



## A new genus and species of Pteromalidae (Hymenoptera: Chalcidoidea) from India

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**ABSTRACT:** A new genus and a new species of Pteromalidae, viz. *Indoclava Gupta et al.* gen. nov. and *Indoclava longissima Gupta et al.* sp. nov. are described from Bhimtal region of Uttaranchal.

**KEYWORDS:** *Indoclava* gen. nov., *Indoclava longissima* sp. nov., Pteromalidae, Hymenoptera

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There are 588 genera and 3506 species of Pteromalidae in the world (Noyes, 2005) and among these 96 genera are listed from India. Out of 96 genera, 84 with identified species and 12 genera with unidentified species are reported and listed from Indian subcontinent. The new genus described hereunder possesses some distinctive characters, which separate it from all known existing genera of this family. It does not fit into any of the keys of Boucek (1988) and Farooqi and Subba Rao (1985) necessitating the erection of a new genus.

**Genus *Indoclava Gupta et al.* gen. nov.**

(Fig. 1-12)

(Type species: *Indoclava longissima Gupta et al.* sp. nov.)

### ETYMOLOGY

The genus name is derived as "Indo" meaning "India" and "clava" meaning "club". The gender of the new genus is feminine.

### DIAGNOSIS

Occiput dorsally rounded, dorsal thorax with bluish tinge, thorax with dense piliferous punctation; pilosity short, vertex broad, malar suture absent. Eyes large and toruli wide apart, and antennae inserted at level of lower margin of the eyes; scape not reaching ocellus; pedicel slightly elongated, anellus very short; antenna with formula 11171, basal 3 funicular segments more elongate than remaining four; club distinctly long, about eight times longer than wide, unsegmented and with

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many sensilla. Mandible with two sharp but short apical teeth and two pre-apical blunt teeth on lower edge.

Thorax compact, broadest at tegula. Pronotum short, slender and inverted U shaped; anteriorly rounded, its hind margin broad and deeply emarginate. Notauli distinct and complete. Axillae slightly advanced, not nearly meeting in middle. Scutellum oval and elongate, midlobe bulging; frenum distinct, metanotum not very concealed. Propodeum feebly sloping in middle, median carinae distinct. Spiracles large. Propodeum with distinct nucha. Middle tibial spur as long as basitarsus. Forewing with speculum sparsely setose and close, costal cell broad and setose; postmarginal vein longer than marginal and stigmal vein, stigmal vein with distinct uncus. Basal half of fore wing sparsely setose.

Gaster oblong and petiolate, first tergite not covering most of gaster, gaster collapsing, ovipositor exerted. Petiole about 3 times longer than broad. First valvifer semicircular.

**BIOLOGY:** Not known

**DISTRIBUTION:** Bhimtal, Uttaranchal

#### REMARKS

This new genus belongs to the subfamily Ormocerinae because of the set of characters like notauli complete, axillae closer to each other; and mid tibial spur not enlarged. In the key to genera of Australasian Pteromalidae (Boucek, 1988) this new genus comes close to the genus *Encyrtocephalus* Girault in having petiole longer than broad but differs from it in having forewing without dark spot at base of curved stigmal vein and without a distinct ridge between antennal toruli.

This new genus also resembles the genus *Asoka* Boucek in the key to the Indian genera by Farooqi & Subba Rao (1985) in having gastral petiole narrow, long, slightly expanded posteriorly and attached on top of propodeum; gaster elongate, long and tapering to apex; but differs in having occiput dorsally rounded; basal three funicle

segments more elongate than rest four; club unsegmented and distinctly long, scutellum oval and elongate, having two parallel lines running in the mid lobe upto its middle; hind tibia with one spur; Postmarginal vein longer than stigmal vein and having oblong gaster.

***Indoclava longissima* Gupta *et al.*, sp. nov. (Figs. 1-12)**

#### Female

The species name is derived from the distinct character of extra-elongated club. Body length about 1.85 mm (Holotype); general body colour black; head black; eyes black and ocelli brown; antennae uniformly dark brown; lateral arms of pronotum black and middle portion completely black; thorax blackish blue with coarse reticulation; wings hyaline; legs brown fore and middle tibia and tarsi brown, hind coxa black and femur brown, hind tibia brown; abdomen black with bright reflection.

#### Head (Fig No. 3)

Wider than long in frontal view (0.78:0.63) (Fig No. 3); frontovertex distinctly (0.38), not more than half of total head width (0.38:0.78) (Fig No. 3); ocelli arranged in obtuse triangle; postocellar line as long as ocellocular line (0.15:0.15); diameter of median ocelli (0.05) smaller than postocellar line (0.05:0.15) (Fig No. 3), malar space smaller than total eye width (0.32:0.78); antennae inserted at level of lower margin of eye; width of frons between eyes more short than two and a half times of distance between two toruli (0.38:0.15) (Fig No. 3); right mandible four dentate; left mandible four dentate; short with two sharp margins and two blunt margins; maxillary and labial palpi four and two-segmented respectively.

