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## On a new subgenus *Neoashmeadiella* and two new species of genus *Ashmeadiella* COCK. from India (Insecta, Hymenoptera, Apoidea: Megachilidae)

With 6 Figures

RAJIV K. GUPTA <sup>1)</sup>

Alwar

**Abstract.** The species of genus *Ashmeadiella* COCKERELL, were grouped under subgenera *Arogochila*, *Chilosima*, *Cubitognatha* all MICHENER and *Ashmeadiella* s. str. A new subgenus *Neoashmeadiella* has been proposed (type-species: *Ashmeadiella* (*Neoashmeadiella*) *indica* sp. n.) and a key to the subgenera of genus *Ashmeadiella* has been presented. The comments on new subgenus follows the description of type species and of *A. (N.) pentadenta* sp. n.

According to KROMBEIN et al. (1979) the species of genus *Ashmeadiella* COCKERELL have been finally grouped under following 4 subgenera: *Arogochila* MICHENER (type-species: *Ashmeadiella timberlakei* MICH.), *Chilosima* MICHENER (type-species: *Ashmeadiella rhodognatha* COCK.), *Cubitognatha* MICHENER (type-species: *Ashmeadiella xenomastax* MICH.) and *Ashmeadiella* s. str. (type-species: *Heriades opuntiae* COCK.).

### Key to the subgenera of genus *Ashmeadiella*

Females:

- 1 Mandible tridentate; length of outer margin of mandible twice that of scape length; clypeus punctate, produced and truncated. ***Ashmeadiella* s. str.**
- Mandible may or may not tridentate; length of outer margin of mandible either more than or nearly equal to that of scape length; clypeus very rarely both produced and truncated, if produced, variously rounded, lobed or lyriate. 2
- 2 Mandible with two or three teeth. 3
- Mandible with four or more teeth. 4
- 3 Mandible bidentate, slender, elbowed, length of outer margin of mandible more than twice that of scape length; clypeus short, apical margin straight, not produced, surface impunctate, basal margin strongly elevated. ***Cubitognatha* MICHENER**
- Mandible tridentate, more robust, not elbowed, length of outer margin more than twice that of scape length; clypeus produced and lobate at apical margin, surface punctate, basal margin not elevated. ***Arogochila* MICHENER**
- 4 Length of dentate margin of mandible distinctly less than the length of outer margin, may be less than half that of length of outer margin; length of outer margin of mandible more than twice that of scape length; clypeus produced but little beyond a line connecting lower ends of eyes, apical margin broadly rounded or variously lobed. ***Chilosima* MICHENER**
- Length of dentate margin of mandible slightly greater or almost equal to the length of outer margin; length of outer margin of mandible slightly less or equal with that of

<sup>1)</sup> Post Graduate Department of Zoology, Raj-Rishi Government College, Alwar — 301001 (India)

scape length; apical margin of clypeus much limited, diminishes much before the line connecting lower ends of eyes, apical margin laterally angulate, medially incurved and dentate, surface distinctly punctate.

**Neoashmeadiella subgen. n.**

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**Type-species** *Ashmeadiella* (*Neoashmeadiella*) *indica* sp. n.

Following combination of characters can distinctly separate this subgenus from the allied subgenera:

**Female** Mandible 4- or 5-dentate, inner angle acute or obtuse, dentate margin with or without a cutting edge, cutting edge, when present, always on lower mandibular surface, length of outer margin of mandible slightly exceeded by the length of dentate margin; length of scape either equal or slightly exceeding that of outer margin of mandible; clypeus convex medially and becoming concave in profile towards lateral margins, surface punctured, pubescence confined to lateral areas, apical margin much limited, diminishes quite before the line connecting lower ends of both eyes, laterally angulate, medially incurved and finely dentate; transverse ridge of pronotum sharply carinate; basal sternum with fine striations.

