

separate *Dorylus* and *Anomma* from each other (Barr & Gotwald, 1982).

A series of phenetic studies was undertaken in an effort to clarify the status of the subgenera. The first of these studies examined the major workers (Gotwald & Barr, 1980), the second the males (Barr & Gotwald, 1982). Both studies provided support for the continued recognition of the subgeneric groupings corresponding to the current taxa *Alaopone*, *Rhogmus* and (less certainly) *Typhlopone*. The single species of *Dichthadia* included in both studies was found to be insufficiently distinct to warrant continued subgeneric status in a conservative classification. In both studies, moreover, species belonging to *Dorylus* and *Anomma* formed a mixed and loose association, a clear indication that they should be combined in a single taxon.

Of the three army ant phena, only the queen remains to be examined quantitatively, and this paper reports the results of an identical set of phenetic studies conducted on the queens. As noted previously (Barr & Gotwald, 1982), the value of such parallel studies lies not only in their contribution to

narrow taxonomic objectives. Such investigations are also useful in demonstrating the extent of phenetic congruence between different phena belonging to the same set of taxa, making the results of heuristic value to evolutionary systematists. And when congruence between phena (or the lack of it) is incorporated into taxonomic decisions, the resulting classification will be of greater pragmatic value to practising taxonomists as well.

Materials and Methods

Methods used in this study, like those for males (Barr & Gotwald, 1982), were chosen to be consistent with, and thus comparable to, those described by Gotwald & Barr (1980), for major workers. In the earliest paper, the analytical techniques were discussed in more detail, and reasons were cited for the choice made.

A set of thirty-seven characters was used to describe the queens of each of the fourteen army ant species examined in the present study. Included in the set were metric,

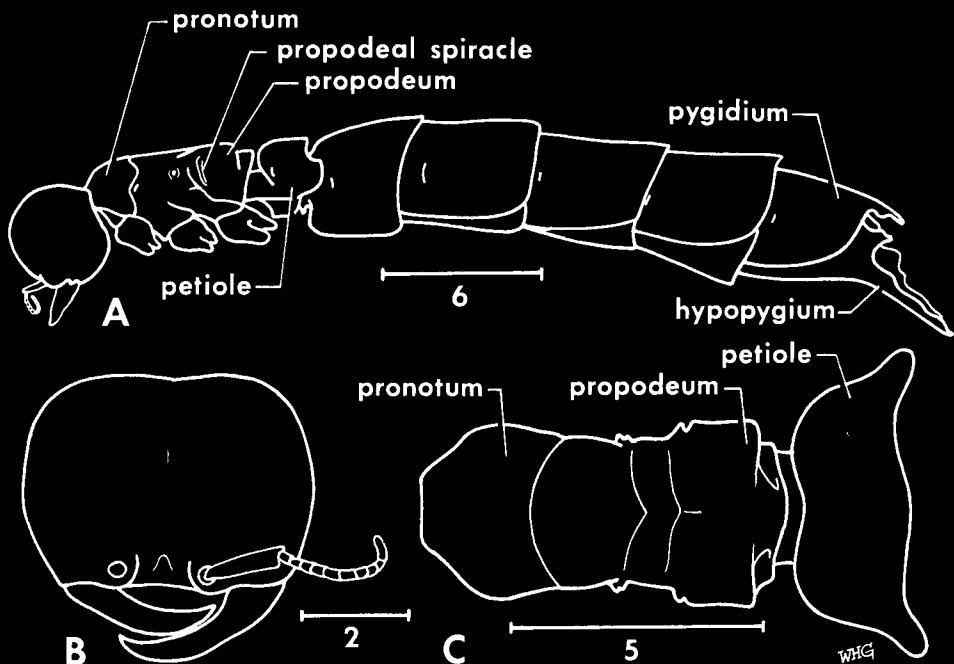


FIG. 1. Morphology of the queen of *Dorylus* (*Anomma*) sp. showing major features from which characters were drawn for the study. (A) Habitus, lateral view, legs and pilosity omitted. (B) Head, dorsal view, right antenna omitted. (C) Alitrunk (mesosoma) and petiole, dorsal view. Scales in mm.