

A second batch of eggs was laid in col. 1 beginning on 13 January, 1988, thus shortly before the pupae began to hatch. Eggs then were recorded for 17 days, and a number of larvae from 25 January on, thus 12 days after the beginning of egg-laying. Until the end of January, however, the numbers of eggs and larvae decreased rapidly, and none of the larvae pupated.

After the second brood in col. 1, and the first brood in col. 3, further egg-laying did not occur, and on 23 November 1988 the last queen died and the last workers of col. 1 were preserved.

d) Raiding behavior, prey specificity and storage

Colony 1 was housed in a maze (Fig. 1) especially constructed for the observation of *Sphinctomyrmex* when confronted with various other ant species. The main purpose of the experiments was to find an appropriate prey species, so that the colony would resume reproduction, since egg-laying and brood development ceased when the supply of *Amblyopone australis* pupae ran out in January. Among various ant species tested the pupae of *A. australis* appeared the most attractive food for the *Sphinctomyrmex* during the first two months of observation, and in the field, *A. australis* was found in

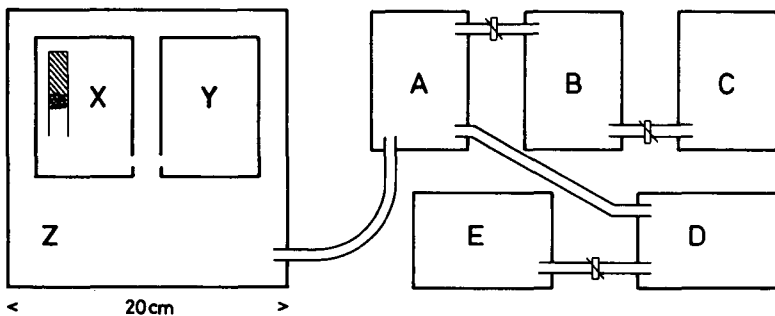


Fig. 1. A maze constructed for observations of *Sphinctomyrmex* colony 1. All chambers are cast out with a layer of plaster of Paris (.5-1 cm) which was covered with fine sand. The walls were coated with liquid paraffin. All compartments were covered with lids having a hole (2 cm diameter) onto which a wire gauze was welded, for ventilation. The "main chamber" also was covered with such a lid, and illumination of all the system was reduced with a sheet of paper covering it. Water was supplied in compartment X, and the plaster ground in all compartments was kept humid. Some clamps are indicated in the PVC-tubes connecting the compartments.