

had long been supposed that this species was a temporary social parasite of *Lasius umbratus* and its varieties. A queen of the former species placed in *umbratus* colonies was not attacked at once, as is generally the case when a queen ant is introduced into a strange colony, but in some instances was attacked later on. When some part of her body was being held by an inimical worker, she endeavored to conciliate it by caressing with her antennae, and often succeeded. Some of the queens on which experiments were made were persistently molested and finally killed, but several were fully adopted and had larvae and pupae at the time the record of the experiment stopped. This shows that *fuliginosus* is a temporary social parasite of *umbratus*, which itself is parasitic in turn on *L. niger*. Several pupae of *niger* were placed in a nest of *umbratus*, in order to ascertain if the latter had any friendly instincts remaining toward the species in a colony of which it had begun its existence. The pupae were carried about; but were left too long before being opened so that most of the ants that emerged were crippled. These were bullied by the *umbratus*, but two perfectly healthy individuals were living in the nest, unmolested, at the time of writing.

Emery (15) observed that the eggs laid by workers of a harvesting ant, *Messor barbarus minor*, produced only males. The larvae were different in appearance from those which produced females and workers, so he concludes that sexual dimorphism is apparent also during larval stages. The same species was offered oats which had germinated and from which the husks had been removed. These were chewed by the ants till they became a ductile mass, from which the nutritive portions had been extracted. Dried oats, not germinated, were put in the nest. The ants ate first the embryo and the end of the grain where this was located, a habit that had been noticed by the ancients and which was mentioned by Plutarch. When the embryos and the farinaceous parts of the seed were separated and each ground up and made into a paste by the addition of water, the ants showed a decided preference for the paste made from the embryonic portion, especially when it was the more humid of the two. The cutting of the radicles of the seed by grain-storing ants may be the result of this fondness for the germinal portion. Italian paste in small ring-shaped pieces