

workers can stay out of the nest for more than one day. This observation may be related to that by Diniz (1990) of a small chamber with three workers that apparently was not part of a nest, but could possibly be housing foraging individuals during an extended trip.

The workers hold the prey eggs below the ventral faces of the mandibles, which are curved in such a way as to provide, along with the hypostomal and anterior gular regions, four points for holding the egg (Fig. 2). The mandibles are thus used to apply pressure and not as pincers or forceps. Even when disturbed the carrier ant never releases the egg.

We followed the first egg-carrying worker and found a nest opening; in fact, this was the very first *Stegomyrmex* nest ever found. We did not excavate the nest, leaving it alone for further studies, but observed that the opening was circular, 2 mm in width. There was no loose earth around the opening, nor any other observable mark. We also noticed three other workers leaving the nest entrance for the foraging area.

We collected the first worker and its egg and brought them to the laboratory, but did not succeed in rearing the egg. We also collected the soil around the foraging area and swept it, obtaining three eggs similar to the ones found with the ants, probably eggs of gastropods or some small arthropods. Unfortunately, this area has been severely disturbed since and we have never been able to find this nest entrance again. We do not know whether the ants moved it.

Months later (January, 1990), however, we found in a similar situation another foraging worker in the same area. We again provided shade and observed the ant entering a natural opening in the soil. As the environment was too complex for observation, we removed the litter, consisting of fresh and dead leaves, twigs, small stones, etc., from the surrounding area. It seemed that this procedure helped to reveal eggs, because moments after we cleared the surface, eight workers came out to forage in the area, enabling us to find another nest entrance, on an inclined surface and also with a diameter of 2 mm.

Aggressive encounters were observed many times among foraging workers, suggesting colony recognition.

In order to learn which animal was responsible for the eggs found with the ant workers, we collected the superficial soil and divided it over three plastic boxes (20 × 15 × 10 cm) after sterilization at 200 °C. In one box we added all diplopods previously found the soil, in another we added the subulid gastropods, and in the last one the arachnids and Dermaptera. Some months later we swept the soil in the boxes and collected all eggs laid.

We found that the eggs carried by the ants were identical to those laid by the spirobolid diplopods. We then kept the millipedes in the same box to obtain more eggs to feed the ants in the laboratory. There the diplopods buried themselves, while in the field we have encountered them only under rocks or logs, inside logs partially filled with earth, buried in the leaf mold, in crevices under bark, or even under lumps of soil. While sweeping the ground or looking for *Stegomyrmex* ants in the field, we noticed that myriapod eggs are mostly found with a protecting soil "cocoon" (Fig. 3), that acts as an earthen nest, sometimes rather complicated; the soil grains and excrements are possibly held together by the products of the specialized anal glands of myriapods. Smaller eggs were found near the surface, while larger ones were found up