



## A new species of *Crematogaster* (Hymenoptera: formicidae: myrmicinae) from India

Himender Bharti\*

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

Email: hbharti@glide.net.in

**ABSTRACT:** A new species of *Crematogaster*, *C. urvijae* sp. nov., is described and illustrated. The species differs remarkably from other Indian species described hitherto. © 2003 Association for Advancement of Entomology

**KEYWORDS:** New ant species, *Crematogaster*, India

Genus *Crematogaster* Lund, 1831 is represented by about 417 species over the globe, and by 17 valid species from India (Bolton, 1995). While studying Formicidae from North–West India, this new species of *Crematogaster* has been discovered and it differs from all other Indian species listed in Bingham's Fauna (1903) and Bolton's Catalogue (1995) quite remarkably and can be easily separated from these.

*Crematogaster urvijae* sp. nov.

**Holotype worker (Major) (Figs. 4–6 and 9)**

Length: 5.33 mm; Head length: 0.58 mm; Head width: 0.82 mm; Scape length: 0.43 mm; Scape index: 52.4; Eye diameter: 0.16 mm; Pronotal width: 0.60 mm; Alitrunk length: 0.66 mm; Cephalic index: 141.3.

**Head (Fig. 6 and 9)**

Broader than long; sides converging from edge of clypeal margin upto eyes; posteriorly oval with occipital margin straightening; mandibles with 4 teeth; palp formula 5, 4; anterior margin of clypeus subacuminate; posterior margin transverse; frontal carinae indistinct diverging posteriorly, just touching anterior eye margin; antennal scrobe feebly indicated; pit like area marked in centre of vertex, marked by two feeble carinae which broaden anteriorly and converge posteriorly enclosing a shallow groove; antennae 11-jointed; club formed by last two apical joints; joint 9 wider than longer than remaining joints except first one which is longer; scape narrow anteriorly, broadening posteriorly; almost reaching upto upper margin of eye; eyes lateral; placed slightly

\*Corresponding author

above mid-line; whole of head with anterior clypeal margin, mandibles covered with long hairs; head longitudinally striate (rugose) at cheeks and near inner margin of eyes, finely punctured all over.

**Thorax, petiole and post-petiole (Figs. 4 and 5)**

Pronotum with anterior angles rounded; narrowing posteriorly; confluent with mesonotum; mesonotum flat as seen from above sloping posteriorly; meso-metanotal furrow distinct; metanotal spines thick at base diverging posteriorly; spines sub-equal to metanotum; pro-mesonotum forming same plain, metanotum very low as compared to pro-mesonotum; petiole almost rectangular, flat from above with anterior margins rounded; longer than broad; post-petiole attached to petiole by a tubercle followed by two larger posterior tubercles joining gaster; pro-mesonotum with few longitudinal striations; reticulate; metanotum irregularly rugose; petiole-post-petiole, finely punctured; whole of thorax with scattered decumbent hairs. Legs: coxae swollen, femora flat; covered with scattered hairs.

**Gaster**

Gaster massive; cordate and elongate; finely punctured all over; covered with scattered hairs; at level of pro-mesonotum.

Head, thorax, pedicel yellowish brown; mandibles, apical segment of antennae with more brownish tinge; legs yellowish; gaster with alternate yellow and brown bands; apical segments completely brown.

**Paratype worker (Minor) (Figs. 1-3)**

Length: 2.2 mm; Head length: 0.35 mm; Head width: 0.48 mm; Scape length: 0.16 mm; Scape index: 33; Eye diameter: 0.09 mm; Pronotal width: 0.33 mm; Alitrunk: 0.55 mm; Cephalic index: 137.

Smaller in size as compared to major; differs from major as; pronotum with more prominent anterior angles head, thorax and abdomen finely punctured; antennae entirely yellowish; mandibles with a faint tinge of brown.

