

capture of many kinds of arthropod prey, and consequently giving rise to a new adaptive radiation.

We know very little about the specificity of *Odontomachus* and *Anochetus* predation, but my own casual observations, made in many countries around the world, as well as on laboratory colonies, suggest that most if not all species take a fairly wide variety of the arthropods available in their respective microhabitats. There are of course bound to be restrictions based on prey size, behavior, and chemical and other defenses, but it should be noted that the quick strike-and-recoil tactics of the odontomachites (with their long mandibles) may represent an optimally safe method of attacking chemically protected or otherwise dangerous prey.

But what of the classification of the odontomachites? If we stress the general-adaptive nature and uniqueness of the worker-queen mandible-head complex, then we most likely should continue to recognize the group as a separate tribe in subfamily Ponerinae. But in their origin and known character systems apart from the prey-getting mechanism, *Odontomachus* and *Anochetus* are rather typical members of Ponerini. It seems to me that a sensible compromise is to include the two genera within tribe Ponerini, but to distinguish them at the subtribal level (subtribe Odontomachiti), at the same time recognizing the equally bizarre *Harpegnathos* as worthy of subtribal rank (*Harpegnathiti*) alongside the subtribe Poneriti, the last to include the bulk of «typical» genera of tribe Ponerini.

Evolution within the Odontomachiti is a matter of speculation, with few points of relative certainty. It does seem fairly clear that the two genera of the subtribe, *Anochetus* and *Odontomachus*, represent a real phyletic separation in the sense that each taxon is monophyletic, and each represents a separate adaptive radiation. I judge that *Anochetus* represents the primitive stock of the subtribe, and that *Odontomachus* arose from some group of *Anochetus*. This conclusion is supported by the configuration of the head, particularly of the posterior vertex and the apophyseal lines, representing shelf-like internal muscle attachments, developed in *Odontomachus*, but not in *Anochetus*. These apophyseal structures presumably increase the effectiveness of the snap-bite of the mandibles, although there is no direct functional evidence for this assumption. The shelves are unique in *Odontomachus*; that is, they are unknown in other ponerines.

Consistent with this interpretation is the fact that *Anochetus* has radiated more extensively and more radically than *Odontomachus*, implying for one thing that it has had a longer time to do so. *Anochetus* species, e.g., *myops*, *talpa* and *minans*, have the body size, eyes, pigmentation, and tibial spurs all reduced to go with a cryptobiotic adaptive zone, while such species as *emarginatus* retain fair body size,