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
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)

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°8’26”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 para-scrobal 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
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Sureshan & Narendran

Bouček

Sureshan

Hedqvist

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**Remarks**

This species closely resembles *N. ramakrishnai* Sureshan in general morphology but differs from it in having a short gaster 0.8x as long as 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,

**Etymology**

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

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### Key to the species of *Netomocera* Bouček (females)

(Modified from Sureshan 2010)

| Step | Description                                                                 | Species                                                                 |
|------|----------------------------------------------------------------------------|------------------------------------------------------------------------|
| 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 ........... |
|      | Gaster with T1 reaching beyond half length; scutellum with frenal line distinct. Australia: Queensland ........... |
|      |                                                                                   | N. sedgecki Bouček                                                     |
| 3.   | Forewing with two fuscous spots, one below MV and the other at apex: Palearctic: eastern Europe .................. |
|      | 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. albescopus 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) ........................................................................ N. africana Hedqvist ........................................ 5 |
| 5.   | Gaster (excluding petiole) long, 2.65x as long as its maximum width; T1 not reaching middle of gaster. Afrotropical: South Africa ........................................................................................................ N. nigra Sureshan & Narendran |
|      | Gaster (excluding petiole) oval or elongate oval, less than 2x as long as its maximum width; T1 reaching middle of gaster ........................................................................................................ N. africana Hedqvist ........................................ 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 ........................................................................................................ N. ramakrishnai Sureshan .................................................................................. 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 ........................................................................................................ N. minuta sp. nov. |
|      | Gaster 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 7
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forewing with MV long, 4.3x STV without a line of long white hairs below on the ventral surface, scutellar frenum 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, frenum 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, frenum vaguely indicated, reticulate in the middle and ridged laterally, forewing without brown infumation, different colour, and body measurements.

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