

# REICHENBACHIA

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### On genus *Robertsonella* TITUS, with description of a new species from Himachal Pradesh, India (Insecta, Hymenoptera, Apoidea: Megachilidae)

With 4 Figures

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**Abstract.** Genus *Robertsonella* TITUS possesses a strikingly prominent character of apically produced clypeal truncation overhead beyond the labral base in females. A new species *R. himachalii* collected from Dharamsala (Himachal Pradesh) has been described as the first ever record of this genus from India. The new species described has been evaluated in difference with *Osmia adae* BINGHAM.

*Anthocopa* LEPELETIER & SERVILLE, *Osmia* PANZER, *Eriades* SPINOLA, *Chelostoma* LATREILLE, *Heriades* SPINOLA and *Ashmeadiella* COCKERELL were the known Indian genera of tribe Osminii. Present paper reports one more genus *Robertsonella* TITUS for the first time, from this country. The one species described in the following pages was also collected from the same countryside, from where majority of the species of *Osmia*, *Heriades* and *Anthocopa* were recorded in past, i. e. south-western slopes of the central Himalayas.

Following are the characters which can distinctly separate *Robertsonella* from rest of the megachilid genera:

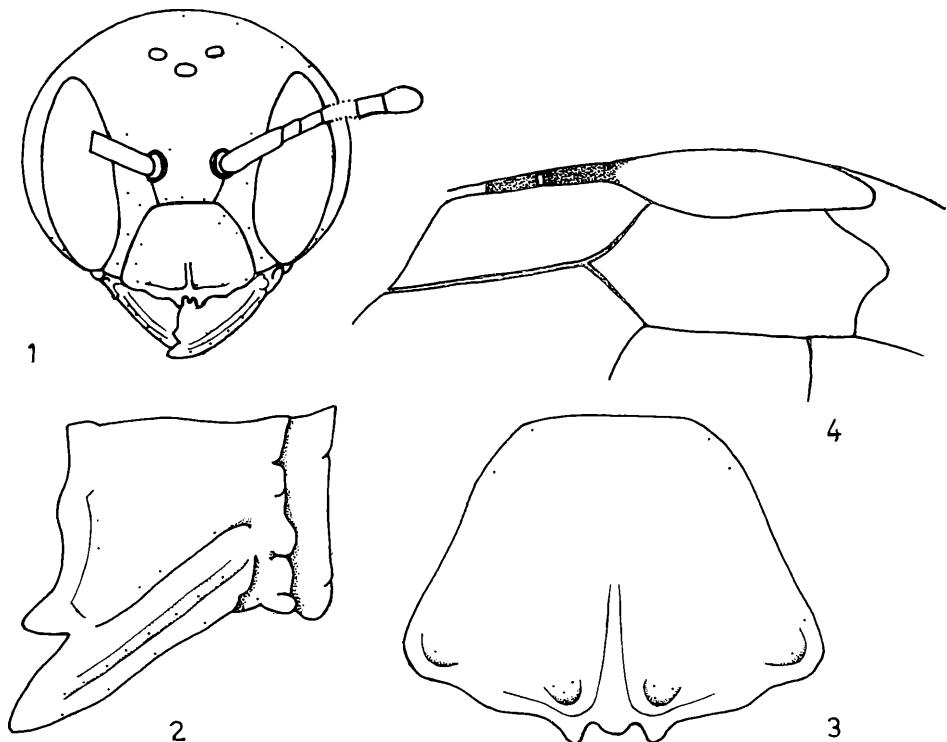
Arolia present; clypeal apical margin much produced medio-apically overhead beyond the labral base in female; in males face below antennae covered with short, fine, appressed pubescence; scutellum very feebly convex or almost oblique in profile, medio-posteriorly protuberent; metanotum medially convex and suppressed below the medio-posterior projection of scutellum, if observe from dorsal side, however, constitute dorsal surface of thorax; median length of scutum lesser than maximum width (at tegulae); suture between mesepisternite and metepisternite straight; pterostigma broader than distance from inner edge of prestigma to costal margin of wing and longer than prestigma; first recurrent vein considerably far from the base, comparatively second one is slightly close to the apex, of second cubital cell in fore wing; basal concavity of first tergite incarinate.

#### ***Robertsonella himachalii* sp. n.**

##### **Female**

Integument in general metallic blue, head and thorax rugose, abdomen shining, clypeal margin, antennae, mandible, sternites and legs with redness; punctures in general coarse and close, on tergites fine and sparse. Pubescence golden-yellow (plumose), tarsal fringe red and scopa golden-yellow.

