

Therefore, as no directly associated males are known, reasons must be given for linking the isolated males discussed in this paper with females and workers in the genus *Paratopula*. The argument for including these males in the genus is twofold. First, other myrmicine genera of the region whose males are already known can be excluded from consideration. Similarly, genera belonging to myrmicine groups in which males are known for some but not all constituents can be excluded, as those which are known show common diagnostic characters not exhibited by, or different from, those males which are now applied to *Paratopula*. Second, as is usual among myrmicines, there is sexual dimorphism between males and the female castes, but a number of characters common to all suggest most strongly that the males here included in *Paratopula* for the first time are correctly associated with the better known female castes. The matching characters in males and the female castes which are considered as being of primary importance are as follows.

- 1 High palp formula (5, 3) and strongly developed multidentate mandibles.
- 2 Broad median portion to the clypeus, which is very broadly inserted between the antennal sockets.
- 3 Similarity of construction of head capsule in full-face view (figs 6–8).
- 4 Alitrunk in males and alate females elongate and low in profile, narrow in dorsal view.
- 5 Common venation (figs 11, 13–15).
- 6 Swollen femora on the middle and hind legs.
- 7 Lack of tibial spurs on the middle and hind legs.
- 8 Elongate low postpetiole.
- 9 Position of petiolar spiracle, close to the articulation with the alitrunk (figs 1–5, 12, 16, 17).
- 10 Presence of large metapleural lobes.
- 11 Presence of basigastral costulae.

Standard measurements (in millimetres) and ratios encountered in this paper are as defined in Bolton (1981, 1982). The institutions are as follows: MHN = Muséum d'Histoire Naturelle, Geneva, Switzerland; MCZ = Museum of Comparative Zoology, Cambridge, Mass., USA; MCSN = Museo Civico di Storia Naturale "Giacoma Doria", Genoa, Italy; MNHU = Museum für Naturkunde an der Humboldt-Universität zu Berlin, Germany (DDR); UM = Hope Entomological Collections, University Museum, Oxford, U.K.

#### DISPOSITION OF PREVIOUSLY DESCRIBED NAMES ASSOCIATED WITH *ATOPULA* AND *PARATOPULA*.

SPECIES-GROUP NAME	ORIGINAL GENERIC COMBINATION	LATER GENERIC COMBINATION(S)	PRESENT GENERIC COMBINATION
<i>belti</i> Forel, 1895	<i>Aphaenogaster</i>	<i>Brunella</i> (Forel, 1917) <i>Atopula</i> (Emery, 1922)	<i>Aphaenogaster</i> (Bolton, 1982)