1968; all were geophilomorph chilopods. In the nest already described, 2 chilopods were found in a cavity next to the brood. One was already dead and decayed; the second was still living, although paralyzed. The brood was in a pile beside the chilopod, but no larvae were feeding. It should be noted that in all the nests observed, the presence of visible prey remains belonging to animal groups other than Chilopoda was never noticed.

Since then, 7 nests of *A. mutica,* the most abundant amblyoponine in this region, have been opened. The only food debris that has been observed inside these nests were the remains of chilopods. Brown (1960) indicated an analogous diet for *A. pallipes* in the United States and *A. hackeri* Wheeler in Australia. On the other hand, the large Australian species *A. australis* gathers various arthropods (e.g. Coleoptera).

The specialized diet of some *Amblyopone* can be compared with that of other neighboring hymenopterous families. It is interesting to note that aculeate families ancestrally close to the ants (according to Brown 1954, Wilson et al. 1967), like *Amblyopone,* have specialized alimentary needs. Thus Scoliidae and most Tiphiidae attack the larvae of lamellicorn Coleoptera, while methochine tiphiids live at the expense of cicindelid larvae (Clausen 1940). Although there are many notable exceptions, the higher ants tend to utilize a wider variety of prey.

Because the observations on these archaic ants are generally so sketchy and hard to come by, some detailed observations on *A. pluto* are offered below. Taking into consideration the limited spatial distribution of this species in the area studied and the small number of colonies discovered, certain observations could only be made once, so more data are needed for confirmation or revision of some details.

The Nest of A. pluto.—Three nests were excavated in March 1968, all at ca. 10 AM. The general plan of the nest was much the same in all cases. The total population of one of them was closely estimated. This nest, ranging from 10 to 30 cm deep in the soil, showed the following plan. An ellipsoidal passage (5×3 mm) ca. 15 cm long had in some places pockets spacious enough to contain brood. This passage could have been created by the ants, or, more simply it could be that they had reutilized a portion of a burrow elaborated by another soil organism or a part of the site of a missing root. This channel led to a 1st chamber measuring 0.5 cm diam by 1.2 cm high. This chamber contained at the time of opening only cocoons. Another opening could be distinguished in the floor which led to a larger cavity, ca. 3 cm high. This chamber contained the greater part of the larvae and workers. Another channel left this latter chamber laterally, but its destination could not be determined.

The colony contained in this nest at the time of opening consisted of 18 workers, 2 winged females, and 7 wingless females. It was not necessarily a polygynous colony, and such a composition can be interpreted in several ways. Taking the date of collection into consideration, it may have been a colony with its foundress queen and its new queens ready to leave the nest to found other colonies. Possibly new queens lose their wings before leaving the nest. It should be noted that there were queen larvae amongst the brood. Supposing that a certain number of individuals was foraging at the time of opening of the nest, it is possible to estimate its total population at ca. 40 individuals. This colony was less populous than another collected in August 1965 at the same hour. It reached 35 individuals, and this count was during the nonreproductive period of the species. Although no precise census was made for the 2 other nests excavated, they were estimated to contain ca. 30 adult individuals each. One of them contained males.

Observations on Feeding Behavior in Laboratory Nests.—After several fruitless tests with nests made in plastic or clay boxes stuffed with blotting paper, rearing was accomplished in plaster nests of the Janet type (1893). These nests consist of 4 connected chambers. The internal temperature, measured with a thermocouple, varied with the time of day between 25 and 30°C. Relative humidity, measured with a probe, remained permanently at the saturation point. The observations described below were carried out with 6 colonies collected between February and May.

Feeding Behavior of Adults.—Different types of food were tried, but only chilopods were accepted. Chilopods belonging to the same genus as those collected in the nests were introduced to the laboratory nests. They measured from 3 to 4 cm long as against 6 mm for the ants. Although quite superior in size, the chilopod usually moved about rapidly without aggressive manifestations from the ants. Generally, after moving about the chambers making up the nest and exploring all the cavities and cracks encountered, the chilopod took refuge in a corner where it would remain for up to several hours without moving. When the chilopod remained in the cell adjoining the chamber containing the brood, or even at the other end of this chamber, apparently the ants did not detect its presence. Aggressive reactions appeared when the prey passed near the ants, or, eventually, when an ant, during its wanderings, came near the chilopod.

The nature of the process by which the excitement in the ants is provoked must be examined. These ants, like all others, are very sensitive to the slightest movement of air, as for instance in moving the lid of the nest. Detection takes place at a short distance, and certainly it could involve vibration or olfaction linked to a movement of the air generated by the motion of the chilopod. Observation seems to suggest that the ants cannot locate their prey at very great distances: 2 cm would be the maximum, and perhaps it is a matter of only several millimeters. At any rate, the discovery is probably not visual, as this species normally hunts in the dark, and like the majority of *Amblyopone* has small, poorly developed eyes.

If the prey flees to the other end of the nest, the