

Research Article

Two new species of *Hedycryptus* Cameron, 1903 from India (Hymenoptera: Ichneumonidae)

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Abstract: Genus *Hedycryptus* established by Cameron in 1903 for the species, *H. filicornis* Cameron. Two new species of the genus viz., *H. noidensis* sp.nov. and *H. baijali* sp.nov. are recorded from India and described.

Keywords: *Hedycryptus*, New species, Ichneumonidae, India.

Taxonomy

Hedycryptus Cameron, 1903

Hedycryptus Cameron, 1903. *Ztschr. System Hymn. Diptera*, 3: 298.

Apachia Townes, 1970. *Mem. Amer. Ent. Inst.*, 12: 195.

Type species: *Hedycryptus filicornis* Cameron.

Key to species of *Hedycryptus*

1. Face entirely black; postpetiole as wide as long at base. Malar space about 1x as long as the basal width of mandible *tenuiabdominalis* (Uchida)
- Face along the eye margin yellow; postpetiole longer (1.3-1.5x) than its width at base. Malar space narrow (0.6-0.8x) 2
2. Face normal, without distinct median tubercle; propodeal spiracle slit-like, about 4x as long as wide; mesopleurum strongly rugoso-wrinkled; postpetiole about 1.5x as long as wide at base; malar space about 0.8x the basal width of mandible *noidensis* sp.nov.
- Face with distinct median tubercle; propodeal spiracle longish-oval, about 3.3x as long as wide; mesopleurum finely trans-rugose; postpetiole about 1.2x as long as wide at base; malar space 0.6x the basal width of mandible. *baijali* sp.nov.

Description

Body slender. Clypeus of moderate size, about 2.3x as wide as long, strongly convex, its apex weakly convex, without a median tooth or lobe. Malar space about 1.0x as long as basal width of mandible. Mandible of moderate length, its lower tooth a little shorter than upper tooth. Apical 0.3 of female flagellum not enlarged, not flattened below, not or only faintly tapered to apex, the tip blunt. Mesoscutum mat, with small, very dense punctures. Notaulus moderately strong, reaching behind center of mesoscutum. Propodeal spiracle about 3.5x as long as wide. Apical carina of propodeum forming strong sublateral crests, carina usually distinct between the crests, laterad often absent. Hind coxae deep, with a short, faint, horizontal groove just below its attachment. Venation as figured, the areolet rather small, with strongly convergent sides, the second intercubitus simply arched. First tergite slender, without a lateral tooth at base, its spiracle near apical 0.31. Ventrolateral carina of first tergite lacking though ventrolateral margin of tergite often indicated by smoother sculpture. Dorsolateral and median dorsal carinae absent or blunt, when present often reaching the apex of postpetiole. Second tergite mat, its setiferous punctures fine, rather dense in male, sparse to rather dense in female. Ovipositor sheath about 1.0 as long as hind tibia. Ovipositor rather slender, weakly compressed, its tip elongate-sagittate.

Distribution: Oriental and Palearctic regions.

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***Hedycryptus noidensis* sp.nov.**

(Pl. I, Figs. 1-3)

