

many ants at an early stage of growth after the first brood has been raised by the queen, E.O. Wilson: pers. comm.) is the tendency for the queen to be very sensitive to disturbances. While the workers of *Acanthomyrmex* ants are usually timid, the queen of *A. ferox* (and presumably also *A. notabilis*) is exceptionally shy: she often rushed out of the nest at the slightest sign of trouble, leaving her workers, as yet undisturbed, behind her.

HARVESTING ANTS. Nests of the species *A. notabilis* have seed stores, and therefore at least this *Acanthomyrmex* clearly joins the select group of species commonly referred to as "harvesting ants." Harvesting ants are most diverse and abundant in xeric situations. The cosmopolitan genus *Pheidole*, however, includes numerous harvesting ant species found in mesic habitats (W. L. Brown, Jr., pers. comm.). On the other hand, species of the tropical Asian genus *Pheidologeton* have been considered harvesting ants, but while these ants harvest large quantities of seeds, apparently none store seeds (pers. obs.).

The majors of all *Acanthomyrmex* species have traits characteristic of seed millers, including greatly enlarged heads and heavy mandibles with the masticatory borders often severely worn. It is therefore reasonable to infer that the diet of all these species consists at least in part of seeds, but whether all are harvestor ants remains to be ascertained.

BEHAVIOR OF THE MAJORS. In the course of this study various roles have been implicated for majors of *A. notabilis*:

- (1) Majors presumably mill seeds.
- (2) Majors play an important role in colony defense, guarding the entrance when there is a disturbance there, and often biting intruders that attempt to enter the nest.
- (3) Majors sometimes carried immatures following severe nest disturbances that led to worker dispersal with brood.
- (4) Majors occasionally held or carried immatures in an quiescent colony.
- (5) I have one observation of a major holding and carrying a piece of prey.

As in other *Acanthomyrmex* species, the gaster of *A. notabilis* is small, contracted and beadlike; there is apparently no tendency for majors to take on a replete condition.