

with compliments to Dr. J. Hays

Dr. M. Agarwal

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TASAWWER HUSAIN - MAN MOHAN AGARWAL
Department of Zoology, Aligarh Muslim University, Aligarh, India

Indosema indica gen. et sp. nov.
(Hymenoptera: Eucharitidae)
described from India



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Three Chalcids were collected by one of us (T. Husain) in early October of 1980 from the vegetable garden perching on the leaves of *Ricinus communis* L. The ovipositor is quite unique for having a pair of additional triradiate structures connecting with second valvifers (not recorded in Chalcids). These specimens possess rudiments of mandibles; scuto-scutellar sutures on thorax; marginal fringe on forewings totally absent. A new genus *Indosema* is proposed for *I. indica* also described as a new species.

Indosema gen. nov.

Head: without fronto-clypeal and fronto-genal sutures; frons depressed; pre-orbital carinae distinct on basal half; interscrobal area raised; clypeus truncated at apex; antennal sockets situated just below the middle of face and above lower margin of eyes; mandibles degenerate, labium and maxillae atrophied, lobate (Fig. I, 2a); antennae 11-segmented with 6 segments to funicle and three segments to club (Fig. II, 5). no!

Thorax (Fig. II, 7) glabrous, highly convex; pronotum (Fig. II, 6) completely hidden dorsally, very narrow in middle, anterior margin straight, posterior margin widely notched, much expanded laterally (condition close to aphelinids and encyrtids); axillae produced anteriorly; parapsidal furrows indicated as shallow depressions; scuto-scutellar suture wanting; scutellum much raised above gaster; propodeum with a median and paired lateral carinae. Forewings completely hyaline, densely punctate but without marginal fringe (Fig. I, 1). Hind wings almost hyaline, without discal setae, marginal fringe and hooklets; Sc+R bifurcated at base (Fig. I, 1a). ? X
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Gaster almost glabrous, without visible petiole; tergite I covering about half of gaster (Fig. II, 7); subgenital plate (Fig. I, 3) with curved anterior margin, posterior margin bilobed, lobes overlapping, two valves connected by a narrow bridge; first valvifers (Fig. I, 4) subtriangular with prominent articular knobs in the same plane, 2nd valvifers triradiate, apical arm elongated posteriorly with thi-

ckened dorsal margin, third valvulae lanceolate, immovably joined with 2nd valvifers; outer plates of ovipositor narrow at base and apex, broad in middle, dorsal

