## A new species of *Pheidole* Westwood, 1839 (Myrmicinae: Formicidae: Hymenoptera) from India

# Новый вид муравьев рода Pheidole Westwood, 1839 (Myrmicinae: Formicidae: Hymenoptera) из Индии

## Himender Bharti Х. Бхарти

Department of Zoology, Punjabi University, Patiala 147002 (Pb.) India.

KEY WORDS: New species, Pheidole, Formicidae, India. КЛЮЧЕВЫЕ СЛОВА: новый вид, Pheidole, Formicidae, Индия.

ABSTRACT. Pheidole bandatus sp.n. from Himachal Pradesh, India is described.

РЕЗЮМЕ. Дано иллюстрированное описание нового вида муравья Pheidole bandatus sp.n. из штата Химачал Прадеш, Индии.

#### Introduction

The world fauna of the genus *Pheidole* Westwood, 1839 is represented by about 538 species. It has about 36 species in the Oriental region represented by about 63 species and 36 valid species in India [Bolton, 1995a, b]. After the review published by Bingham [1903] two species were described by Wilson [1984]. Recently, two more species have been described by Bharti [2001] from India. Now this genus is represented by 66 species from the Oriental region and 38 species from India [Bharti, 2001]. During the present studies, a new species, *Pheidole* bandatus sp.n. has been discovered. This new species differs considerably from other species of this genus and has been described in the present paper. The holotype of the new species shall be deposited in IARI (Indian Agriculture Research Institute, National Collections) PUSA New Delhi, after the publishion of this paper.

Pheidole bandatus sp.n. Figs 1–6.

MATERIAL. Holotype: Worker (major); India, Dunera, Himachal Pradesh; 700 m a.s.l., 8.03.2000; Bharti, H. Paratypes: 10 major workers, 20 minor ones with same data as those of holotype.

DESCRIPTION. HOLOTYPE (major worker) (Figs 1-4). Length 4.62 mm; head length 1.32 mm; head width 1.15 mm; scape length 0.82 mm; scape index 71.30; eye diameter 0.19 mm; pronotal width 0.66 mm; alitrunk length 1.15 mm; cephalic index 87.12; mandibular index 37.12.

Head (Figs 1, 2, 4). Little longer than broad, converging slightly in posterior part; occipital emargination not deep; posterior margin of lateral lobes almost flat; mandibles with two apical teeth; antennal club formed by 3 apical segments, which are much longer than preceding ones (Fig. 4); antennal scrobes reaching up to length of scape, broad and shallow;

scape crosses more than half of head, short of posterior margin of head by 2/5th its length; eyes situated below midline of head; frontal carinae cover bases of antennae, diverging posteriorly; clypeus with anterior margin incised in the middle, posterior margin extending in between frontal carinae; clypeus elevated at middle with faint carina in anterior half touching its incision; head rugulose with longitudinal rugae, which curve outward in front of lateral lobes, turn downwards toward anterior side of head; occiput not rugulose, punctured; area between rugae and antennal scrobes finely punctured; clypeus and mandibles finely punctate; whole head covered with pale hairs.

Alitrunk, petiole and postpetiole (Figs 2, 3). Pronotum with distinct lateral tubercles; mesonotal furrow deep and wide, followed by distinct transverse ridge; metanotal groove deep and distinct; propodeum laterally bordered, with long acute spines (at almost 45° in profile); propodeal base truncate in profile, declivity very oblique; petiole with long peduncle without appendix, its upper margin transverse, narrowing anteriorly in front view, diverging into short blunt margins; postpetiole acutely conical along lateral margins, very broadly joined to gaster, its upper margin rounded; petiole and postpetiole, 1:2; postpetiole broader than long (2:1); whole alitrunk transversly rugulose, finely punctate; petiole, postpetiole finely punctate with few indistinct transverse rugae on posterior margin of postpetiole; alitrunk, petiole, postpetiole, legs covered with scattered long pale hairs.

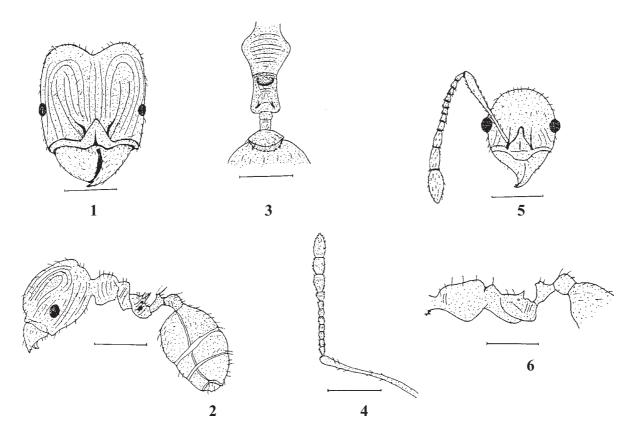
Gaster (Figs 2, 3). Broadly elongate; very densely and finely punctate from base to apex; covered with long decumbent hairs.

