Cassia* sp. (Fabaceae); it is the first species of *Phanerotoma* reported from the Andaman Islands. The terminology used follows van Achterberg (1993).

Material and methods

The wasps were aspirated manually while hovering over the inflorescence of *Cassia* sp. at Jirkatong, South Andaman in the early morning hours. LEICA M 205A stereozoom microscope with LEICA DC 420 inbuilt camera using automontage software (version 3.8) was used for imaging. The holotype and two paratypes are deposited in the National Bureau of Agriculturally Important Insects (NBAIL), Bangalore. Two paratypes are deposited in Naturalis Biodiversity Center, Leiden, Netherlands.

Species description

***Phanerotoma andamanensis* Gupta & van Achterberg sp. nov.**

(Figs A–N)

Measurements: Length of body in dorsal view 4.0 mm (holotype, Fig. A); 3.7 (paratype, Fig. G); 3.2 mm (paratype, male, Fig. J); antenna 3.1 mm (paratype, female) and fore wing 2.9 (holotype) or 2.5 mm (paratype, female).

Female. Colour: Yellowish brown. Basal five segments and pedicel of antenna yellowish, remainder of antenna brown. Eyes and stemmaticum black. Pronotum pale testaceous; T1 and T2 pale testaceous; T3 yellowish brown laterally, but medio-longitudinal third black; T1 with H shaped mark medially. Tip of mandible dark brown. Pterostigma dark brown without distinct pale basal spot, only somewhat paler basally than medially; ocelli yellow; hind tibia medially pale yellow.

Head (Fig. B): Width 1.3 times median length in frontal; antenna with 23 segments and 1.1 times as long as fore wing; area of stemmaticum punctate (Fig. D); OOL: diameter of posterior ocellus: POL= 6: 2: 1; vertex transversely rugose with fine granulate background anteriorly, setose; temple rugose; face rugose with median ridge and setose; clypeus smooth medially, shiny and setose; malar space rugose, lower tooth of mandible 0.25 times as long as apical tooth (Fig. C).

Mesosoma (Fig. E): 1.4 times as long as wide; sides of pronotum coarsely crenulate with median depression dorsally; mesoscutum granulose-reticulate, setose; notauli distinct and foveate anteriorly, absent posteriorly; scutellar sulcus wide and with 9 crenulae; scutellum finely punctate and setose; metanotum with median ridge; propodeum coarsely reticulate rugose with distinct transverse carina below the median line, median carina absent, median areola just above transverse carina (open anteriorly). Fore wing 3.2 times as long as wide; length of 1-R1 1.5 times pterostigma; r issued much beyond middle of pterostigma; 2-SR slightly sinuate; 3-SR and SR1 slightly curved; 2-SR+M longitudinal; parastigma large and dark brown pigmented; m-cu interstitial; vein 1-CU1 0.8 times as long as vein 2-CU1; 3-SR = 0.35 times as long as 1-R1 and 5.6 times r; r = 0.3 times as long as width of pterostigma; pterostigma 3 times longer than wide; 1-R1 = 1.5 times longer than pterostigma; inner mid tibial spur 0.6 times mid basitarsus; hind coxa finely punctate; hind femur 3.7 times its width.

Metasoma (Fig. F): Oval in dorsal view and 1.8 times as long as wide, 1.2 times as long as mesosoma; first –second tergites longitudinally spaced rugose with some interconnections, second suture sinuate dorsally; third tergite longitudinally reticulate-rugose and truncate medio-posteriorly, its medial length 1.6 times medial length of second tergite, lateral lamella not protruding latero-apically; ovipositor exerted (0.16 mm in lateral view) and setose; exerted part of sheath 0.14 times as long as hind tibia.

Male (Fig. J): Similar to female except for smaller size and T3 completely black (Fig. M).

Note. The new species differs from all described Oriental species by the combination of the dark brown vein 1-M and 1-R1 of the fore wing, the median third of the third tergite of female dark brown and contrasting with yellowish brown lateral parts and the rather long vein 1-CU1 of the fore wing. In the key to Indian species by Sheeba & Narendran (2008) the new species runs to *P. buchneri* Fahringer, 1932, from NE. India because of its size and the venation and to *P. agarwali* Varshney & Shujauddin, 1999, from N. India. *P. buchneri* has a rather pale 1-R1 (darkened in *P. andamanensis*), the pterostigma largely pale brown (dark brown), vein 1-CU1 of the fore wing about 0.7 times vein 2-CU1 (0.8 times), the hind tibia with dark brown subbasal patch (absent), the propodeum darkened (brownish yellow), the third tergite apically dark brown and anteriorly yellowish brown (laterally brownish yellow and medially dark brown) and T1 posteriorly and T2 medially distinctly brownish yellow pigmented (largely unpigmented). *P. agarwali* Varshney & Shujauddin, 1999 (a junior synonym of *P. syleptae* Zettel, 1990, **syn. nov.**) differs by having the third tergite medio-apically concave and lateral lamella somewhat protruding (truncate and lamella not protruding); vein 1-CU1 about 0.5 times as long as vein 2-CU1 (incorrectly depicted in original description of *P. agarwali*; 0.7 times in *P. andamanensis*); the pterostigma brown (dark brown) and the third tergite yellowish brown (median third dark brown and remainder yellowish brown).