**Etymology** This subgenus is named after its new proposal.

**Ashmeadiella** (*Neoashmeadiella*) *indica* sp. n.

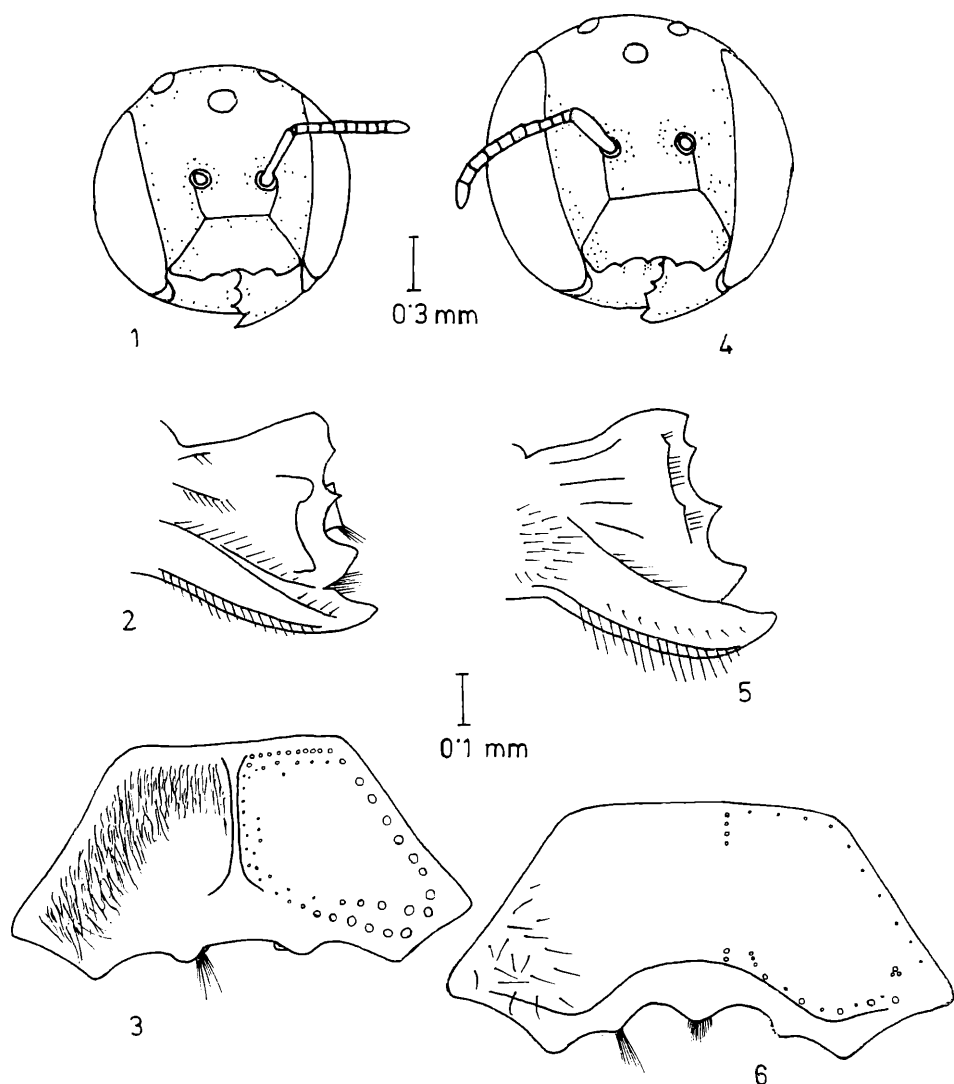
**Female** Integument black, except legs, first tergum, apical margins of all tergites, propodeum and tegulae; pubescence white with silky luster but hind tarsi, last sternum and tergal margins with pale-yellow fringes; scopa white.

Head wider than length; eyes convergent below; clypeal surface with a distinct smooth transverse mid line, apical margin with four tubercles; surface of paraocular area sloping laterally, its maximum width is about  $\frac{2}{3}$ rd that of clypeal basal width; subocellar area slightly elevated, midfacial groove absent; genae parallel-sided, hypostome with thick white hairs; mandible with 5 teeth but inner angle obtuse, appearing like tetrudentate, lower surface with a short cutting edge confined around third tooth.

Scutum surface doubly punctured, swollen anteriorly becoming flat posteriorly, notauli slightly markable; wings clear hyaline, veins yellowish-brown, first recurrent vein nearer to the base than second one which is near to the apex of the second cuboital cell; fore tibia with an apico-dorsal notch, spur pale, tarsal claws with 2 basal bristles on mid and hind legs; basal tergal concavity margin slightly carinate at median area; apical marginal fasciae of all tergites complete, gradular concavity demolishes after 4th tergum; basal width of tergum 6th greater than median length; basal sternite feebly expanded; apical margins not fringed in all sternites upto 5th; apical margin of 6th notched as well fringed at mid line.

