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## A NEW SPECIES OF *NETOMOCERA* BOUČEK (HYMENOPTERA: CHALCIDOIDEA: PTEROMALIDAE) FROM THE SOUTHERN WESTERN GHATS, KARNATAKA, WITH A KEY TO WORLD SPECIES

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**Abstract:** A new species of *Netomocera* Bouček (Hymenoptera: Pteromalidae) *N. minuta* sp. nov. is described from the southern Western Ghats of Karnataka, India. Affinities of the new species with related species are discussed and a key to the world species of *Netomocera* is provided.

**Key words:** Hymenoptera, Pteromalidae, *Netomocera*, new species, key.

**Abbreviations:** F1-F7 - Funicular segments 1 to 7; MV - Marginal vein; OOL - Ocellocular distance; PMV - Postmarginal vein; POL - Post-ocellar distance; SMV - Submarginal vein; STV - Stigmal vein; T1 - First gastral tergite.

The genus *Netomocera* Bouček belongs to the subfamily Diparinae of the family Pteromalidae (Hymenoptera: Parasitica), the species of which are cosmopolitan in distribution, known from all continents except Antarctica (Desjardins 2007). Currently, the genus is known by eight described species throughout

the world (Sureshan 2010; Noyes 2014). *Netomocera* specimens are seldom found in general parasitic Hymenoptera collections made by net sweepings and no information is available on the biology of the genus. The genus is also very little collected and described from the oriental region and known only by two species, viz., *Netomocera nigra* Sureshan & Narendran and *N. ramakrishnai* Sureshan, described from India (Sureshan & Narendran 1990; Sureshan 2009, 2010). In continuation of the studies on Pteromalidae of the southern Western Ghats (Sureshan 2012, 2003) a new species of *Netomocera* is described here based on a Malaise trap collection made by the Ashoka Trust for Research in Ecology and the Environment (ATREE) Bangalore from the Western Ghats in the Insect Inventory Program. The present species shows a close affinity with *N. ramakrishnai* Sureshan described from Arunachal Pradesh and uniquely differs from other



DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
DD	LC	NT	VU	EN	CR	EW	EX

*Netomocera minuta* sp. nov.



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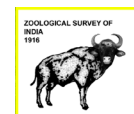
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related species.

The specimen of the present study was collected in a Malaise trap set by ATREE in the southern Western Ghats forests of Karnataka and studied in the laboratory using a LEICA M 205A stereozoom microscope with a LEICA DFC 500 camera. The holotype is deposited in the National Zoological Collections of the Zoological Survey of India, Western Ghat Regional Centre, Kozhikode (ZSIK). The present description is based on a single specimen since efforts to collect further specimens did not yield any additional material due to the rare nature of the genus as mentioned above.

***Netomocera minuta* sp. nov.**  
(Images 1–5)

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**Material examined**

**Holotype:** ZSI/WGRC/IR-INV/2583, 1.vi.2007, female, Mariappana Palla, Biligiri Rangaswamy Temple Wildlife Sanctuary, Karnataka, India, 77°59'38"N & 77°08'26"E, elevation 1350m, (Malaise trap), coll. Priyadarsanan.

