workers will not follow it. The attack will occur when a foraging worker in the nest passes near the prey. The ant immediately becomes much more active (rapid movements in all directions, antennal movements, etc.). It attempts to catch a leg or cercus in its mandibles. The chilopod flees. There is a very distinct lack of persistence in the attack of the workers. The majority do not attack more than once or twice. At the end of a few minutes, they seem to lose track of the prey in its flight. The workers no longer bother with it, and return to the brood piled in another corner of the chamber. After a while, a foraging worker seemingly by chance, discovers the chilopod in another corner of the nest. In its flight the latter may pass through that portion of the chamber containing the brood, thus causing general excitement. There follows a number of attacks which increase when the chilopod is in the region of the brood. Generally, the attack is concentrated on the posterior features of the chilopod, since they are more easily accessible to the ants during pursuit.

In general, several hours pass before a systematic attack on the chilopod begins. But in 1 case an immediate attack on the prey was recorded. It involved a colony collected in the preceding hours and immediately put into the laboratory chamber. From the moment the prey was introduced to the chamber, the workers dashed to the attack, and the chilopod was quickly immobilized at the end of a brief period (several minutes). Generally in these cases of collective aggressiveness, the attack on the chilopod becomes continuous and finally efficacious. The degree of aggressiveness revealed in this case was stronger than usual. No prey was present in the nest when it was collected, so that it may have been a hungry colony. The other 2 colonies collected contained prey at the time of opening. (Also, there is undoubtedly some significant structural difference between the soil channels where prey is naturally found, and the artificial chambers in which these observations were made.)

During the skirmishes between predator and prey, the chilopod defends itself with its ventral glands, which secrete a liquid that flows onto the cuticle. This liquid contains, among other things, HCN. It has the affect of causing the assailant worker to stop abruptly, to arch itself, and to remain immobile. Most often the 1st pair of legs is immobilized, sometimes the head and all of the anterior part of the body. This paralysis generally lasts only a few minutes, but the worker can be killed (1 observation).

The chilopods found in the nest belong to the genus *Schendylurus* (*S. paucidens* Silvestri). The prey accepted by the laboratory colonies belonged to *Schendylurus* and *Pleuroschendyla,* and to the species *Paratringonocryptos planquettei* Demange, all geophilomorphs.

The chilopod system of defense varies enough to help hold the *Amblyopone* to considerable alimentary specificity. For example, the scolopendromorphs have no repugnatory glands, but their very powerful, venom-containing claws, added to their size and mobility, make them formidable adversaries. In fact, they are never attacked by the African *Amblyopone*. The introduction into the nest of a 6-cm *Rhysida nuda togoensis* Kraepelin created great excitement in the workers, which fled in all directions. It was the same for *Cryptos* (sensu lato), which possesses, in addition to powerful claws and large quantities of venom, hind legs that can serve as tearing claws. This fleeing behavior did not occur in the presence of geophilomorphs which, in spite of their ventral glands, are systematically attacked. In this group, the poison claws are not very powerful. There is no mechanism for spraying the venom which, although toxic because of the HCN it contains, does not seem to be secreted in an efficient enough manner to make it a good defense mechanism against these ants.

Cyanogens as principal components of defensive allomones are found in polydesmid diplopods (Eisner and Meinwald 1966) and geophilomorph chilopods (Schildknecht et al. 1968; Eisner, personal communication). For a review of chemical defenses against predation, see Eisner 1970.

Apparently, only living prey is attacked and eaten. An attempt was made (1 trial) to feed a colony a chilopod killed an hour earlier by slightly crushing its head. Several workers approached and touched it with their antennae. The chilopod was abandoned without being eaten, even though the workers and their larvae had had nothing to eat for 2 days.

Because of the prey's rapid movement, the workers try to grip the hind legs and the cerci, although the more accessible cerci break easily. Usually at most 2 workers effectively participate in the attack, but sometimes only 1 is involved, even when the alarm is transmitted to the majority of the ants while the chilopod is in the region of the colony. Thus there is no real coordination among the workers in locating or attacking the prey. The worker that has "discovered" the chilopod returns excited (agitated behavior, rapid movements in all directions). The worker's excitement appears to be transmitted to 1 or 2 others, rarely more, but never to the entire colony, which is numerically small and occupies only a few square centimeters.

When a worker has succeeded in hanging on to an appendage of its prey, it tries to sting by curving its abdomen between its legs. Many of these attempts fail as the sting appears to glide across the prey's cuticle. It is impossible at the moment to relate the number of abdominal flexions with the number of effective sting contacts.

Several effective stings are necessary to paralyze a prey (perhaps up to 4). Although it is not dead, the chilopod's motor system becomes progressively paralyzed. The paralysis can be seen to spread slowly from the stung area, but it appears to move more rapidly caudad. Although the legs can no longer move, the body can still be contracted. Uncoordinated movements of the chilopod body occur,