4. Shape and position of lateral ridges on the dorsal surface of the petiole node closely resemble most species of *Myrmicocrypta* and *Mycocepurus*. Petiole shape in these genera is very close to that of *Proatta*.

5. Posterior margin of postpetiole indented medad in dorsal view, as in most attines.

6. Queen with two pairs of blunt spines on anterior face of pronotum very similar in size and location to those of *Myrmicocrypta* queens.

Proatta gynes also closely resemble those of attines in wing venation and in trunk shape. *Proatta* males likewise resemble those of attines (*fig. 1*).

Of the characters distinguishing *Proatta* from the Attini (EMERY, 1922 ; WEBER, 1958), several (e.g. the number of antennal segments) are apparently plesiomorphies. Contrary to statements by EMERY (1922) and others, the front tarsi of attine ants are not always conspicuously more dilated than in *Proatta*. The front tarsi of *Proatta* and species of *Cyphomyrmex* are particularly similar. The clypeus of *Proatta* is very distinctive ; however, this could represent an autapomorphy.

HABITAT AND NESTING BIOLOGY

Proatta gynes also closely resemble those of attines in wing venation in secondary rain forests. Most nests are near tree bases. Colonies infiltrate rotten roots, abandoned termite nests, and other cavities near the surface, forming within them a labyrinth of chambers and galleries. The ants apparently make use of available spaces, with little additional excavation. The chamber surfaces are lined with detritus such as woody frass and prey remains (*fig. 2*). Dealate queens are numerous, with roughly one queen for every 100-500 workers throughout the nest. Nest entrances are scattered on the ground above the chambers, and are unornamented except for strewn debris. The primary study colony is one of the largest I have seen, probably containing several thousand ants, and possibly 10,000 or more. The nest site has been occupied for at least 3 years.

DIVISION OF LABOR

The behavioral repertoire of *Proatta butteli* within a captive nest is presented in *table I* ; worker foraging behavior is considered separately (see below). These data were compiled during 10 hrs within a five day period. The total repertoire size for workers was estimated to be between 29 and 31 (95 % confidence intervals). Queens showed a limited repertoire, self-groom-