

the soil or beneath rocks in very close proximity (30 cm–1 m) to the three *Sphinctomyrmex* colonies.

Raiding and foraging behavior itself were thus observed only incidentally, but a number of interesting details may be reported.

During the first rearing of larvae in December, 1987, all kinds of ant brood were consumed in the *Sphinctomyrmex* colonies, such as larvae and pupae of *Myrmecia* spp., *Monomorium* cf. *rubriceps*, other *Monomorium* species, *Meranoplus* spp., and the obviously most preferred *Amblyopone australis*. In addition, pieces of mealworm were chewed, which is the first record of a diet different from ants. On one occasion, about 30 *Sphinctomyrmex* fed on a piece of *Tenebrio* pupa, despite the presence of *Myrmica* brood in their nest (see below).

After the transfer of the colonies to Germany, experiments were run with several European ant species, mainly *Myrmica ruginodis*, *Leptothorax muscorum*, and *Lasius niger*. In addition, material was available from laboratory colonies of Australian *Monomorium* cf. *rubriceps*. Generally, ant pupae were preferred over larvae which were only attacked once no more pupae were present. Often larvae or prepupae were carried into the *Sphinctomyrmex* nest, where they were stored until pupation, and the pupae then devoured. Dead adult ants also were consumed, and *Sphinctomyrmex* larvae were placed for feeding onto such prey items.

When adult ants were placed singly into the main chamber of the maze, or into the Petri dishes containing a *Sphinctomyrmex* colony, all species of foreign ants including *Amblyopone*, *Monomorium*, *Myrmica*, or a *Lasius niger* queen, were immediately attacked and killed within a few seconds, despite being (much) larger than the *Sphinctomyrmex* (Fig. 2). After having detected an "intruding" ant, one or two *S.* workers circled around the victim very rapidly, with erratic movements, perhaps releasing an alarm pheromone or marking the surrounding area. Very soon a number of nestmates approached, and tried to grasp the legs of the foreign ant, and to sting her. With large prey ants, stinging evidently was possible into the appendages only, because it is only there that the *Sphinctomyrmex* were able to keep a firm hold with their tiny mandibles.

In the maze (Fig. 1), the majority of col. 1, including its brood, was usually in the compartment X, or in front of it (site marked "Z" in Fig. 1). In the compartment A to E colony fragments of prey