Head, alitrunk, petiole, postpetiole reddish brown; antennae and legs with a paler shade; gaster dark brown to black with apical margins having yellow bands; these bands are also prominent on lateral side of gaster.

PARATYPE (minor worker) (Figs 5, 6). Length 2.64 mm; head length 0.49 mm; head width 0.49 mm; scape length 0.66 mm; scape index 134.6; eye diameter 0.11 mm; pronotal width 0.33 mm; alitrunk length 0.82 mm; cephalic index 100; mandibular index 48.97.

Head oval, as long as broad; mandibles with 3rd tooth reduced and smaller than the 4th; scape long extending by 1/ 3rd of its length from top of head; eyes almost at mid-length of head; pronotum tuberculate; propodeal spines short but acute; petiole without appendage; postpetiole not conical along lateral margins, slightly broader than long (1.6: 1.3); petiole breadth of postpetiole, 1:1.5; head, alitrunk, petiole,

306 H. Bharti



Figs 1–6. *Pheidole bandatus* sp.n.: 1–4 — major worker, head, front view (1), head, alitrunk, petiole, postpetiole, lateral view (2), alitrunk, petiole, postpetiole, dorsal view (3), antenna (4); 5–6 — minor worker, head (5), alitrunk, petiole, postpetiole, lateral view (6). Scale: x70 mm (1, 3), x16 mm (2), x50 mm (4–6).

postpetiole, gaster finely punctate with few rugae on cheeks; head and gaster dark brown, other parts brown; the rest like in the major worker.

HABITAT. Collected from a nest in the soil; pupae were also collected.

#### DISTRIBUTION. India.

REMARKS. Pheidole bandatus sp.n. differs remarkably from all other species of this genus described from the Oriental region on the basis of the following combination of characters (which are distinct for this species):antennal scrobes broad and shallow; occiput punctured, not rugulose; whole alitrunk transversly rugose; propodeal spines much longer than in other species; gaster finely punctate from base to apex; prominent yellow bands on gaster. However it is related to Ph. nietneri Emery, 1901, but can be easily distinguished from the latter by; head longitudinally striate up to vertex in nietneri; but transversely striate on lateral lobes in bandatus sp.n.; posterior portion of head smooth and shining in nietneri, finely punctate in bandatus sp.n.; anterior margin of clypeus transverse in nietneri, incised in middle in bandatus sp.n.; gaster smooth and shining in nietneri, finely punctured in bandatus sp.n.; petiole rounded above in nietneri, transverse in bandatus sp.n. The minors of two species also differ remarkably as; pronotum smooth, mesonotum with shallow punctures, gaster shining in nietneri, but finely punctate in bandatus sp.n.

ETYMOLOGY. The species is named due to presence of prominent yellow bands on gaster.

ACKNOWLEDGEMENTS. The financial assistance provided by the Department of Science and Technology, New Delhi

is thankfully acknowledged. The author is also grateful to Dr. Barry Bolton, BMNH, London for guidance and literature.

### References

Bharti H. 2001. Check list of ants from North-West India—I // Uttar Pradesh Journal of Zoology. Vol.21. No.2. P.163—167.

Bharti H. 2001. Two new species of *Pheidole* Westwood (Myrmicinae: Formicidae: Hymenoptera) from India // Journal of Entomological Research. Vol.25. No.3. P.243—247.

Bharti H. 2003. Check list of ants from North-West India—II // Journal of Bombay Natural History Society (in press).

Bingham C.T. 1903. Hymenoptera Vol. II Ants, Čuckoo Wasps. The Fauna of British India, including Ceylon and Burma. London: Taylor Francis, XIX + 106 pp.

Bolton B. 1994. Identification Guide to Ant Genera of World. Cambridge M.A.: Harvard Univ. Press. 222 pp.

Bolton B. 1995a. A New General Catalogue of Ants of World. Cambridge M.A.: Harvard Univ. Press. 504 pp.

Bolton B. 1995b. A taxonomic and zoogeographical census of extant ant taxa (Hymenoptera: Formicidae) // J. Nat. Hist. Vol.29. P.1037–1056.

Emery C. 1901. Ameisen gesammelt in Ceylon von. Dr. W. Horn, 1899 // Deutsch. Entomol. Zeit. S.113–122.

Holldobler B. and Wilson E.O. 1990. The Ants. Mass. Harvard Univ. Press. 732 pp.

Westwood J.O. 1839. An Introduction to Modern Classification of Insects. London. P.193–224.

Wilson E.O. 1984. Tropical social parasites in the ant genus *Pheidole*, with an analysis of the anatomical parasitic syndrome // Insectes Sociaux. Vol.31. P.316–334.