**Measurements** (in mm): Total length: 6.7 eyes: length 1.6, lateral width 0.75, distance of upper, median and lower interspaces 1.5, 1.25, 1.12; clypeus: median length 0.45, basal and apical width 0.52 & 1.1; antennae: length of scape 0.47, pedicel 0.175, flagellar segments Ist 0.07, IInd 0.175, VIth 0.175, Xth 0.225, widths of VIth 0.175 & Xth 0.175; lateral ocelli: distance to eye 0.4, to occipital margin 0.5 & to each other 0.4; labrum: median length 0.52, basal & apical width 0.42 & 0.35; mandible: length of inner margin 0.75, outer margin 0.42, dentate margin 0.57; labial palpi: length of segment Ist 0.42 & IInd 0.5; scutum: median length and maximum width 1.25 & 1.75; median length of scutellar dorsal surface 0.5; fore wing: total length 3.75 & length of radial cell 1.0; relative widths of terga I to VI 1.8, 2.0, 2.0, 1.9, 1.5, 0.75.

**Male** Not known.



Figs. 1–6: *Ashmeadiella* (*Neoashmeadiella*) *indica* sp. n., ♀ (1–3) and *A. (N.) pentadenta* sp. n., ♀ (4–6). 1, 4: head front view (dots indicate pubescence), 2, 5: mandible, 3, 6: clypeus.

**Material examined** Holotype: ♀, Narain Garden, Jhansi (U.P.), 17 V 1981, Coll. Rajiv K. Gupta; paratypes 2 ♀, same data as for holotype (holotype at N.P.C., Entomology Division, I.A.R.I., New Delhi, paratypes presently with author himself, shall be submitted to N.P.C., New Delhi).

**Flower record** *Murraya* sp.

**Etymology** This species has been named after the native country India.

**Ashmeadiella (Neoashmeadiella) pentadenta sp. n.**

**Female** Integument black, except tegulae, propodeum, legs, complete first tergum and basal halves of rest of the tergites, which are brownish yellow; pubescence in general silky white but tarsal and tergal fasciae and scopa pale yellow.

Head wider than length; clypeal surface with uniform large punctures, mid-transverse smooth line absent, with few sparsely distributed hairs at extreme lateral sides, apical margin with 5 tubercles; mandible much broad with 5 acute teeth, cutting edge inevident, inner angle acute; scutum coarsely punctured but fine punctures in between coarse ones absent, pubescence confined to lateral extremities; scutellum distinctly raised above in profile than scutum.

Distance of first recurrent vein is little far from the base than the second one which is quite close to the apex of IInd cuboital cell in fore wing; tarsal claws without any basal bristles; apical marginal fasciae of terga Ist and IInd well developed but on rest feebly markable; discal pubescence also sparse; sternal surfaces finely tubercled instead of punctures, hidden pregradular areas finely punctured; VIth with yellow fringe.

**Measurements** (in mm): Total length 7.8; eyes: length 1.75, lateral width 0.75, distance of upper, median and lower interspaces 1.42, 1.5 & 1.25; clypeus: median length 0.5, basal and apical width 0.67 & 1.25; antennae: length of scape 0.5, pedicel 0.225 and flagellar segments Ist 0.1, IInd 0.22, Xth 0.25, widths of VIth 0.25 & Xth 0.25; lateral ocelli: distance to eye 0.227, to occipital margin 0.37 and to each other 0.4; mandible: length of dentate margin 0.62; scutum: median length & maximum width 1.5 & 1.95; fore wing: total length 4.5 and length of radial cell 1.1; relative widths of terga I to VI 1.87, 2.0, 2.12, 1.9, 1.62, 0.9.

**Male** Not known.

**Material examined** Holotype ♀, Narain Garden, Jhansi (U. P.), 17 V 1981, Coll. Rajiv K. Gupta; paratype 1 ♀, same data as for holotype (holotype at N.P.C. Entomology Division, I.A.R.I., New Delhi, paratype presently with author himself shall be submitted to the same museum).

**Flower record** *Acacia* sp.

**Etymology** Named after the acute pentadentate condition of the mandible found in this species.

**Remarks** *A. (N.) indica* and *A. (N.) pentadenta* are close relative of each other in their subgeneric characters, however, *pentadenta* clearly differ from *indica* in: lacking mid transverse smooth line on clypeus, 5 tubercled apical margin; mandible without any cutting edge and acute inner angle making the mandible distinctly pentadentate; basal bristles of tarsal claws absent; scutum singly punctate and scutellum distinctly raised above in profile than scutum.

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**Reference**

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Autor(en)/Author(s): Gupta Rajiv K.

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