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A new species of genus *Anthidium* FABRICIUS from Himachal Pradesh, India (Insecta: Hymenoptera: Apoidea: Megachilidae)

With 10 Figures

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Abstract. A new species of genus *Anthidium* FABRICIUS has been described from Manali (Himachal Pradesh). *A. himalayensis* spec. nov. is quite different from predescribed Indian species of this genus in having orange integumental maculations. However, the new species described has certain close affinities with *A. kashmirensis* and *A. sikkimensis* (both by MAVROMOUSTAKIS).

Anthidium himalayensis spec. nov. (Figs. 1–5, 8–10)

Male:

Integument: Head and thorax finely and closely, and abdomen coarsely and sparsely punctured. Pigmentation: black; mandible except teeth, clypeus entirely, parocular area below to antennal sockets, a longitudinal spot close to occipital margin at vertex near eye, apex of femora, tibia and all tarsi dorsally, a longitudinal spot at hind coxa, laterally confined transverse spots at first tergum, little more broader on 2nd to 4th but leaving a wide gap at centre, on 5th tergum much broader and much closer at centre and on 6th tergum distinctly far from each other – with orange maculation; rest of the body including antenna, gena, thorax, VIIth tergum and all sternites – black.

Pubescence: Golden all over the body, becoming pale on ventral surfaces of thorax and abdomen; conspicuously erect on all segments including tergites.

Head: Much wider than median length, pubescence much prominent near antennal sockets; clypeus: centrally broadly convex, anterior margin laterally angled then medially transverse entire, all around bordered with fine black line; surfacial punctures shallow becoming finer towards lateral margin and almost sparse at centre of convexity, so as the density of hairs increases towards lateral surface, apical hairs projects beyond the margin which is incarinate. Supraclypeus uniformly elevated in profile from lateral parocular area and except an apico-central smooth spot, finely ‘reticulated’; parocular area shallowly concave towards antennal sockets and with shallow punctures; mandibles prominently tridentate, apical tooth much produced, surface feebly punctured and with only one subapical groove, ventral surface smooth black, bare and much angled towards apical dentate margin; ocelli slightly elevated in profile; vertex margin feebly incurved, incarinate but finely punctured; lateral ocelli followed by a narrow smooth surface below; midfacial line feebly markable; gena quite broad, neither narrowed above or below, margin incarinate and surface uniformly finely punctured and hairy, hypostome margin below to mandibles carinate and almost quadrangled equal to the genal width; rostrum slightly exceeding hypostomal angle in length; length and breadth of labrum equal with a basomedian channel not reaching apex, quite small just reaching half that of hypostomal angle; flagellum of antenna – almost equal in width upto apex; XIth segment less than half of that of scape.

Thorax: Pronotal extensions lateral to tegulae – slightly projecting, conical and testaceous like tegulae, below margin fringed; scutum much broader than median length, anteriorly much convex, posterior

margin more depressed in profile than scutellum, uniformly finely punctured; axillae flat, triangular, surface like scutum but profile like that of scutellum; scutellum with punctures slightly sparser than scutum, midposterior transverse carina broad, semilunar but medially truncated, overhanging posteriorly beyonds the metanotum, lateral surfaces below to carina and close to tegulae smooth, shallow like lateral metanotal extensions; propodeum finely punctured and right angled with scutellar carina; tegular margin anteriorly almost testaceous followed by a small orange spot, rest of the surface black shining and finely punctured; second recurrent vein in fore wing slightly at the outer edge of the second submarginal cell, wings pale hyaline fuscous along the costal margin; both surfaces of mesepisternite closely punctured but surface of metepisternite with more fine punctures confined to posterior side, both mes- and metepisternites are separated by a fine smooth and depressed groove.

Legs: Normal and unmodified; coxae without spines; hind trochanter with a fine protuberance at posterior lateral angle; tibial and tarsal fringes more prominent in fore legs; spurs pale yellow; apices of all tarsi unproduced; arolium absent; claws clefted with their apices black and basal protuberances with 2 bristles.

Abdomen: All tergal maculations are confined to the centre of postgradular areas, i.e. leaving a considerable margin towards graduli and apical rims; pubescence much prominent laterally; basal tergal concavity margin semicarinate dorsally; tergites 1 to 5: all graduli hidden, all postgradular areas coarsely but shallowly punctured, apical rims medially broad with very fine punctures and slightly more depressed in profile than the preceding postgradular areas; margins of all 5 tergites brownish smooth; tergite 6: uniformly but much coarsely punctured, apicolateral extremities produced as apically projecting prominent spines, then margin moves towards centre as a subapical carina which perishes much before midline, here midapical spine projects from almost same profile to the carina, i.e. apical rim area remain below to the carina as much finely punctured shallow surface; tergite 7: surface black shining and resembling tergite 6 in texture, apical margin with a broad deep notch at the centre. – Basal sternum triangular, much restricted and with midapically depressed rim quite broad at centre. Sternites 2 to 4: all pregradular areas very finely rugose, graduli distinct and incurved at centre, postgradular areas shallowly but closely punctured, pubescence confined to posterior surfaces, surfacial hairs projects beyond the rim surface, apical rims depressed; sternite 5: partially exposed and apical margin slightly incurved; sternite 6: much exposed as a wide plate with almost quadrangled apical margin, rim testaceous brown; sternite 8: apical lobe midapically much produced and laterally angled, stiff bristles confined to apical projection.

Genitalia: Gonostyli broadly dilated near apex and pubescent; gonocoxites much swollen so as penial forceps dilated and hairy at apex; gonobase bulbous but narrow and penis valve low.