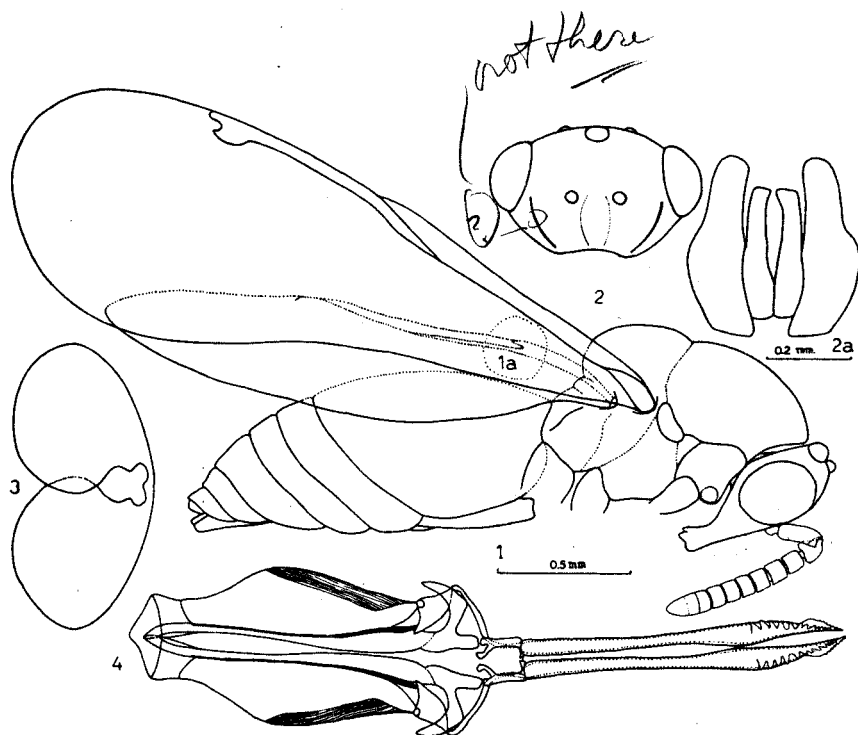


FIG. I. - *Indosema indica* gen. et sp. nov.: 1, Female, lateral view, without legs; 1a, hind wing venation; 2, head, front view; 2a, maxillo-labial complex; 3, subgenital plate; 4, ovipositor.

margin with an oblique inflexion extending upto middle length of plate; 2nd valvulae articulated to the stylets through a pair of additional triradiate rods (labelled as oval plate of VII sternum by some authors), not reported in Chalcids so far. Their presence remains unexplained.

Genotype: *Indosema indica* gen. et sp. nov.

Indosema indica sp. nov.

Female (Fig. I, 1) black except club of antennae, apices of femora, tibiae and tarsi reddish yellow; basal triangle of scape white.

