



A NEW SPECIES OF THE GENUS *PHANEROTOMA* WESMAEL (BRACONIDAE: CHELONINAE) WITH A KEY TO INDIAN SPECIES

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Abstract

A new species of *Phanerotoma* viz., *P. malabarica* Sheeba & Narendran sp. nov. from India is described and compared with its closest relative. A key to Indian species of *Phanerotoma* is also provided.

Key words: *Phanerotoma*, Braconidae, Cheloniinae, New species, *P. malabarica*

Introduction

Wesmael 1838 erected the genus *Phanerotoma* with the type species *Chelonus dentatus* Panzer. The genus includes two subgenera: *Bracotriactoma* Csiki and *Phanerotoma* Wesmael (Achterberg 1990). It is a cosmopolitan genus characterized by glabrous eyes, 23 segmented antenna, comparatively stout pterostigma and carapace with distinct sutures. The genus is represented by nine species from India (Shenefelt 1973, Zettel 1990, Varshney and Shujauddin 1999 and Ahmad and Shujauddin 2004). In this work we describe one new species of *Phanerotoma* from Kerala, India. A key to Indian species is also provided.

The terminology used in this work is that of Achterberg (1993). The types of the species described are deposited in Department of Zoology, University of Calicut pending transfer to Western Ghat Regional Station, Zoological Survey of India, Kozhikode, Kerala, India later.

Materials and Methods

The Braconids were collected using sweep net and curated by the methods described by Narendran (2001). Observations were made under Leica MZ6 Stereozoom Microscope (Switzerland) and the drawings were made using the drawing tube of the same microscope. The drawings were enlarged to appropriate size using the KB enlarger of model B2M.

Key to indian species of the genus *Phanerotoma* Wesmael

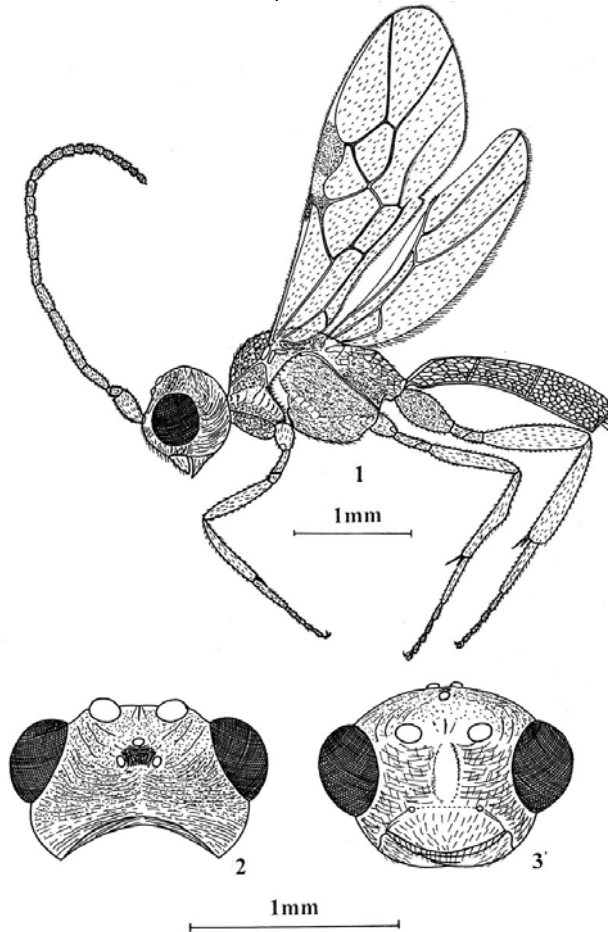
(Modified from Zettel (1990) and Ahmad & Shujauddin (2004))

1. Apical spine of hypopygium 0.23x length of metasoma*P. syedi* Ahmad & Shujauddin
-- Apical spine of hypopygium less than 0.23x length of metasoma..... 2
2. Ocellocular line (OOL) less than 2x OD: m-cu strongly postfurcal.....*P. indica* Zettel
-- OOL greater than 2x OD; m-cu different..... 3
3. Metasoma short and broad, shorter than mesosoma, at most 1.65x its breadth; antenna shorter and thicker than that of other species.....*P. sylepta* Zettel
-- Metasoma much slender..... 4
4. Length 3mm.....*P. buchneri* Fahringer
-- Length greater than 4mm..... 5
5. Fore wing vein 2-SR almost straight..... 6
-- Fore wing vein 2-SR slightly sinuate..... 7

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6. Fore wing with m-cu interstitial; malar space 0.86x basal width of mandible;
 OOL 4x Postocellar line (POL).....*p. agarwali* Varshney & Shujauddin
 -- Fore wing with m-cu antifurcal; malar space 0.43x basal width of mandible;
 OOL 3.3x POL.....*P. hayati* Varshney & Shujauddin
7. Fore wing with 3-SR hardly more than 2x r (1.65- 2.1);
 metasoma of female at least twice its width.....*P. nathani* Zettel
 -- Fore wing with 3-SR more than 3x r; metasoma of female less than twice its width.....8
8. Length 3.9- 4.5mm; clypeus punctate and shiny; scutellar sulcus hardly recognizable; 3-SR 3x r; 2SR+M
 transverse; 1-R1 1.53x pterostigma; metasoma of female 1.85x its width.....*P. noyesi* Zettel
 -- Length 4.1mm; clypeus smooth, shiny and hairy; scutellar sulcus wide and crenulate; 3-SR 5.5x r;
 2SR+M longitudinal; 1-R1 1.71x pterostigma; metasoma of female 1.67x its width *P. malabarica* Sheeba
 & Narendran sp. nov.

