

**TWO NEW SPECIES OF THE GENUS *PHANEROTOMA* WESMAEL
(HYMENOPTERA : BRACONIDAE) FROM INDIA**

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INTRODUCTION

The genus *Phanerotoma* Wesmael belongs to the subfamily Cheloninae of the family Braconidae. The genus was first described by Wesmael 1838 to accommodate type species *Chelonus dentatus* Panzer. The genus is divided into two subgenera : *Bracotritoma* Csiki and *Phanerotoma* Wesmael (Achterberg, 1990). The genus is represented by two species viz., *p. hendecasisella* Cameron 1905 and *p. buchneri* Fahringer 1932 from India (Shenefelt, 1973). In the present work two new species of the genus are described from India viz., *Phanerotoma (Phanerotoma) agarwali* and *Phanerotoma (Phanerotoma) indica*. The terminology followed after Achterberg (1993).

***Phanerotoma (Phanerotoma) agarwali** sp. n.**

(Figs. 1A-C)

Female : Head, ocelli, antennae and mesosoma yellowish-brown ; mesoscutum with three yellowish-brown longitudinal bands ; eyes yellowish-black ; ocellar spot black ; legs and metasoma yellow to yellowish-brown. Wings hyaline with brown infuscation below pterostigma ; parastigma, pterostigma, C + SC + R, 1-U1, 1-M, R, 3-SR, proximal portions of 2-SR and SR1, 1-CU1 and cu-a brown, rest of the veins pale.

Head 1.2X wider than maximum width of mesoscutum ; frons transversally rugose, not depressed behind antennae, with a distinct broad carina ; OOL = 4.0X POL ; length of eye in dorsal view 1.7X length of temple, the latter transversally rugose ; diameter of anterior ocellus 0.8X diameter of posterior ocellus ; face 1.7X as wide as high, transversally rugose,

*Named after late Prof. M. M. Agarwal, Department of Zoology, A.M.U., Aligarh.

carina in the form of a broad raised band ; clypeus punctate, with three teeth ; malar space 0.86X basal width of mandible ; inner tooth of mandible much shorter than outer. Antenna (fig. B & C) 23-segmented, shorter than body ; scape 2.1X as long as broad, further segments gradually shortening, subapical segments not moniliform, rather robust, apical segment twice as long as broad.

Mesoscutum reticulo-granulate ; scutellum granulate ; propodeum rugose, carina formed by rugosities, lateral tubercles very small. Fore wing (fig. A) 1.4X shorter than body ; pterostigma 2.85X as long as broad, 1.75X shorter than 1-R1 ; maximum width of pterostigma 0.54X vein 3-SR (but pterostigma rolled in) ; r emerging much beyond the middle of pterostigma, 4.8X shorter than 3-SR ; SR1 slightly curved, 2.3X as long as 3-SR ; 2-SR slightly curved at its base ; r-m 1.3X as long as r ; 2-SR + M not distinct (or 2-SR interstitial with m-cu). Mid tibia with blister ; hind femur 4.0X as long as broad, 1.2X shorter than hind tibia ; hind basitarsus 1.3X shorter than tarsal joints 2-4 combined.

Metasoma longitudinally rugose, 1.14X as long as mesosoma ; first and second tergites almost equal, third longer (20 : 21 : 33), with converging carinae on basal half, not reaching up to first suture ; third tergite convex ; apex of metasoma excised with two small lateral tubercles ; ovipositor sheath protruding much beyond the apex of metasoma.

Length : 4.15 mm.

Male : Subapical antennal segments slender than in female ; apex of metasoma less excised, lateral tubercles indistinct.

Holotype " : 2 " ", 2 ♂♂ paratypes ; INDIA : Uttar Pradesh, Aligarh, 29.IX.1971 ; ex *Sylepta derogata* Fabricius on *Gossypium arboreum* L. ; coll. (Shujauddin).

Remarks : The new species *Phanerotoma (Phanerotoma) agarwali* runs close to *P. (P.) hendecasisella* Cameron, but differs in having : (i) antennae shorter than body (ii) clypeus punctate, (iii) vein r and 3-SR of fore wing not forming an arc.

