

eggs in the ants' chambers. In another nest he observed that the ants had stored many termite eggs and a single Staphylinidae (termitophilous) egg among their larvae.

The most specialized oophagous ant species are known to belong to the Ponerinae. In *Proceratium* (Ectatommini), at least four species have been observed storing and feeding on spider eggs and, rarely, on other arthropod eggs (Brown, 1957, 1958, 1974, 1979). The related minute ectatommine *Discothyrea* also collects, stores, and feeds on arthropod eggs, probably of spiders and centipedes (Brown, 1979; Lévieux, 1972, 1982, 1983). The ponerine *Plectroctena lygaria*, from West Africa, stores in its nest large numbers of millipede eggs, which appear to constitute their exclusive diet (Bolton et al., 1976). The data of *P. subterranea*, feeding likewise on diplopod eggs (Lévieux, 1972, 1983), may also refer to *P. lygaria* (Bolton et al., op. cit.).

Brown (1979) considered the information available in the literature on arthropod egg predation by ants not at all exhaustive. In the case of *Plectroctena* he said that adults of the large species are also predators of adult millipedes (see also Dejean and Suzzoni, 1990 and Villet, 1991). The Neotropical *Thaumatomyrmex contumax* also captures and preys on adult polyxenid millipedes. However, before eating them, the ants remove the millipedes' cover of setae, that probably release an aversive substance (Brandão et al., 1991).

Stegomyrmex ants are considered extremely rare. In museums one can find less than fifty individuals collected from very few localities, and nothing is known about their biology. The genus is the sole representative of the Neotropical tribe Stegomyrmecini, and has been recently revised by Diniz (1990), who studied all specimens known to be kept in museums. He recognized three species: *S. manni* Smith from Panama, *S. connectens* Emery from Peru and Bolivia, and *S. vizottoi* Diniz from Southeastern Brazil and Paraguay. Lenko (1965) found a worker of the latter species (although identified as *S. manni*) in the gizzard of *Conopophaga lineata* (Aves, Formicariidae). Diniz (op. cit.) found three workers of *S. vizottoi* in a small chamber under a plant vase, with no traces of construction. Hölldobler and Wilson (1986) described the coating of *S. connectens* integument (identified by them as *S. manni*) with a thin muddy layer of dirt, greatly enhancing the overall camouflage of the body. They also observed a similar coating in relatively old workers of basicerotine ants (Myrmicinae).

For the first time for the Neotropics and for the Myrmicinae, the searching behavior and specialized predation of myriapod eggs by *Stegomyrmex vizottoi* are described. The reasons why we believe that this represents a very specialized behavior are discussed below. We studied the morphological features related to *S. vizottoi* habits, and describe nest architecture, distribution of its population within chambers in natural nests, and comment on some other observations of its behavior in the field and in the laboratory.

Morphology

The *Stegomyrmex* antennal carinae are much enlarged, forming lobes that completely cover the deep and elongate antennal scrobes, into which the ants can entirely