

5. Posterior margin of head convex; clypeus excavated medially with two carinae lateral to the excavation; antennae with 11 segments; mesonotum with two lateral bulges (Fig. 3) *C. wroughtoni*
- Posterior margin of head strongly concave in the middle; clypeus bulging with a convex anterior margin; antennae with 12 segments (Fig. 22); mesonotum without lateral bulges *C. papuana*
6. Petiole as wide as 2/3 of postpetiole (Figs. 12, 16, 19) 7
- Petiole narrower than 2/3 of postpetiole (Figs. 7, 14) 9
7. Propodeum with a pair of spines; alitrunk at anterior margin of shoulders straight, more than twice as wide as at base of propodeal spines; shoulders strongly angulated (Figs. 16, 19) 8
- Propodeum with short blunt teeth; alitrunk at anterior margin of shoulders narrower than at base of propodeal teeth; shoulders less angulated (Fig. 12) *C. stambuloffi*
8. Propodeal spines fingerlike, twice or more as long as wide; anterior margin of petiolar node in profile nearly vertical; postpetiole ventrally with a large toothlike, protuberance directed forward (Fig. 20) *C. elegans*
- Propodeal spines less than twice as long as wide; anterior margin of petiolar node in profile very oblique; postpetiole without a toothlike ventral protuberance (Fig. 17) *C. batesi* var. *nigra*
9. Pronotal shoulders angular; margin of pronotum at anterior margin of shoulders forming a straight sharp line, as wide as head; postpetiole nearly twice as wide as long (Fig. 7) *C. emeryi*
- Pronotal shoulders slightly rounded; margin of pronotum at shoulder level not a sharp line, narrower than head; postpetiole 1 1/4 as wide as long (Fig. 14) *C. nuda* var. *mauritanica*

DISCUSSION

The occurrence of winged males in ants is the rule, while wingless males are the exception. In *Cardiocondyla* the reverse situation seems to be true. The genus comprises about 40 described species (Bolton, 1982). Winged males are known from three species only (*C. emeryi*, *C. wroughtoni* and *C. batesi* var. *nigra*), while wingless males are known from these three species, as well as from five additional ones (*C. stambuloffi*, *C. nuda*, *C. elegans*, *C. papuana* and *C. ectopia*).

Le Masne (1956) summarized the characters of the winged and wingless males of ants in comparison to females and workers. According to him the winged male is characterized by: a relatively small globulose head; small mandibles; large convex eyes; 3 ocelli; the number of antennal segments is nearly always higher than that of the worker and female. The scapus is shorter and the mobility between the funiculus and the scapus is less developed than in workers and females. The thorax is swollen dorsally with well differentiated sclerites. The color is often black, even if the workers are light colored.

The wingless males contrary to the winged males, have a large head; developed mandibles; small eyes; no ocelli; antennae with the same number of segments as the