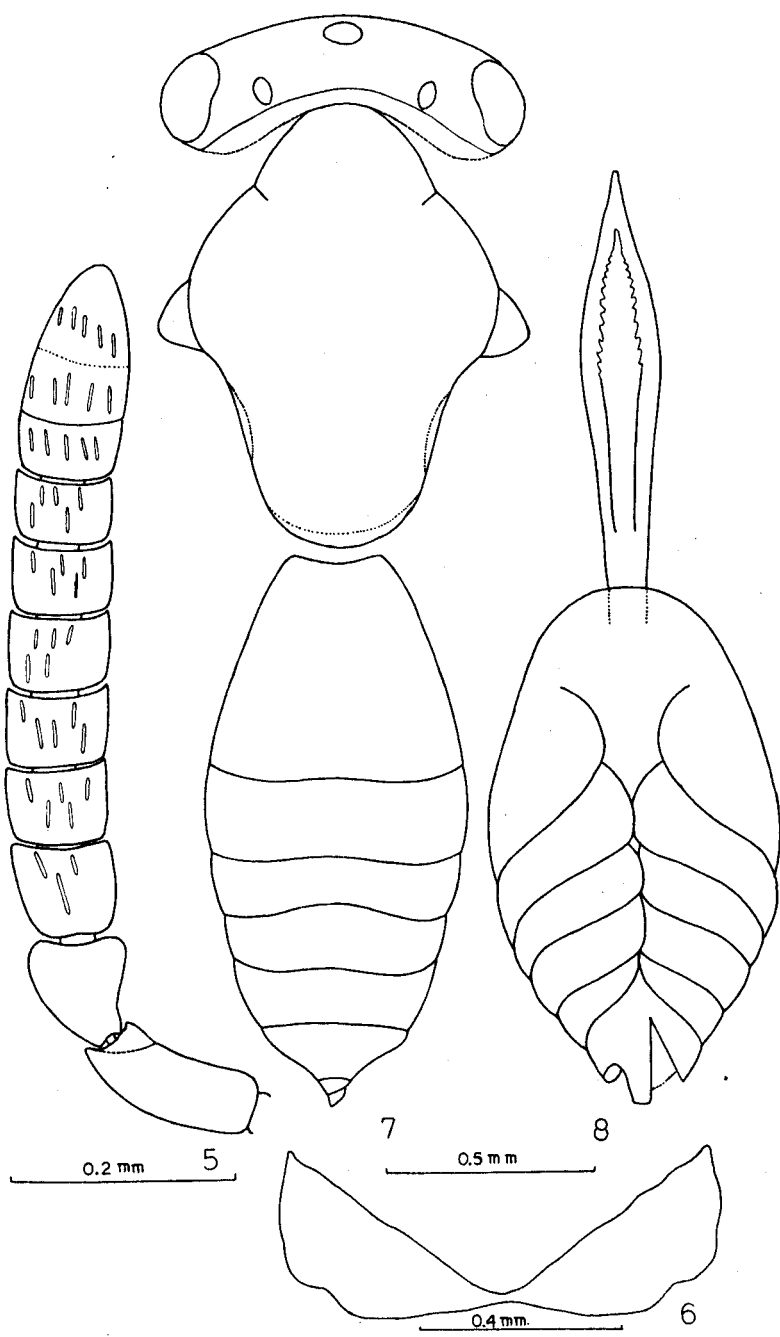


FIG. II. - 5, antenna; 6, pronotum; 7, head, thorax & abdomen, dorsal view; 8, gaster & ovipositor, ventral view.

Head reticulate, distinctly more than 1.5 times wider than long (Fig. I, 2) almost glabrous with few impressions of shallow pits, occiput immargined, ocelli in obtuse triangle, basal ocellus almost touching (Fig. II, 7) occipital margin, oral margin concave. Antennae (Fig. II, 5) 11-segmented with 6-segmented funicle and 3-segmented club; scape short, slightly less than 3 times longer than wide; pedicel subtriangular, slightly longer than wide, longer than following funicle segment; funicle uniform in width, segments gradually decreasing in length distad, F1 as long as wide, V1 about 1.5 times as long as wide; club less than 2.5 times as long as wide, as long as preceding 3 funicle segments combined, 3rd segment faintly indicated, sensoria clearly visible.

Thorax (Figs. I, II, 1 & 7) reticulate, almost glabrous with some shallow pits, highly convex; pronotum almost hidden dorsally, very narrow in the middle, much expanded laterally, anterior margin straight, posterior margin widely notched (Fig. II, 6); mesonotum with axillae produced anteriorly; parapsidal furrows indicated by shallow depressions; scuto-scutellar sutures obliterated; scutellum much raised above gaster; propodeum shining with a median and paired lateral carinae. Forewings hyaline, slightly less than 3 times as long as wide, without discal setae and marginal fringe, striations on marginal and submarginal veins; submarginal, marginal, postmarginal and stigmal in ratio of 32:16:2:1, stigmal sessile. Hind wings almost hyaline, more than 4.5 times as long as wide, without discal setae, marginal fringe and hooklets; Sc+R bifurcated near base (Fig. I, 1a). Legs normal.

Gaster longer than head and thorax combined.

Length: Female, 2.47 mm.

Holotype ♀, INDIA, UTTAR PRADESH: ALIGARH, 8.X.1980, T. Husain Coll. *Paratypes*: 2 ♀ ♀. Data same as for holotype.

Host: Unknown.

One paratype with BMNH, London, one with ZM, AMU, Aligarh.

The new genus stands close to *Orasema* Cameron in the Family Eucharitidae (personal communication with Dr. Z. Bouček). It can be clearly differentiated by its rudimentary mandibles, lobate maxillo-labial complex; obliterated sutures on thoracic dorsum (scuto-scutellar suture totally absent); wings without marginal fringe; Sc+R bifurcated at base in the hind wings, and 6 segments to funicle. The most striking feature of this genus lies in having a pair of triradiate structure at the base of stylets, not reported in Chalcids so far.

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SUMMARY

A new genus *Indosema* and a new species *indica* is described. This species stands out clearly for its degenerate mandibles; absence of scuto-scutellar sutures on thorax, of discal setae and marginal fringe on forewings. The ovipositor has additional sclerotic triradiate rods, hitherto unrecorded in Chalcids.

RIASSUNTO

Sono descritti il nuovo genere *Indosema* e la nuova specie *indica*. Quest'ultima si distingue per le mandibole ridotte, l'assenza delle suture scuto-scutellari sul torace e delle setole discali nonché della frangia delle ali anteriori. L'ovipositore presenta delle strutture triradiate sclerotizzate finora non segnalate nei Chalcidoidei.

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