

opened sufficiently to allow the *Sphinctomyrmex* to pass, usually one or two *Sphinctomyrmex* workers were seen during the first hours of observation, wandering to and fro between the nest and the prey compartment, or sometimes "scouting" inside the latter. Recruitment presumably took place during the night, since often a high number (up to 50) of *Sphinctomyrmex* were crowding the respective compartment the following morning. With *Myrmica ruginodis* as prey, all adults had been killed, and the corpses as well as the *Myrmica* pupae and larvae were mostly carried as far as the narrow passage in the tube. When the tube-clamp was opened, the *Sphinctomyrmex* quickly carried the booty to their nest.

In one experiment, a *Myrmica* colony fragment was offered in compartment E, and a group of 20 *Monomorium cf. rubriceps* workers with *Myrmica* pupae was placed simultaneously in C. After two days, the *Myrmica* workers in E were dead, and their brood had been removed, whereas *Monomorium* had not been attacked. They remained unharmed for a further 4 days, whereas two other *Myrmica* groups in E and D were raided during this time.

Prey ants and their broods (larvae and pupae) were usually carried into the *Sphinctomyrmex* nest. Ant corpses were quickly cut in pieces and then soon discarded outside the nest. Pupae were chewed and eaten apparently according to the actual needs in the colony (they sometimes remained intact for up to a week) whereas foreign larvae usually were not consumed before all pupae were eaten.

Once, a surplus of *Myrmica* and *Monomorium* pupae had been supplied (Fig. 3), at a time when *Sphinctomyrmex* larvae were no longer present. Two workers of *M. cf. rubriceps* then eclosed within the *Sphinctomyrmex* nest, but were soon attacked and killed. This observation is remarkable, since *Cerapachys* stings prey brood, and apparently prevents its further development (Hölldobler, 1982). We did not see whether or not *Sphinctomyrmex* actually stings captured brood, although stinging movements towards them were usually observed. However, if stinging occurs, it apparently does not stop the development of the prey pupae.

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Fig. 3 (opposite page). Part of *Sphinctomyrmex* colony 1, with prey brood (larvae, prepupae, pupae of *Monomorium cf. rubriceps*). The sand hill (upper left corner) in front of the entrance to one of the compartments had been piled up by the ants.