reduction of minor worker numbers to below the threshold. Wilson suggests that *Pheidole* majors serve as an "emergency stand-by caste" following periods of high minor worker mortality.

One possibility is that the apparent behavioral flexibility of *A. notabilis* majors could be a result of the small size of *Acanthomyrmex* colonies. In small colonies it is likely that the number of minor workers available at any given time will often drop below some minimum necessary to carry out the normal affairs of a colony; as a result frequent temporary crises can be expected to occur. For example, a single rich food find could divert much of the limited population of minors to food harvesting activities, so that for a time an insufficient number of minors are available to care for brood; a larger colony will probably be able to draw upon a reserve force of minor workers to handle such situations. If such labor crises are indeed common, it may be most effective to lower the thresholds beyond which majors perform the behavioral acts typical of minors, so that the threshold is closer to the normal ratio of majors to minors than Wilson (1984) found for *Pheidole*. Perhaps the death of about half of the original minor worker population prior to the start of my observations on the captive *A. notabilis* colony had been sufficient to elicit an expansion of the major behavioral repertoire. If so, further studies may show that under most conditions the repertoire of majors is restricted to defense and seed milling.

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