

sucked, *plus* the various particles collected by the ant by means of the strigils of the fore tibiæ from the surfaces of the antennæ and other parts of the body and carried into the infrabuccal pocket after being wiped off by the maxillæ. Other ants eventually spit out the pellet which is commonly a moulded, subspherical conglomerate of diverse particles, such as small pieces of insects, fragments of plant tissue, fungus spores and hyphæ, pollen grains, etc., and cast it away as refuse, but the worker nurses of the *Pseudomyrmicæ* place it as pabulum in the trophothylax of the larva!

Even this, however, is not the whole story. An examination of the mouth of the larva reveals a singular structure, evidently used for reducing the food pellet to such a finely divided state that it can, when acted on by the digestive juices of the mesenteron, yield a certain amount of nutriment, which the worker ant could not extract from it while it was in the infrabuccal pocket. This larval structure, which may be called the *trophorhinium*, consists of two flat, opposable plates, the dorsal and ventral surfaces of the buccal cavity, each furnished with very fine, parallel, transverse striæ or welts, which, under a high magnification are seen to be made up of minute chitinous projections or spinules. The ventral usually has more numerous rows of spinules than the dorsal surface. The two surfaces are evidently rubbed on one another and thus triturate the substance of the food pellet, only small portions of which are ingested at a time from the trophothylax. In all *Pseudomyrmicæ* larvæ and in many larvæ of the other subfamilies, except the *Dorylinæ* and *Cerapachyinæ*, the trophorhinium is beautifully developed, although in many ants (*Ponerinæ*) it may be used for comminuting parts of insects given directly to the larvæ by the workers. A detailed description of the organ and of its extraordinary variations of structure in the various genera of *Formicidæ* is reserved for future publication.

In its development the trophorhinium bears a strange resemblance to the stridulatory organs of the petiole and postpetiole of many adult *Ponerinæ* and *Myrmicinæ*. It may, in fact, function also as a stridulatory organ, when the food supply is exhausted, and thus apprise the worker nurses of the larva's hunger. Many ant-larvæ, notably those of the *Ectatommiine Ponerinæ* and of most genera of *Camponotinæ* (*Formicinæ*), also have elaborate but coarser stridulatory surfaces on the mandibles, so that the larva