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Figs. 1-4: *Robertsonella himachalii* sp. n., ♀. 1: head, front view; 2: mandible; 3: clypeus; 4: fore wing (in part). (Larger dots on the figures indicate pubescence)

Head much wider than median length, face with sparse pubescence; eyes slightly convergent below, medially incurved and inner margin semicarinate; clypeus: surface medio-basally convex, lateral margins slightly more depressed in profile than neighbouring paraocular area, medially produced truncation tubercled on either sides of midline protuberance; supraclypeus broadly convex, midfacial groove punctiform; paraocular area deeply concave near antennal sockets, otherwise almost flat, partly forming apical margin of face with clypeal margin; carina of antennal socket prominent and raised above in oblique angle, distance of antennal sockets to midocellus about double that of eye margin, equidistant with eye margin and each other, nearer to clypeal base than eye margin; antennae: first flagellar segment equal in length but about half in width with that of Xth, scape 3 times longer than Xth, flagellum gradually broadening towards apex; lateral ocelli almost equidistant with occipital and eye margin, distance to antennal socket about double with that of eye margin and slightly less among each other than occipital margin; vertex broadly convex, occipital margin feebly incurved and incarinate; genae gradually narrowed above as well as below, maximum width more than double with that of eye in lateral view; mandible: only two apical most teeth prominent, third tooth obscure and inner angle subacute, outer surface subbasally tubercled, from which originate two carinae running parallel to the base of apical most tooth; more than half of the labrum covered up by clypeal emargination; vestibule reaching up to the posterior margin of fore coxae.

Scutum slightly convex anteriorly, median line fine, parapsidial lines and nautolices punctiform; margin of pronotal apical lobe not produced and incarinate; tegulae piceous-red; axillae triangular, in same profile of scutellum, which is raised above than posterior margin

of scutum; lateral extensions of metanotum suppressed beneath the base of hind wing; propodeum perpendicular; wings yellow hyaline, veins brownish-piceous; legs normal, tarsi dorsally with dense golden pubescence and ventrally fringed with thick blackish-red bristles.

Metasoma more parallel-sided, elongated; concavity of basal tergite quite shallow; apical rims of all tergites indistinct except 4th and 5th, where fine and close punctures with pubescence mark them; all tergite dorsally with few sparse hairs, becoming dense laterally; margins of all tergites infasciate; tergum 6th broadly convex, densely hairy (fine but plumose), apical margin slightly upcurved; first sternite acutely protuberent midbasally, lateral margins quite limited; most of the pregradular areas of sternite 2-5 exposed; postgradular areas with scopal hairs, discal pubescence absent, gradular lines carinate; sternum 6th with fine bristles; apical margins of all sternites infasciate.

**Measurements** (in mm): Total length 12; maximum width and median length of face 3.2 & 2.5; eyes: length 2.25 and median width 0.9, distance between interspaces above, median and lower 2.25, 2.15 & 1.75; basal and apical widths of clypeus 0.75 & 1.7 mandible: length of lower and of dentate margin 1.1 & 1.0; scutum: maximum width and median length 3.0 & 2.5; median length of scutellar surface in dorsal view 0.9; total wing length 7.0 and median widths of terga 1st to VIth 3.0, 3.25, 3.25, 3.0, 2.75 & 1.5.

**Male** Not known.

**Material examined** Holotype ♀, Dharamsala (H. P.), 6000' m. s. l., (on wing) 15. V. 1982, Coll. Rajiv K. Gupta (at NPC, Division of Entomology, I. A. R. I., New Delhi); Paratype ♀, same data as for holotype (with author himself).

**Etymology** This species is named after the name of the collection site (situated in the state Himachal Pradesh).

**Remarks** The new species described above constitute the first record of genus *Robertsonella* from India. It basically differs from known Western species in: the absence of medio-posterior projection of scutellum; metanotum constituting dorsal surface of mesosoma in continuation with scutellum, surface not so convex medially and second recurrent vein very close to apex than the first one which is far from the base, of second cuboital cell in fore wing. Among the known Indian megachilids *Osmia adae* BINGHAM (1897) falls quite close to *R. himachalii* sp. n. However, the major characters, beside the basic generic characters, which distinctly separate the *adae*, are: elongated head; short thorax; apical 3 mandibular teeth prominent, only inner angle obtuse; clypeus apically not so produced and feebly outcurved, basal width about  $\frac{1}{3}$ rd that of apical width; carina of antennal socket raised dorsally; integument of antennae, tegulae and tarsi black, tarsal fringe completely golden.

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#### Reference

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