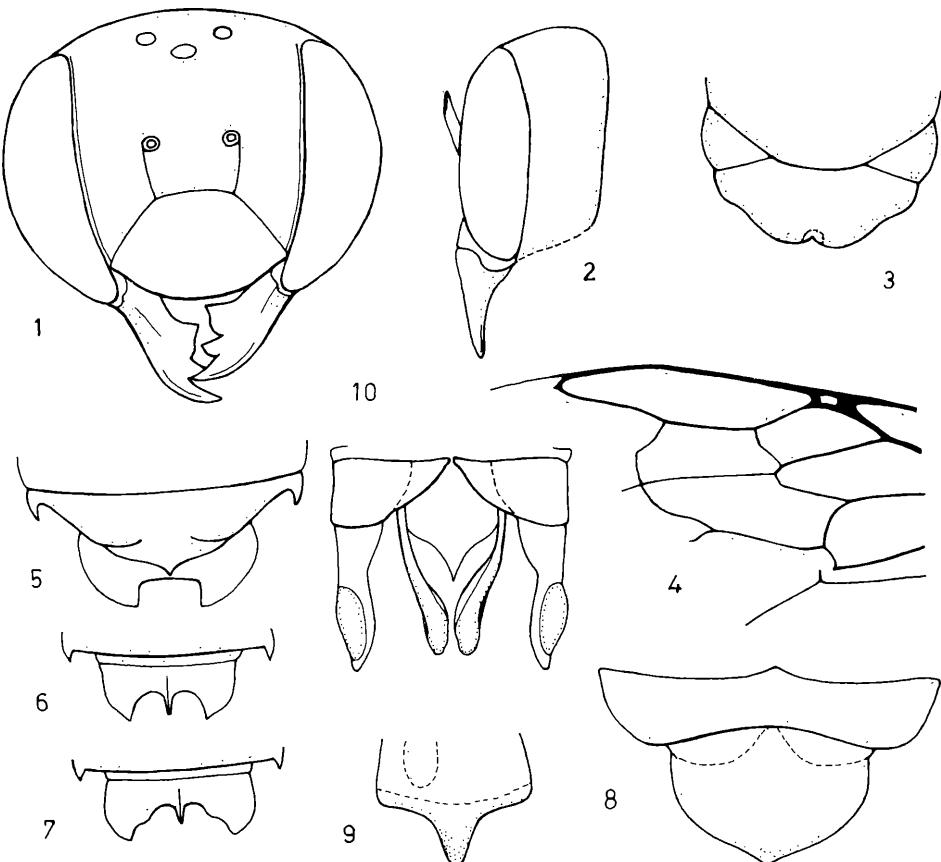
Measurements (in mm): Total length 11.0; head: maximum width and median length 4.0 & 2.4; eye: length and lateral width 2.42 & 1.2; clypeus: basal width & apical width 0.38 & 1.92, median length 1.12; mandible: lengths of outer margin & dentate margin 1.5 & 0.85; distances of antennal sockets: to each other 0.4, to clypeus 0.35, to eye 0.6 and to midocellus 0.8; distance of lateral ocelli: to each other 0.5, to occipital margin 0.5, to eye 0.78; antenna: length of scape 1.2, 1st flagellar segment 0.25 & XIth 0.45; scutum: median length & maximum width 2.46 & 3.22; median length of scutellar dorsal surface: 0.75; fore wing: total length 8.75 & of cuboital cell 2.4; median widths of terga I to VIth 3.5, 4.0, 3.85, 3.5, 3.0 & 1.75.

Female: Not known.

Material examined: Holotype ♂, Manali (H.P.), 8200' m.s.l. (on wing), 19.VI.1991, coll. S. SIMLOTE. No paratypes. (Holotype shall be placed at NPC, Division of Entomology, IARI, New Delhi).

Etymology: This species is named after the name of the collection site (Manali is situated at the south western slope of the Himalaya mountain range).

Remarks: *A. himalayensis* spec. nov. is quite different from rest of the known Indian species of genus *Anthidium* FABR. in: orange integumental maculations (becoming more dark when exposed to poison fumes a little longer), truncated 2nd and 3rd mandibular teeth, 3 spines at VIth



Figs. 1-5, 8-10: *Anthidium himalayensis* spec. nov., holotype male. 1 - face; 2 - head, lateral view; 3 - scutum, axillae and scutellum; 4 - fore wing (in part); 5 - Vth, VIth and VIIth tergum; 8 - Vth and VIth sternum; 9 - VIIth sternum; 10 - genitalia. - Fig. 6: *A. kashmirensis* MAVROM., VIth and VIIth tergum. - Fig. 7: *A. sikkimensis* MAVROM., Vth and VIIth tergum.

tergum and almost rounded corners bordering the notch at VIIth tergum. *A. kashmirensis* MAVRO-
MOUSTAKIS (= *kashmirensis*) described from Gulmarg is close to the new species in parocular,
clypeal and vertex maculations (ochreous red), second recurrent vein nearly interstitial with apex of
second subcubital cell in fore wing but differs in maculated and smooth surface of supraclypeus,
lack of clypeal convexity, unmodified scutellum, all tarsi maculated dorsally, abdomen totally black,
VIth tergum without median spine, VIIth tergum with an additional spine originating from the centre of the notch and IVth sternum having deeply incised apical margin in middle. - *A. sikkimensis* MAVRO-
MOUSTAKIS (= *sikkimensis*), a slightly smaller species from Teesta Valley, Sikkim, is little
more close to *himalayensis* having integumental maculations pale yellow on abdominal tergites but
clearly differs in: incised margin of clypeus, totally black legs, normal scutellum, tergite 2 to 4 each
with 2 median and 2 lateral yellow spots, VIth sternum apically truncated with rounded sides but
with a short and stout bifid median projection in addition to the clear hyaline wings, and structure of
VIth & VIIth terga.

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Reference

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