Female: Face subpolished, granuloso-punctate, with finely running aciculations. Clypeus subpolished, basal half minutely and densely punctate, apical half largely smooth and shiny, with a few scattered punctures. Malar space rough, 0.8x the basal width of mandible. Frons subpolished, antennal scrobe shiny with weak indication of sparse transverse striations, above largely rugoso-wrinkled. Vertex and temple with dense and shallow punctures, surface appears to be granulose. Pronotum moderately strong trans-striate, at upper margin closely punctate with fine trans-striations reaching up to upper margin. Mesoscutum dull, weakly rugoso-punctate, punctures not well defined, short striae present along the notauli, notauli long and narrow. Scutellum closely punctate, with fine longitudinally running striations, lateral carina extending to its more than 0.5. Metascutellum with a few punctures and longitudinal striae at sides. Mesopleurum moderately strongly rugoso-wrinkled, speculum and sternal area striato-punctate, prepectal carina extending almost up to the base of subtegular ridge. Metapleurum rugose, with strong transverse ridges on metapleural fold. Propodeum with moderately strong wrinkles between basal carina and apex, basad of basal carina rugose, basal carina strong and complete, arched in the middle; apical carina variable, evenly arched to straight in the middle, sublaterally weak or absent, apophyses high, strong and conical. First abdominal tergite long, about 3x as long as wide at apex, postpetiole 1.5x as long as wide at base, spiracles protruding, dorsal carina weak. Following tergites dull and granulose. Ovipositor long, about 1.3x as long as hind tibia, tip long and pointed, lower valve with weak teeth. Forewing with nervulus interstitial to little basad of basal vein.

Black. Antennal flagellum usually with a whitish band above on fourth to basal half of sixth segment, sometimes this band absent. Face, frons and temple narrowly along the eye margin, pronotal collar and subtegular ridge faintly, yellow. Hind tarsus white except basal 0.66 black. Wings hyaline with yellowish hue.

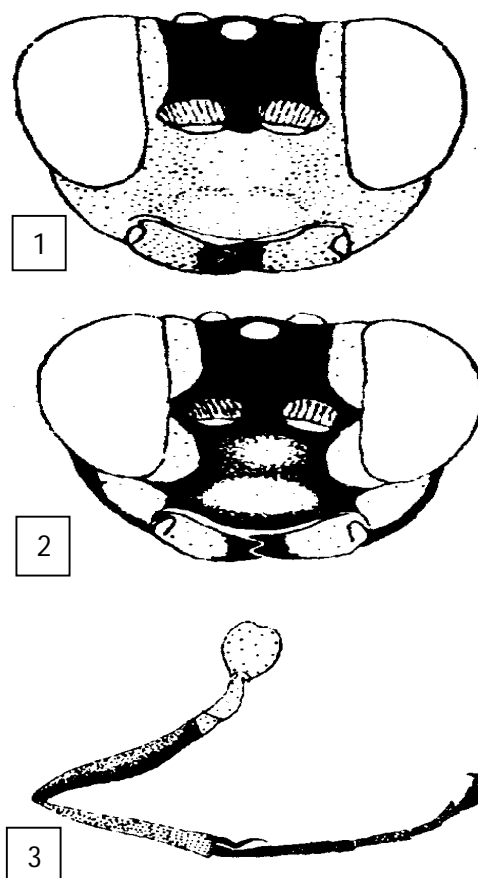
Male: Similar to female, except more slender and weakly sculptured. Face granuloso-punctate, without aciculations. Clypeus sparsely punctate. Frons at antennal scrobes smooth and shiny, above rugoso-wrinkled. Vertex and temple shiny, with indication of weak minute sparse punctures. Mesoscutum densely punctate. Scutellum with moderately strong coalescent punctures, punctures running into striations. Metapleurum in basal half striate, closely punctate above. First tergite smooth and shiny, following tergites mat and subpolished. Forewing with nervulus basad of basal vein.

Black. Antennal flagellum without any band. Scape in front, face in the middle and along the eye margin, frons and temple along the eye margin, malar space, mandible (except the teeth), pronotal collar narrowly, subtegular ridge, pale yellow. Hind tarsus white, except basal 0.33 of its first segment black. Fore and middle tibiae and tarsi lighter in shade. Wings hyaline with yellowish hue.

Length: Female- 10-15mm; forewing 8-12mm; ovipositor sheath 3.5-5.0mm. Male- 7.2-11mm; forewing 5.7-7.5mm.

Material examined: Holotype one female, India: Uttar Pradesh, Noida, 20.iii.2008, Satish Kashyap; Allotype, one male, same data as that of Holotype; Paratypes, 13 females, 12 males, same locality.

Distribution: India: Uttar Pradesh.