***Phanerotoma (Phanerotoma) indica* sp. n.**

(Figs. 1D-F)

Male : Head, ocelli and first tergite brownish-yellow ; eyes yellowish-black ; ocellar spot black ; antennae yellowish-brown gradually becoming darker apically ; mesoscutum brownish-yellow with two lateral and one medio-basal brown bands, rest of the mesosoma, second and third tergites brown ; legs yellow to brownish-yellow. Wings subhaline with brown infuscation below pterostigma ; pterostigma, C + SC + R, 1-R1, 1-M, r, 3-SR, proximal portion of 2-SR and SR1, 1-CU1 and cu-a brown, rest of the veins pale.

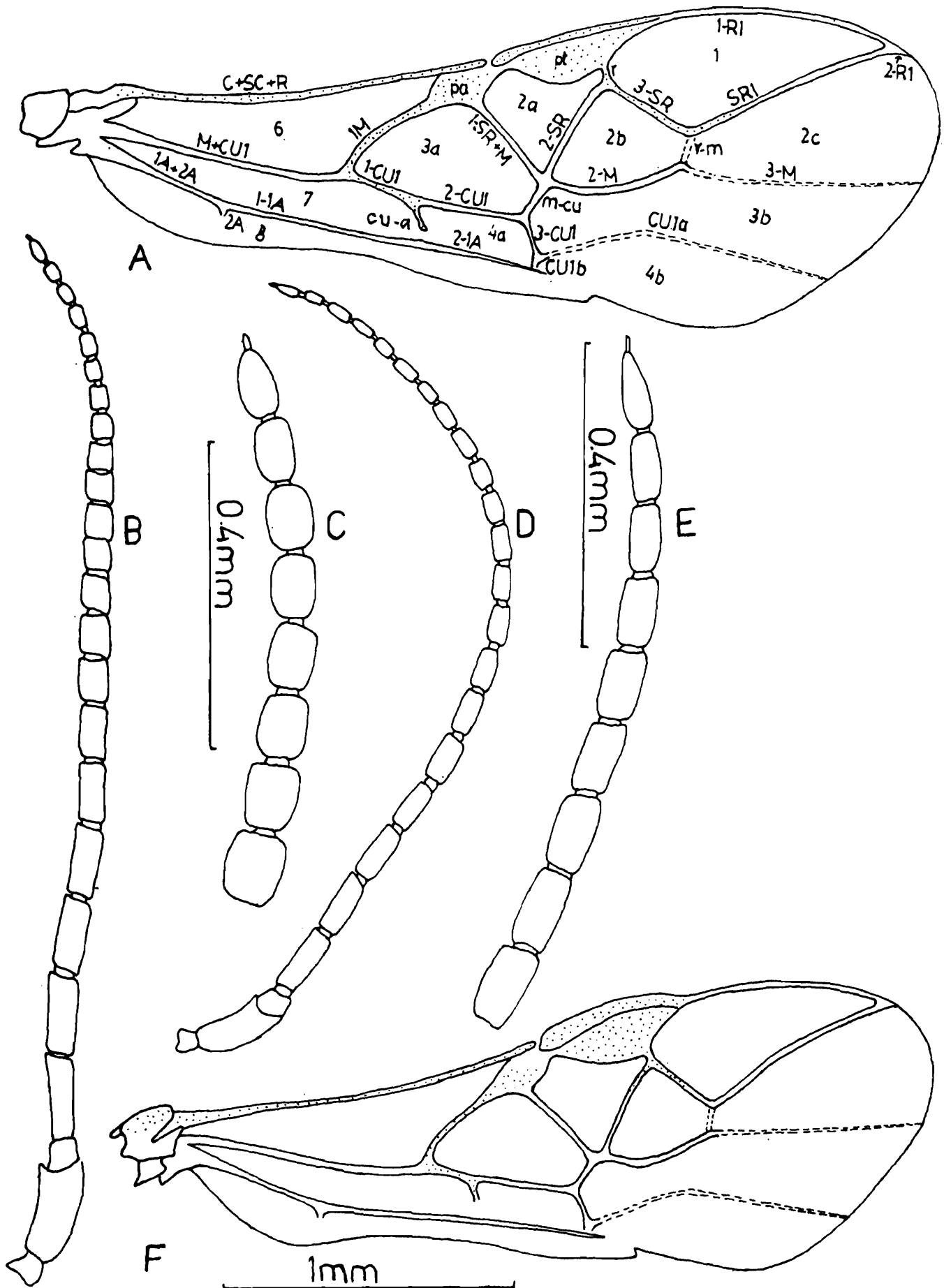


Fig. A-C. *Phanerotoma (Phanerotoma) agarwali* sp. n. ♀. A : Fore wing. B : Antenna. C : Apical part of antenna.
 Fig. D-F. *Phanerotoma (Phanerotoma) indica* sp. n. ♂. D : Antenna. E : Apical part of antenna. F : Fore wing.

Head 0.9X wider than maximum width of mesoscutum ; frons reticulate granulate, slightly depressed behind antennae, with a distinct carina (not reaching up to anterior ocellus in 2 ♂♂) ; OOL = 3.3X POL ; length of eye in dorsal vein 1.8X length of temple, the latter reticulate-rugose ; ocelli equal in diameter ; face 1.8X as wide as high, rugose-granulate, carina ending in a tubercle medially ; clypeus punctate, with three teeth ; malar space 0.43X basal width of mandible ; inner tooth of mandible much shorter than outer. Antenna (fig. D & E) 23-segmented, almost as long as body ; scape 2.2X as long as broad, first flagellar segment 2.8X as long as broad, further segments gradually shortening, sub-apical segment slender and elongated, apical segment 3.3X as long as broad.

Mesoscutum reticulate-granulate ; scutellum granulate ; propodeum rugose, with mid transverse carina ; lateral tubercles small. Fore wing (fig. F) 1.4X shorter than body ; pterostigma 2.4X as long as broad, 1.5X shorter than 1-R1 ; maximum width of pterostigma 0.8X vein 3-SR ; r emerging much beyond the middle of pterostigma, 4.0X shorter than 3-SR ; SR1 slightly curved, 2.8X as long as 3-SR ; 2-SR slightly curved at its base ; r-m 1.3X as long as r ; 2-SR + M distinct (or 2-SR not interstitial with m-cu). Mid tibia with blister ; hind femur 3.5X as long as broad ; 1.14X shorter than hind tibia ; hind basitarsus 1.14X shorter than tarsal joints 2-4 combined.

