

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

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ABSTRACT

A new species of the genus *Phanerotoma* is described. A key to the Indian species of this genus *Phanerotoma* is also given. A new replacement is proposed for *P. indica* Varshney & Shujauddin.

KEYWORDS

Braconidae, *Cheloninae*, *Hymenoptera*, new name, new species, *Phanerotoma hayati* nom.nov., *Phanerotoma syedi* sp. nov.,

ABBREVIATIONS

AOL - Anterior-ocular line; OOL - Ocello-ocular line; POL - post-ocular line; ØOD - Diameter of an ocellus; ZDAMU - Zoology Department, Aligarh Muslim University.

The genus *Phanerotoma* Wesmael belongs to the subfamily Cheloninae of Braconidae. The genus is represented by seven species from India (Shenefelt, 1973; Zettel, 1990; Varshney & Shujauddin, 1999). In the present work a new species is described from India and a key to Indian species of *Phanerotoma* is also provided. Achterberg (1993) has been followed for terminologies.

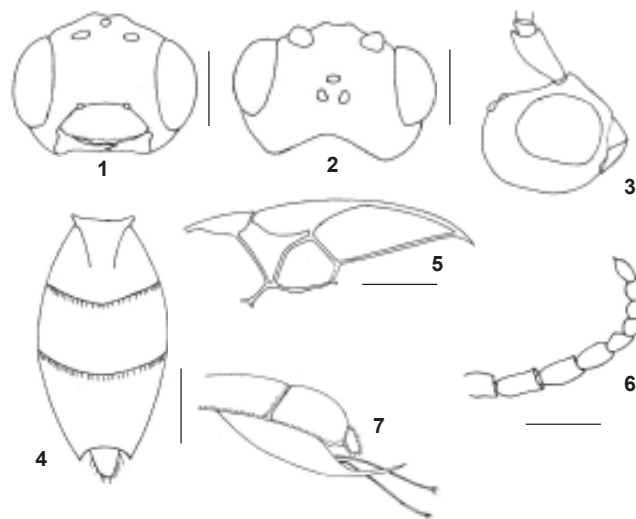
Phanerotoma syedi sp. nov.

(Figs. 1- 7)

Female: Length, 2.7mm; fore wing, 2.5mm.

Head: 0.9x maximum width of mesoscutum; frons and vertex transversely rugose with very finely granulate background sculpture; OOL:POL:AOL:ØOD=8:2:2:2 (Fig. 2); length of eye in dorsal view 2.0x temple (Fig. 2); face 1.5x as long as high, transversely rugose with very finely granulate background sculpture; clypeus 2.5x as broad as high, tubercles distinct (Fig. 1); malar space 0.5x basal width of mandible (Fig. 3); inner tooth of mandible short, shorter than half length of outer tooth (Fig. 1); antennae rather slender, 23-segmented; scapus 2.1x as long as broad, further segments gradually shortening, subapical segments submoniliform and as long as broad, apical segment 2x as long as broad (Fig. 6).

Mesosoma: Mesoscutum reticulo-granulate; scutellum granulate; propodeum rugose with a transverse carina. Forewing with pterostigma about 3.0x as long as broad and about 0.8x as long as 1-R1 (Fig. 5); vein 3-SR and SR1 straight (Fig. 5); vein 2-SR bent (Fig. 5); vein r emerging much beyond the middle of pterostigma and 0.15x as long as 3-SR (Fig. 5); vein m-cu 3x as long as vein r (Fig. 5); 2-SR+M distinct (Fig. 5). Mid tibia with indistinct bluster; hind tibia 4.0x as long as broad and about as long as hind femur; hind basitarsus 0.7x as long



Figures 1-7. *Phanerotoma syedi* sp. nov., (female)
1 - Frontal head; 2 - Dorsal head; 3 - Lateral head;
4 - Dorsal metasoma; 5 - Apical fore wing;
6 - Subapical antennal segments; 7 - Lateral metasoma.
Scale = 1-4 & 7 - 1.0mm; 5-6 - 0.5mm

as remaining tarsal segments.

Metasoma: Shape of metasoma moderately elongate (Fig. 4); first and second tergite longitudinally rugos-striate; lateral converging carinae of tergite one on basal half; tergite three reticulate rugose, emarginated with sharp protruding corners latero-apically (Fig.4); ovipositor sheaths very long and thick (Fig.7); hypopygium abberent because of the presence of long apical spine (Fig.7).