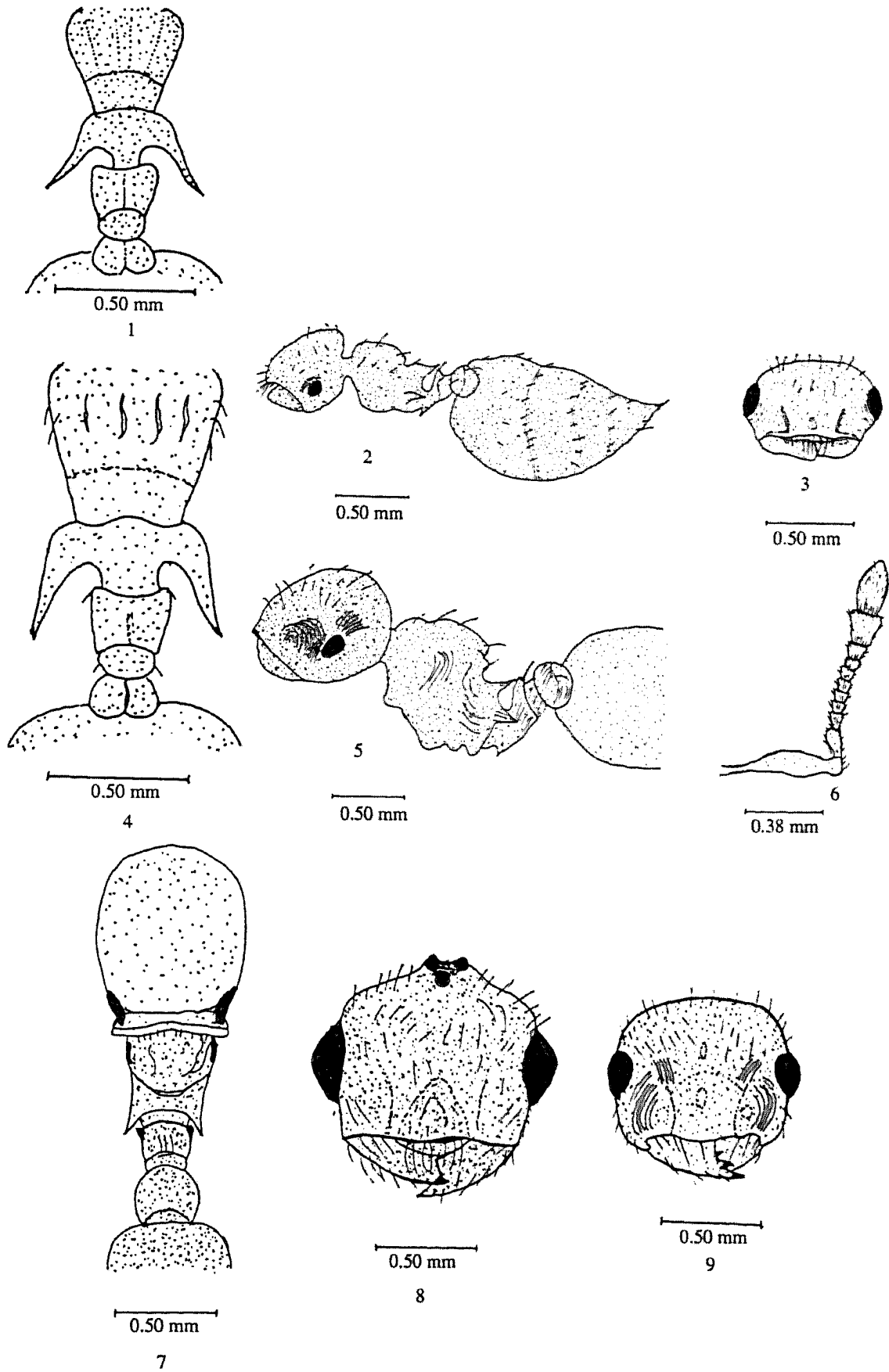
**Paratype female (de alate) (Figs. 7 and 8)**

Length: 8 mm; Head length: 0.82 mm; Head width: 0.90 mm; Scape length: 60 mm; Scape index: 66.6; Eye diameter: 0.28 mm; Pronotal width: 0.99 mm; Alitrunk: 1.65 mm; Cephalic index: 109.

Head like major but with prominent ocelli; pronotum converging anteriorly; pro-mesonotum marked by black impression; metanotal spines reduced; petiole tubercles reduced; appendix small; abdomen long.

**Holotype**

Worker (Major); India, Patiala, Punjabi University Botanic garden; 249 mtrs; 30.20 N, 76.25 E; 21. IV 2000; Bharti, H.



### Paratypes

15 majors, 12 minors, one de alate female with same data as of holotype.

### Habitat

No foraging worker was found out side nest. Nest in loose soil, 5–6 cms deep at base of *Dalbergia* tree. When excavated workers started running in all directions. Along this species, *Aenictus pachycerus* was also collected from same nest.

### Discussion

*Crematogaster urvijae* sp. nov. is somewhat allied to *Crematogaster artifex* Mayr, due to (i) scape of antenna not crossing posterior margin of head (ii) metanotal spines divergent backwards (iii) petiole with anterior margins rounded; but can be easily separated from this by; head finely longitudinally striate all over in *artifex*; striate anteriorly, but finely punctured all over in *urvijae* sp. nov; pro-mesonotum not highly elevated in *artifex*, but so in *urvijae*; pro-mesonotal suture distinct in *artifex*, indistinct in *urvijae* sp. nov; petiole not trituberculate in *artifex*; trituberculate in *urvijae* sp. nov; abdomen smooth in *artifex*; but finely punctured in *urvijae* sp. nov; apart from this both species differ strikingly in colour pattern, which is fairly constant in *urvijae* sp. nov.

### Etymology

The species is named after the daughter of author, Urvija; who has been a moral support throughout the course of present studies.

### ACKNOWLEDGEMENTS

Author is grateful to Dr. Barry Bolton, BMNH, London for guidance and support. Financial assistance rendered by Department of Science and Technology, Ministry of Human Resources, New Delhi is also thankfully acknowledged.

### REFERENCES

- Bingham, C. T. (1903) *Fauna of British India, Including Ceylon and Burma. Hymenoptera-II, Ants and Cuckoo Wasps*, London, 506 p.
- Bharti, H. (2002) Check list of ants from North-West India-II *J. Bombay Nat. History Society* **99**(2): 341–343.
- Bharti, H. (2002) Check list of ants from North-West India-I *U. P. J. Zoo* **21**(2): 163–167.
- Bolton, B. (1994) *Identification Guide to the Ant Genera of the World*, Cambridge: London, 222 p.
- Bolton, B. (1995) *A New General Catalogue of the Ants of the World*, Cambridge: London, 504 p.
- Hölldobler, B. and Wilson, E. O. (1990) *The Ants*, Harvard University Press: Cambridge, Massachusetts, 732 p.

(Received on 21 January 2002; accepted on 9 May 2003)