Figs. 1-3. *Hedycryptus noidensis* sp.nov. (1) Front view of head. (2) Front view of head. (3) Foreleg.

Remarks: This species is close to *H. tenuiabdominalis* Uchida and *H. baijali* sp.nov. in having fore and middle legs entirely, black. This species can be recognized by the absence of median tubercle on face. Propodeal spiracles slit-like, about 4x as long as wide. Mesopleurum strongly rugoso-wrinkled; postpetiole

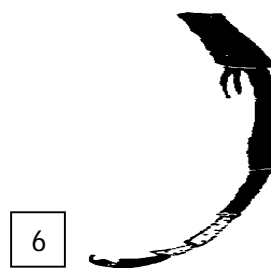
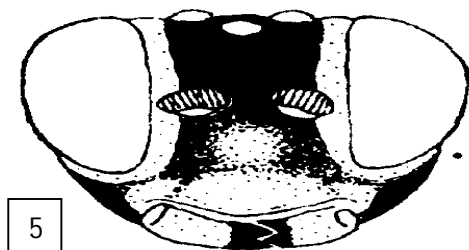
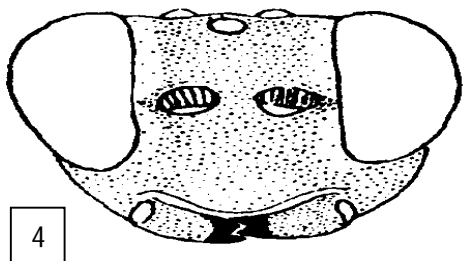
1.5x as long as wide at base and malar space 0.8x the basal width of mandible. It is for the first time recorded from Uttar Pradesh, India.

***Hedycryptus bajjali* sp.nov.**

(Pl. II, Figs. 4-6)

Female: Clypeus shiny with minute sparse punctures in the basal half. Face with a distinct median tubercle. Malar space 0.6x the basal width of mandible. Frons above obliquely rugoso-punctate. Vertex and temple with distinct punctures. Notauli short, not extending more than 0.5 the length of mesoscutum. Scutellum punctate, without strong longitudinal striations. Mesopleurum finely trans-rugose, speculum and sternal area striato-punctate. Propodeum basad of basal carina rugulose, striato-wrinkled between apical carina and apex, between transverse carinae distinctly longitudinally striate; spiracles longish oval, about 3.3x as long as wide. First abdominal tergite smooth and shiny, about 3x as long as wide at apex, postpetiole 1.2x as long as wide at base.

Colouration similar to *H. noidensis*, except without any mark on frons and temple along the eye margin. First hind tarsal segment almost wholly black. Wings with yellowish-brown hue.



Figs. 4-6. *Hedycryptus bajjali* sp.nov. (1) Front view of head. (2) Front view of head. (3) Foreleg.

Length: Female- 11mm; forewing 9mm; ovipositor sheath 4mm.

Material examined: Holotype one female, India: Uttar Pradesh, Varanasi, 14.ix.2011, Satish Kashyap; Paratypes, 11 females, same data as that of Holotype and Allotype.

Distribution: India: Uttar Pradesh.

Remarks: This species is essentially similar to *H. noidensis* sp.nov. in most of its characters.

Etymology: The species is named after eminent taxonomist Dr. H.N. Baijal.

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References

- [1] Townes, H. (1970). Genera of *Ichneumonidae* Part II. Gelinae. *Mem. Amer. Ent. Inst.*, **12**: 1-537.
- [2] Townes, H., M. Townes and Gupta, V.K. (1961). A Catalogue and reclassification of the Indo-Australian *Ichneumonidae*. *Mem. Amer. Ent. Inst.*, **1**: 1-522.
- [3] Uchida, T. (1931). Beitrag zur Kenntnis der Cryptinenfauna Formosas. *J. Fac. Agri, Hokkaido Univ.*, **30**: 163-193.