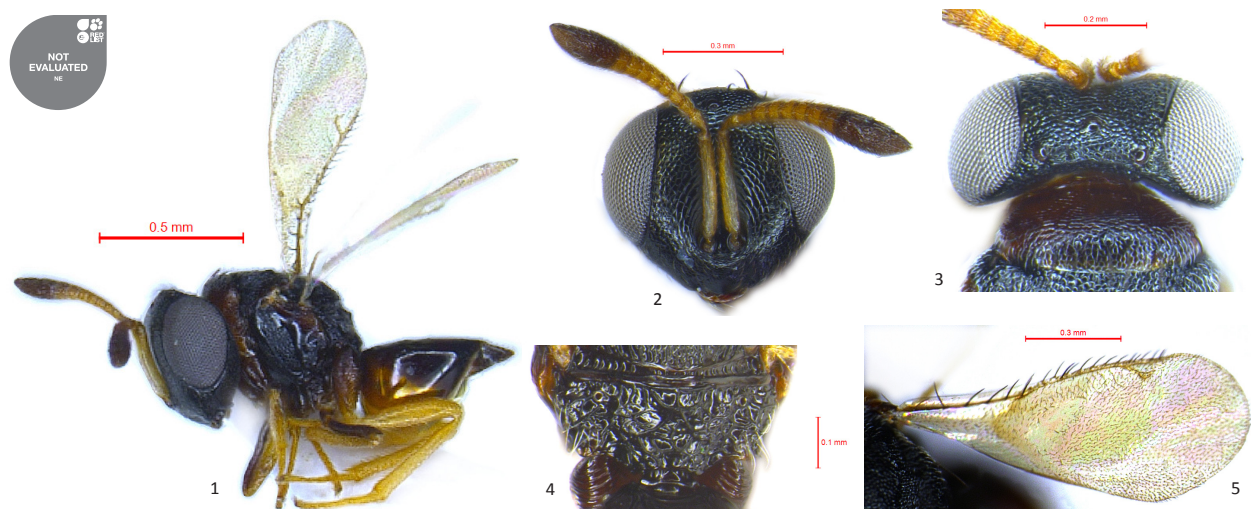
**Female**

Length 1.5mm. Head and mesosoma black except lateral part mainly, dorsal part slightly and upper mesopleuron brown; gaster brownish-black except ventro-lateral parts brown; eyes silvery grey; ocelli black. Antennae testaceous except clava brown. Legs with all coxae and fore femora brown, remainder testaceous. Tegulae brown, wings smoky, veins, bristles and discal

pubescence brown.

**Head:** uniformly reticulate, reticulation finer on lower face and gena, pubescence denser on lower face, otherwise less distinct; in front view head width 1.1x height; clypeus transversely aciculate, anterior margin angularly produced; malar grooves distinct; gena not carinate posteriorly; eye height 1.4x width in profile; malar space length 0.3x eye length in profile; scrobe deep, not reaching median ocellus, scrobal and parascrobal area striate reticulate in the form of circular lines. In dorsal view head width 2x length; POL 4.2x OOL; temple narrow, 0.2x eye length; vertex declivous, with three pairs of black bristles. Antennae inserted at level with lower ocular line; scape not reaching median ocellus, length 0.8x eye length and 7.2x width; pedicel plus flagellum 0.9x as long as head width; pedicel 1.7x as long as wide and 1.5x as long as F1; anelli single, transverse; F2 almost as long as F1; F3-F7 almost equal in length, slightly shorter than F2, funicular segments becoming wider towards the tip; clava as long as 5.5 preceding segments combined, length 2.3x width, area of micropilosity reaching base of third segment, claval sutures not clear.

**Mesosoma:** Pronotum 4.3x as broad as long, collar rounded anteriorly, with seven black bristles (5 in the centre and 1 each on the sides), moderately reticulate with small white pubescence, lateral panel finely reticulate. Mesoscutum 2.9x as broad as long, reticulate punctuate with small white pubescence, notauli complete; mid lobe with a pair of bristles and side lobes with one bristle each. Scutellum slightly longer than wide



Images 1–5. *Netomocera minuta* sp. nov. female.

1 - body in profile; 2 - Head in front view; 3 - Head and pronotum in dorsal view; 4 - Propodeum and gastral petiole in dorsal view; 5 - Fore wing (© WGRC, ZSI, Kozhikode)

(12:11.5), distinctly reticulate as on mesoscutum, with two pairs of strong bristles, frenum vaguely indicated, distinctly reticulate in the centre and with longitudinal rugae laterally. Dorsellum narrow, shiny. Propodeum 2.6x as broad as median length with irregular strong carinae enclosing broad areas, the interior of which shiny; median carina indicated only anteriorly, bordered on either side by a triangular area followed by two carinae in the form of an inverted “V”; plicae irregular; spiracles small, round separated from hind margin of metanotum by own diameter; callus irregularly carinate with sparse white hairs. Prepectus as long as tegula, coriaceous. Mesopleuron with mesepisternum punctuate reticulate, sub-alar area and mesepimeron shiny except for broad areas separated by transverse rugae in the hind part of the latter. Metapleuron irregularly ridged, interior of which shiny. Fore wing 2.4x as long as broad, pubescence almost complete except for a narrow elongate and closed speculum; marginal fringe present only in the lower margin; veins with a row of strong brown bristles which is in double row on MV. Relative lengths of MV 39, PMV 17.5 and STV 9. Fore coxae finely aciculate; mid coxae transversely ridged;

hind coxae transversely ridged in the anterior part and transversely aciculate in the rest of area; hind tibiae with two unequal spurs. Relative lengths of hind coxa 33, femora 48, tibia 51 and tarsus 35.