Metasoma with first and third tergites reticulate, second tergite longitudinally rugose ; metasoma 1.3X as long as mesosoma ; first tergite longer than second but shorter than third (18 : 16 : 20), with carinae converging on basal two-third then becoming parallel up to first suture ; third tergite convex ; apex of metasoma not excised.

Length : 3.63 mm.

Male : Unknown.

Holotype " : 6 ♂♂ paratypes ; INDIA : Uttar Pradesh, Aligarh, 2.IX.1968, light trap ; Coll. (Shujauddin).

Remarks : The new species *Phanerotoma (Phanerotoma) indica* differs from *P. (P.) agarwali* sp. n. in having : (i) fore wing with vein 2-SR not interstitial with m-cu (ii) antennae almost as long as body (iii) subapical antennal segments slender and elongated (iv) carinae on first metasomal tergite reaching up to first suture (v) malar space 0.43X basal width of mandible and (vi) OOL = 3.3X POL.

The type material is deposited in the Museum, Department of Zoology, Aligarh Muslim University, Aligarh.

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SUMMARY

Two new species of the Genus *Phanerotoma* Wesmael 1938 namely *Phanerotoma (Phanerotoma) agarwaali* and *Phanerotoma (Phanerotoma) indica*, collected from Aligarh (U. P.) India have been described. *P. (P.) agarwali* runs close to *P. (P.) hendecasisella* Cameron 1905 but differs in having (i) antennae shorter than body, (ii) clypeus punctate and (iii) vein r and 3-SR of forewing not forming an arc. *P. (P.) indica* differs from *P. (P.) agarwali* mainly in having (i) forewing with vein 2-SR not interstitial with m -cu, (ii) antennae as long as body, (iii) subapical antennal segment slender and elongated and (iv) carinae on first metasomal tergite reaching upto first suture.

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