Phanerotoma malabarica Sheeba & Narendran sp. nov.



Figs. 1-3 *Phanerotoma malabarica* Sheeba & Narendran sp. nov.
 1. Body profile, 2. Head dorsal view, 3. Head front view

Holotype: Female: Length of body 4.1mm, of antenna 3.48mm and of fore wing 3.06mm.

Head: Width 1.43 and 2.16x its median length in anterior (Fig.3) and dorsal (Fig.2) views respectively; antenna with 23 segments; scape 2x its breadth; length of third, fourth, penultimate and apical antennal segments 3.8, 3.6, 1.67 and 3.25x their width respectively; frons granulate with rugosities on either side of srobe and with median carina (Fig 3); area of stemmaticum rugulose; OOL: diameter of posterior ocellus: POL= 13: 2: 7; vertex transversely rugose with fine granulate background anteriorly, rugose posteriorly and hairy; occiput transversely rugose; eyes glabrous, not emarginate; length of eye 1.43x temple in dorsal view; temple finely rugose with fine granulations near eyes; gena rugose; face rugose with median ridge and hairy (Fig 2); width of face 2.18x height; clypeus smooth, shiny and hairy; width 2.79x its height; malarspace rugose, 1.6x basal width of mandible; mandible long and slender; inner tooth of mandible much longer than that of outer.

Mesosoma (Fig 1): Length 1.57x its height; pronotum coriaceous dorsally with crenulate edges, coriaceous laterally with crenulated middle region; mesoscutum granulate- reticulate, hairy; notauli distinct and foveate anteriorly, absent posteriorly; scutellar sulcus wide and crenulate; scutellum punctuate and hairy; metanotum with median ridge; propleuron coriaceous; mesopleuron granulate, hairy; precoxal sulcus with weak fovea; pleural sulcus crenulate; metapleuron coriaceous; propodeum reticulate with distinct transverse carina and small tubercles. Fore wing 2.6x its width; length of 1-R1 1.7x pterostigma; r emerging much beyond middle of pterostigma; 3-SR 5.5x r; 2-SR slightly sinuate; 3-SR and SR1 straight; 2SR+M longitudinal; parastigma large and pigmented; maximum width of pterostigma 0.63x length of 3-SR; mid tibia with a blister; mid tibial longer spur 0.46x mid basitarsus; hind coxa granulate; hind femur 4x its width; hind tibia 5.25x width, 1.13x hind femur; hind basitarsus as long as remaining tarsal segments.

Metasoma (Fig 1): Oval shaped; 1.67x its width; 1.17x mesosoma; first and second tergites longitudinally reticulate but reticulate laterally; first tergite with lateral converging carinae slightly extending its middle; third tergite reticulate- rugose, shallowly emarginate, with slightly protruding corners and its medial length 1.33x medial length of second tergite; ovipositor sheath just protruding beyond apex of metasoma.

Colour: Yellowish brown. Tip of mandible, apical seven segments of antenna, stigma, veins 1-R1, 1-M, 1-cu1, cu-a basal half of 2-cu1, r, 3-SR, SR1 and 2-M brown (other veins pale yellow); stemmaticum and eyes black; ocelli shining yellow; hind tibia medially pale yellow.

Male: Unknown.

Host: Unknown.

Material Examined: Holotype: Female, INDIA: Kerala, Malappuram Dt., Manjeri (11°7'N 76° 7'E), 6.iii.2005, Sheeba. M. Paratypes: 1 Female with same data of holotype; 2 Females, Alapuzha Dt, Kayankulam, Onattukara (9°10'N 76° 30'E), 19.iv.2005, T. C. Narendran & party.

Etymology: Named after the area of collection (Malabar area of Kerala State).

Discussion

The new species closely resembles *P. noyesy* Zettel in having metasoma of female less than twice its width, 2-SR slightly sinuate, and metasoma oval shaped but differs in having: 1) Clypeus smooth, shiny and hairy (In *P. noyesy* clypeus punctuate and shining); 2) Mesoscutum granulate- reticulate (In *P. noyesy* mesoscutum finely rugose); 3) Scutellar sulcus wide and crenulate (In *P. noyesy* scutellar sulcus hardly recognizable); 4) 1-R1 1.71x pterostigma (In *P. noyesy* 1.53x pterostigma) and 5) Metasoma of female 1.67x its width (In *P. noyesy* 1.85x width).

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