Colour: Yellowish brown; palpi, fore and mid coxae whitish; apical half of hind tibia, third tergite and tips of mandible dark brown; stemmaticum black; wings hyaline, pterostigma dark brown, venation yellowish to yellowish brown.

Male: Unknown

Material examined:

Holotype: Female, INDIA: Uttar Pradesh: Etawa, 30. 4. 2002, Coll. Shamim Ahmad (ZDAMU).

Paratypes, 2 F with the same data as Holotype.

Distribution:

India: Uttar Pradesh.

Etymology:

The species named after Sir Syed Ahmad Khan, founder of Aligarh Muslim University, Aligarh.

Remarks:

Phanerotoma syedi sp. nov. is allied to the Palearctic species, *P. bilinea* (Lyle) (Achterberg, 1990) but differs for having subapical segments submoniliform (subapical segments rather slender in *bilinea*); first and second tergite longitudinally rugo-striate and third tergite reticulate rugose (first and second tergite coarsely irregularly rugose and third tergite rather matt in *bilinea*).

***Phanerotoma hayati* nom.nov.**

Phanerotoma (*Phanerotoma*) *indica* Varshney & Shujaiddin, 1999: 260-262.

Preoccupied by *Phanerotoma indica* Zettel, 1990.

Distribution:

India: Uttar Pradesh.

Etymology:

The species is renamed after Prof. M. Hayat, Aligarh Muslim University, Aligarh for his valuable contribution to the parasitic hymenoptera.

REFERENCES

- Achterberg, C. Van. (1990).** Revision of the Western Palearctic Phanerotomini (Hymenoptera: Braconidae). *Zoologische Verhandelingen* 255: 1-160.
- Achterberg, C. Van. (1993).** Illustrated key to the subfamilies of the Braconidae (Hymenoptera: Ichneumonoidea). *Zoologische Verhandelingen* 283: 1-189.
- Fahringer, J. (1932).** Zwei new Braconidenarten als Feinde einer Mordraupe-*Z. angew. Ent.* 19:144-146.
- Shenefelt, R.D. (1973).** Hymenopterorum Catalogus. (Nov. ed.) Part 10, Braconidae 6: 813-936.
- Varshney, K. & Shujaiddin. (1999).** Two new species of the genus *Phanerotoma* Wesmael (Hymenoptera: Braconidae) from India. *Record of zoological survey of India* 97: 259-263.
- Zettel, H. (1990).** Die *Phanerotoma* - Arten des indischen subkontinentes (Insecta: Hymenoptera: Braconidae: Cheloniinae) *Reichenbachia* 27: 147-158.

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Key to the Indian species of *Phanerotoma**

1. Hypopygium with very long apical spine [OOL:POL: AOL: ØOD = 8:2:2:2]..... ***Phanerotoma syedi* sp.nov.**
Hypopygium without such a long apical spine..... 2
2. Ocelli very large, OOL less than two ØOD; m-cu strongly postfurcal *P. indica* Zettel
Ocelli small, OOL always greater than two ØOD; m-cu different..... 3
3. Metasoma short and broad, shorter than the mesosoma at most 1.65x as long as broad..... *P. syleptae* Zettel
Metasoma much slender 4
4. Fore wing with vein 2-SR distinctly curved..... 5
Fore wing with vein 2-SR almost straight 6
5. Fore wing with vein 3-SR, 1.27x as long as vein r ; metasoma of female at least 2.0x as long as broad..... *P. nathani* Zettel
Fore wing with vein 3-SR, 3.0x as long as vein r ; metasoma of female less than twice as long as broad..... *P. noyesi* Zettel
6. Forewing with m-cu interstitial; malar space 0.86x basal width of mandible; OOL 4.0xPOL..... *P. agarwali* Varshney & Shujaiddin
Forewing with m-cu antiferulcal; malar space 0.43x basal width of mandible; OOL 3.3x POL..... ***P. hayati* nom. nov.**

* *P. buckneri* Fahringer is not included in the key. From the original description (noted from Zettel, 1990) it has the following characters: Temple ½ eye width; head and thorax with setigerous punctures; carapace 1.8x as long as broad ; length 3 mm. This species was described from material collected- Assam and Jharkhand.