**Metasoma:** Gaster ovate, petiolate, petiole transverse, 4.3x as broad as long, smooth basally and with small carinae in the hind part. Gaster 0.8x as long as head plus mesosoma combined (in profile) and 1.4x as long as broad in dorsal view (including petiole), T1 covering most of the gaster, 1.2x as long as broad; other tergites reduced; hind margin of T1 convex, ovipositor sheaths exerted.

**Etymology**

The species is named after the small size of the holotype specimen.

**Remarks**

This species closely resembles *N. ramakrishnai* Sureshan in general morphology but differs from it in having a short gaster 0.8x as long a head plus mesosoma combined and 1.4x as long as broad with petiole highly transverse (4.3x as broad as long) which is partly shiny,

**Key to the species of *Netomocera* Bouček (females)  
(Modified from Sureshan 2010)**

- 1. Wings more or less reduced ..... 2
- Wings fully developed ..... 3
- 2. Gaster with T1 not reaching beyond half length; scutellum with frenal line indistinct. Nearctic: Canada ..... *N. nearctica* Yoshimoto
- Gaster with T1 reaching beyond half length; scutellum with frenal line distinct. Australia: Queensland ..... *N. sedlaceki* Bouček
- 3. Forewing with two fuscous spots, one below MV and the other at apex: Palearctic: eastern Europe ..... *N. setifera* Bouček
- Forewing without fuscous spots, but sometimes with uniform brown infumation ..... 4
- 4. Antennae inserted distinctly above lower ocular line; eyes large (2x as long as wide); malar space very short, less than 0.2x as long as eye (in profile). Afrotropical: Congo ..... *N. alboscapus* Hedqvist
- Antennae inserted just at lower ocular line; eyes not large (less than 2x as long as wide); malar space not very short, more than 0.2x as long as eye (in profile) ..... 5
- 5. Gaster (excluding petiole) long, 2.65x as long as its maximum width; T1 not reaching middle of gaster. Afrotropical: South Africa ..... *N. africana* Hedqvist
- Gaster (excluding petiole) oval or elongate oval, less than 2x as long as its maximum width; T1 reaching middle of gaster ..... 6
- 6. Gaster with hind margin of T1 distinctly emarginate, petiole as long as broad; forewing with uniform brown infumation. Oriental: India ..... *N. nigra* Sureshan & Narendran
- Gaster with hind margin of T1 slightly angulate, petiole transverse, 2.3-4.3x as broad as long; forewing sometimes smoky ..... 7
- 7. Gaster short, 0.8x as long as head plus mesosoma combined and 1.4x as long as broad in dorsal view; petiole highly transverse, 4.3x as broad as long; frenum vaguely indicated, middle of it distinctly reticulate and sides with longitudinal ridges; MV 4.3x STV, without a line of long white hairs below on the ventral side. mesosoma mainly black; size 1.5mm ..... *Netomocera minuta* sp. nov.
- Gaster long, as long as head plus mesosoma combined and 1.8x as long as broad in dorsal view; petiole not as above, 2.3x as broad as long with strong longitudinal ridges; frenum clearly marked, longitudinally striate reticulate; MV 3.6 x as long as STV with a line of long white hairs below on the ventral side; mesosoma mainly reddish-brown; size 2.5..... *N. ramakrishnai* Sureshan

forewing with MV long, 4.3x STV without a line of long white hairs below on the ventral surface, scutellar frenal line vaguely indicated which is distinctly reticulate in the middle and ridged laterally, antennal clava as long as 5.5 preceding segments combined, size small (1.5mm) and different colour of mesosoma, mainly black (in *N. ramakrishnai* gaster long, as long as head plus mesosoma combined and 1.8x as long as broad with petiole less transverse, 2.3x as broad as long and with strong ridges, forewing with MV 4.3x STV with a line of long white hairs below on the ventral side, frenal line clearly indicated and longitudinally striate reticulate, clava a little longer than four preceding segments combined and size large (2.5mm) and the colour of mesosoma mainly reddish-brown). This species is uniquely different from the other Oriental species *N. nigra* Sureshan & Narendran in having a highly transverse petiole, gaster with hind margin not emarginated, frenal line vaguely indicated, reticulate in the middle and ridged laterally, forewing without brown infumation, different colour, and body measurements.

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