



Fig. 1. Major of *Pheidole ridicula* in the position it assumes when about to attack another ant.

between the mandibles. Perhaps this is why the *ridicula* major is much less deliberate in its attack and will strike the victim anywhere. Moreover, when the major of *ridicula* is aroused it will sometimes charge its own minors by mistake. It seldom kills them for the minor usually dodges under the closing mandibles to a safe position below the major's head. Nevertheless minors of *ridicula* are sometimes crushed by their own majors. In the encounters which occurred daily around each of the nests, the majors of *ridicula* rarely got the worst of it. They disposed of the majors of *Ph. floridana*, *metallescens* and *dentata* with ease and had little trouble with those of *Solenopsis geminata*. They would occasionally kill workers of *Pogonomyrmex barbatus* although this species was more often driven away than killed. There can, however, be no doubt about the high efficiency of the major of *ridicula* as a guard.

In addition to its activities as a guard the major of *ridicula* also functions as a seed crusher. Each of the flowers of *Amaranthus palmeri* produces a single, shiny, black seed about one millimeter in diameter, which resembles a tiny, blunt-edged discus. When these seeds are ripe they may fall out through a transverse slit which develops in the ovary wall or the ovary may be shed with the seed inside it. The minors strip the ovary wall away from such seeds after they are brought to the nest and the small amount of chaff which accumulates around the nest entrance is the result of this stripping. As far as could be determined the minors of *ridicula* cannot open the *palmeri* seeds; at least they never did so in the observation nests. When the major opens one of these seeds it picks it up by closing the mandibles on the lateral surfaces of the seed. Increasing pressure on these surfaces ultimately shatters the seed. In the observation nests the majors opened a number of seeds in quick