#### Antenna (Fig No. 1)

Ten-segmented, excluding one ring segment, antennal formula-11171; scape not exceeding to frontocellus and about four times as long as wide (0.26:0.06) (Fig No. 1); pedicel slightly longer than wide (0.08:0.07); funicle seven-segmented;

segments gradually decreasing in length towards club, first funicle segment longer than wide (0.16:0.09) (Fig No. 1); second funicle segment longer than wide (0.13:0.10); third segment slightly longer than wide (0.11:0.10); fourth segment wider than long (0.10:0.09); fifth segment wider than long (0.12:0.06); sixth segment wider than long (0.12 : 0.05); seventh funicle segment wider than long (0.12:0.15), club unsegmented and eight times longer than wide (0.08 : 0.11), longer than all funicle segments together (Fig No. 1).

### Thorax

Anterolateral arm of pronotum bend inside; anterior margins concave and posterior margin convex, pronotum short and slender; thorax longer than wide (0.85:0.78); mesoscutum shorter than scutellum (0.27:0.40) (Fig No. 5), mesoscutum about two times wider than long (0.06:0.27) (Fig No. 5); scutellum wider than long (0.78:0.40) (Fig No. 5); axillae triangular, widely separated from each other; parapsidal grooves deep and complete. Propodeum with median carina and large spiracles (Fig No. 4); with a distinct nucha. Lateral outer half of axillae with longitudinal reticulations and inner half with hexagonal reticulations. Scutellum hexagonally reticulate in middle with longitudinal reticulations at both sides.

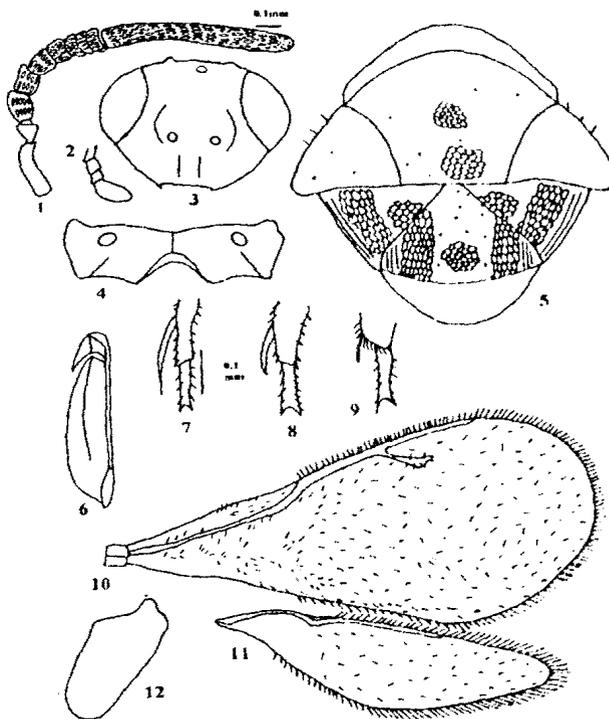
### Forewing (Fig No. 10)

A little longer than wide and about two times as long as wide (2.0:0.95) (Fig No. 10); densely setose; costal cell broad and setose, speculum sparsely close; submarginal vein almost two times as long as marginal vein (0.77:0.20) (Fig No. 10); basal cell setose; marginal fringes short, spaced by a distance equal to one third their length.

### Hindwing (Fig No. 11)

About three times longer than wide (1.35:0.42) (Fig No. 11); disc setose; marginal fringes long and spaced by one fourth of their length.

### Plate No.1: *Indoclava longissima* Gupta et.al. sp nov (Fig Nos. 1-12)



1. Female antenna, 2. Maxillary palp, 3. Head in frontal view, 4. Propodeum, 5. Thorax, 6. Ovipositor, 7. Part of fore leg., 8. Part of mid leg, 9. Part of hind leg, 10. Forewing, 11. Hindwing, 12. Hind Coxa

Fig. 1, 3, 10 & 11 – same scale; Fig. 2, 4, 5, 6, 7, 8, 9 & 12 – same scale

### Legs

Fore tibial spur slightly smaller than basitarsus (0.22:0.42) (Fig No. 7); Middle tibial spur as long as basitarsus (0.35:0.35) (Fig No. 8). Hind coxa longer than wide (0.56:0.18) (Fig No. 12); hind femur about three times as long as wide (0.56:0.18); hind tibia longer than hind femur (0.65:0.56), hind tibial spur too smaller than basitarsus (0.14:0.48) (Fig No. 9).

### Abdomen

Petiolated, petiole longer than wide (0.30:0.09). More longer than wide (1.15:0.58), ovipositor exerted; first valvifer semicircular third valvulae five times as long as wide (0.20:0.04) (Fig No. 6), second valvifer smaller than length of outer plate of ovipositor (0.60:0.74) (Fig No. 6), outer plate of ovipositor five times as long as wide (0.74:0.16) (Fig No. 6).

**Male:** Not known

**Holotype:** ♀, India, Bhimtal, Uttaranchal, egg patch on an ornamental plant, 4-IV-04, Ankita Gupta.

**Paratype:** 2♀, found, same data as holotype; Ankita Gupta

### ACKNOWLEDGEMENTS

The authors are thankful to Dr. J. Poorani, Senior Scientist, Project Directorate of Biological

Control and Dr. K. Tyagi for their help during the revision of manuscript.

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