

preadaptive to an eventual division of labor among workers in such behaviors as foraging, retrieving prey, defense, transporting brood, queen and brood care, trail wall construction, nest building, and "housekeeping" activities.

The reduced palpal segmentation of *Anomma* is characteristic of all true army ants in which the maxillary palpus ranges from one to two segments and the labial palpus from two to three segments. This reduction in palpal segmentation is correlated with the hypogaecic life style of most species and supports the hypothesized subterranean existence for the ancestors of those species, such as many *Anomma*, that lead a largely epigaecic life style (Gotwald, 1982). The mouthparts of army ants were previously examined and compared by Gotwald (1969). Among the unique features of the mouthparts of *Anomma* and of at least some other species of *Dorylus* are the conically produced galeal crown and the entire distal margin (i.e., the absence of a median cleft) in the labrum. In the Ecitoninae the galeal crown is flattened and the labrum is always bilobed. This is also true of *Aenictus*. The mandibles of *Anomma* and *Cheliomyrmex* soldiers resemble one another more closely than they do other species (there is one subapical tooth in *Anomma*, two in *Cheliomyrmex*). This similarity in mandible morphology between Old and New World army ants is a convergent development.

Little taxonomic importance can be attached to the fact that most army ants are eyeless or in possession of greatly reduced eyes, since this condition is arrived at convergently (Gotwald, 1982). The workers of *Dorylus*, *Aenictus*, and *Cheliomyrmex* are eyeless, while with few exceptions, those of *Eciton*, *Labidus*, *Neivamyrmex*, and *Nomamyrmex* possess greatly reduced (to a single facet) compound eyes. Like reduced palpal segmentation, reduced eyes and eyelessness are correlated with hypogaecic life ways. The adoption of epigaecic foraging, emigration, and nesting behaviors by some species, notably *Anomma*, *Eciton*, and *Neivamyrmex*, is a secondary and rather recent evolutionary development. These species retain their hypogaecically produced morphological characteristics.

The alitrunk (= mesosoma) of *Anomma* and the other *Dorylus* subgenera is fundamentally different from that of *Aenictus* and the Ecitoninae, in that it is divided in half dorsally and laterally by the pro-mesonotal and pro-mesopleural sutures. The absence of thoracic suturing shared by *Aenictus* and the Ecitoninae is the derived or apomorphic condition but little can be inferred phylogenetically about lost character states, because parallel losses are common in species not closely related. The spines on basisternum 2 in *Anomma* may be unique among the army ants but their absence in other species will have to be observationally confirmed.

In *Anomma*, the rest of *Dorylus*, and *Cheliomyrmex*, the waist consists of a single segment, the petiole, and represents the plesiomorphic state. Among the Ecitonini and *Aenictus*, the waist consists of two segments, the petiole