deposited on various holders (paper, cardboard, glass, wood) showed that the workers are totally indifferent to honey. After sensing the material with their antennae, they finally turned away, confirming Haskins and Haskins' (1951) conclusion that *Amblyopone* will not accept honey. We note, though, that the male of *A. pallipes* can eat honey and fruit juice.

A test conducted with the successive introduction of a campodeid and a japygid was more interesting. Their size was 5–7 mm. They were immediately attacked by the workers, as are all living arthropods passing close to the brood. The japygid was killed with a single sting; the campodeid required three. However, as in the case of the termites, there was no attempt to feed on them. Therefore, at the moment, it is concluded that living geophilomorph chilopods make up the entire diet of this primitive ant.

It was impossible to quantify the amount of nutrients taken in nature. However, a laboratory nest could consume 2 chilopods every 3 days. It is possible, taking into account the number of prey observed in the opened nests, that this number is superior to that actually ingested in nature. However, if the laboratory values are used, a colony of ca. 50 individuals could consume 200–250 chilopods a year. If one estimates that the density of *A. pluto* colonies can reach from 10 to 20/ha in their preferred biotope and that, at a given time, one can find at least 1 chilopod/m^3 (value arrived at in counts without particular sampling of this group), colonies within this hectare would consume 2000–5000 chilopods/year. Keeping in mind the chilopod replacement rate and the fact that their real density is probably higher than the estimates indicate, it is possible that this genus of ants is, within its zone of maximal density, an important factor in the limitation of the number of chilopods.

Trophallactic transmissions of food in *Amblyopone* are very rare; in 1 hr of continuous observation of *A. pluto,* 1 sure exchange was recorded and 1 probable exchange. The duration of the first was ca. 30 sec. The 2 partners approached each other face to face. After a few contacts with the antennae, the head of one pivoted ca. 90°, while the other raised its head to the head of the other, thus permitting the mouthparts to come into contact. Liquid could not be seen between the labia.

It is impossible at the moment to conclude whether a division of labor (polyethism) exists among the various workers making up the colony. This division of labor can be seen in other primitive ants like *Myrmecia gulosa* (F.) (Haskins and Haskins 1950, Freeland 1958) or *Mesoponera caffraria* (Fr. Smith) (Bonavita and Poveda 1970), and it is well known for more highly evolved ants (e.g. *Camponotus* and *Myrmica*). It could not be ascertained for *A. pluto* whether certain workers were more particularly concerned with the brood, while others were involved in foraging.

The following conclusions on *A. pluto* hunting can be made, based on field and laboratory observations. a, The workers forage alone in their search for prey. b, They attack their prey with their mandibles and paralyze it with their sting. c, The prey is then dragged into the nest to a position near the brood. d, The workers penetrate the integument of the paralyzed prey without cutting it up, and feed on the soft parts. e, The prey probably consists exclusively of geophilomorph chilopods.

Note that the range of observed behavior patterns (prey discovery, contact, attack, stinging, transport, etc.) never takes place in a continuous fashion. There is a more or less marked interruption after each pattern, the longest interruptions taking place at the beginning (the discovery and attack phases), at least in the artificial nest.

Larval Feeding.—Before examining the manner in which the larvae are fed, an examination of larval transport is appropriate. This transport occurs in 2 stages. In the first, the worker moves the larva to be fed to the side of or eventually onto the chilopod (Fig. 28, 29). In the second, the larva, through independent movements of its thorax, next attempts to stick its head into the chilopod.

The worker can therefore move a larva and place it beside the chilopod. The larva lies on its side or back. The worker usually seizes the larva dorsally, either behind the head or at the junction of the thorax and abdomen. Seizure occurs in this latter region from 60 to 70% of the time. The worker may also grasp the larva in the abdominal region (2 observations). The larva is carried with its abdomen dragging because late-stage larvae are almost as long as the workers. Two cases of larval transport occurred in which the larva involved was left isolated in the middle of the nest without any prey contact. Even in well-fed colonies, the workers drag their prey to the brood area, and as a result of this prey transport, the larvae can sometimes find their own way to the prey. The winged queens behave like the workers and try to place the larvae, although awkwardly, on or beside the chilopod. However, they make this attempt less frequently than the workers.

Once beside the chilopod, the hungry larva elongates its thoracic segments, turns its head by prolonging the thorax and bends it to the side. It may also slightly bend the thorax toward the posterior. Its flexibility is such that this part of the body can assume an S-shape (Fig. 28). If the head moves over to the side, the larva can rock itself from this dorsal position to a lateral position. It then attempts to hook onto the prey, moving its mouthparts over the surface of the cuticle of the chilopod. If it is situated at the middle of a segment, it is evidently unable to pierce the cuticle. If, on the other hand, it is opposite an intersegmental membrane, it searches for a tear in the membrane. If it is next to a place not previously cut by the workers, it will try to pierce the cuticle, but it can do so only where the integument is thinnest. The larval mandibles can be seen through the transparent larval integument