Type material. Holotype, female on card, INDIA, Andaman Islands, Jirkatong, 11.36620N 92.850E; 10.iii.2012; hovering on inflorescence of *Cassia* sp., leg. Ankita Gupta. Paratypes, one female and two males on card, with same data as holotype. Deposited in the National Bureau of Agriculturally Important Insects (NBAIL), Bangalore, India. Code NBAIL/Brac/Phan/10312. Two males are deposited in Naturalis Biodiversity Center, Leiden, the Netherlands.

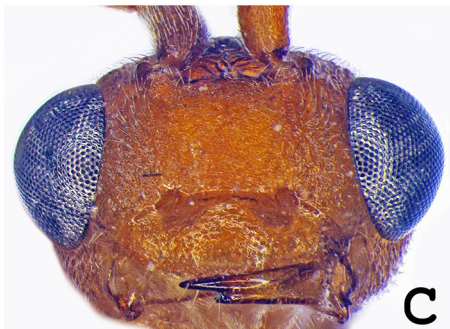
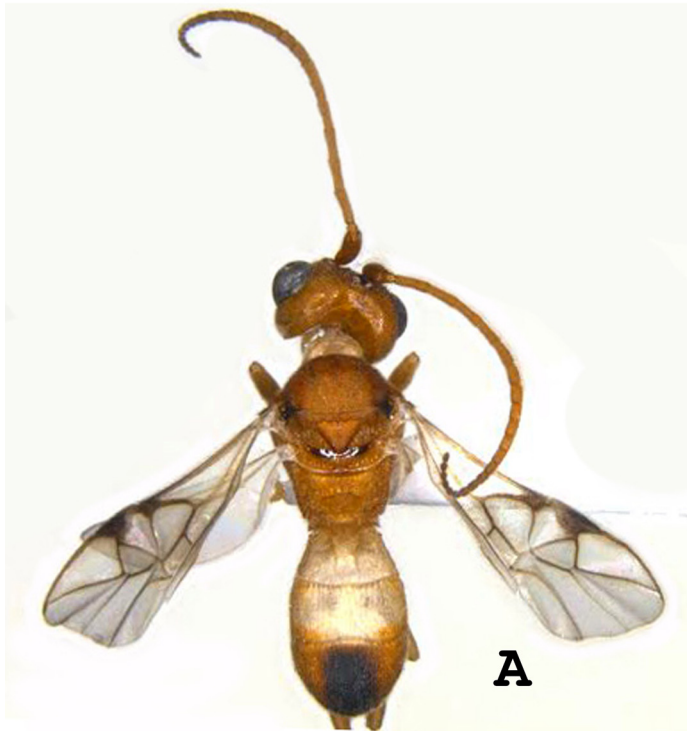


PLATE I. *Phanerotoma andamanensis* **sp. nov.** (Holotype)—A. Female in habitus; B. Head in frontal view; C. Head with full sight on mandibles; D. Vertex; E. Mesosoma; F. Metasoma.



PLATE II. *Phanerotoma andamanensis* sp. nov. (Paratype, female)—G. Profile view; H. Lateral view of head and mesopleuron; I. Fore wing.

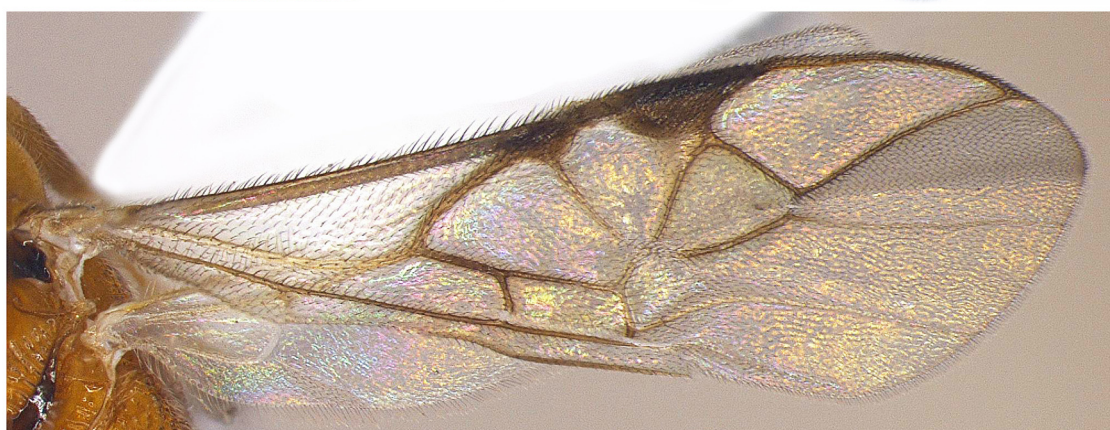


PLATE III. *Phanerotoma andamanensis* sp. nov. (Paratype, male)—J. Male in habitus; K. Mesosma; L. Vertex; M. Metasoma; N. Fore wing.

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