cytology of the fat cells in larvae of all sizes throughout development. These changes include the presence, in varying amounts, of vacuoles, acidophilic-staining globules, and crystalline inclusions in the fat cells (fig. 7, 13, 15, 18, 20 and 23). These changes are believed indicative of, and related to, metabolic changes during metamorphosis of this species, but not to polymorphic differences.

DISCUSSION

The description of the external morphology of *Eciton burchelli* herein presented conforms to and extends the general descriptions given for larvae of this species by EMERY (1899 and 1901) and G. C. WHEELER (1943). Study of the internal anatomy of the larva of this species reveals a close similarity to that of *Eciton hamatum* (TAFURI, 1951) and a general similarity to the anatomy of other ant larvae which have been described from histological studies (PÉREZ, 1902 ; STÆRKE, 1948; ATHIAS-HENROIT, 1947 ; MARCUS, 1951, and VALENTINI, 1951). The present account also confirms the brief description of the digestive tract of *Eciton burchelli* made by WHEELER and BAILEY (1925).

Adult worker populations of *Eciton burchelli* are polymorphic (W. M. WHEELER, 1910 and 1921, and EMERY, 1899). That is, all the adult individuals of a single Eciton colony are sterile females which between the extremes exhibit graduated differences in body size and in structurals details. The adult extremes range from the largest workers, the workers major, which have huge hooked mandibles and a heavy exoskeleton, to the smallest workers, the minima, which have relatively small, feebly developed mandibles and a less heavily armored exoskeleton.

Is is highly probable that the largest larvae of any stage have developed from the eggs first to be laid and first to hatch and represent the potential major workers of the mature brood. Similarly, the smallest larva presumably develop from the eggs last to be laid and last to hatch and represent the potential workers minima of the mature brood.

Study of the development of a single *hamatum* brood series (TAFURI, 1951 and 1955) revealed a distinct foreshadowing of adult polymorphism in the larval form. For example, evidence was found that during larval development the growth of the imaginal leg discs proceeds at a different rate in each of the three polymorphic size groups studied. TAFURI's results show that the growth rate of specific larval structures is describable as an allometric and not as a direct function of the overall body growth. His results showed that in *hamatum* larvae the growth rate of the leg discs was slowest in the largest larvae, intermediate in the intermediate size larvae, and fastest in the smallest larvae of the developing brood. In all three of these polymorphic types, the leg discs being the local structures best studied in this connection, the limb buds advance in a geometric