and not in a direct relationship to body length when body length is taken as the indication of overall body growth.

The evidence presented in this investigation regarding larval development of a synthetic series of all-worker brood of *Eciton burchelli* indicate that differences exist in hatching time within the distinctive brood, as well as growth differences in size and in the time at which individuals throughout the size range attain specific structural advances. From these results it is apparent that from the earliest stages of development the basis of adult polymorphic differences is established in the brood of this species.

It is significant that differences in the growth pattern of the led discs occur in *burchelli* much as TAFURI found them to occur in *hamatum*. Also, for *E. burchelli* the ratio of quantitative changes in leg discs to body length was obtained for each of the three larval groups through the

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FIG. 1-7. — (1) *Fig. 1.* Representative specimens of the smallest (A), the size-graded (B), and the largest (C) polymorphic size-groups of *Eciton burchelli* larvae. 11th N. D.* Lynch's borax-carmine whole mount. X 1.75. *Fig. 2.* Dorsal view of head segment showing mouth parts. L--larva**, 7th N. D. Lynch's borax-carmine whole mount. X 55. *Fig. 3.* Side view of head and prothorax showing mouth parts and some internal structures. I--larva***, last N. D. Lynch's borax-carmine whole mount. X 80. *Fig. 4.* Ventral surface of larva showing imaginal leg discs (two pairs, meso and metathoracic, in focus) and one leg vestige (mesothoracic). L--larva, 8th N. D. Bouin's preserved specimen. X 4.75. *Fig. 6.* Longitudinal section. S--larva****, 3rd N. D. Harris' haematoxylin, eosin. X 80. *Fig. 7.* Longitudinal section of head and thorax. I--larva, 8th N. D. Harris' haematoxylin, eosin. X 55.

LEGEND TO FIGURES

A : Anus. — AD : Antennal Disc. — B : Brain (Supraesophageal ganglion). — BC : Buccal Cavity. — Bl : Blood. — Bl′ : Blood (Very granular). — CA : Corpora Allata. — CB : Cellular Breakdown products. — CD : Common Duct (Labial Gland). — Ch : Chorion. — Cu : Cuticle. — Cu′ : Cuticle (Double). — DL or LD : Duct Labial Gland. — DV : Dorsal Vessel (Heart). — E : Esophagus. — EI : Esophageal Invagination (Cardiac Valve). — F : Fat. — FM : Fibrous Acidophilic Material. — FG : Frontal Ganglion. — G : Galea. — GD : Gonopodal Disc. — GL or LG : Labial Gland (Glandular Portion). — Gr : Granular Secretion (Labial). — H : Hypodermis. — Hg : Hindgut. — I : Intima. — L : Lumen filled with fine granules. — Lb : Labium. — LD : Leg Disc. — LP : Labial Palp. — Lr : Labrum. — LV : Leg Vestige (Sectional view). — LV′ : Leg Vestige (Small circular structure). — M : Midgut. — M′ : Midgut (Histolysis). — Md : Mandible. — MT : Malpighian Tubules. — MT′ : Anlagen of Adult Malpighian Tubules. — Mu : Muscles (Surrounding Midgut). — Mu′ : Muscles (Surrounding Esophageal Invagination). — Mx : Maxilla. — MxP : Maxillary Palp. — NC : Ventral Nerve Connectives. — Nu : Neurilemma. — O : Ovary. — OS : Opening of Sericteries (Labial Glands). — P : Pharynx. — PC : Peripodal Cavity. — PG : Prothoracic Ganglion. — PM : Peritrophic Membrane. — PS : Prothoracic Segment. — R : Rectum. — RN : Recurrent Nerve. — S : Saccus (Labial Gland; Sectional view of cells). — S′ : Saccus (Labial Gland; Surface view of cells). — SG : Subesophageal Ganglion. — Su : Submerged Portion of Leg Disc. — VG : Ventral Ganglion. — VG′ : Ventral Ganglion (Last).

* N. D. -- "Nomadic Day".
** L--larva of the largest polymorphic size group.
*** I--larva of the size-graded (Intermediate-size) polymorphic size group.
**** S--larva of the smallest polymorphic size group.
(1) All illustrations are photomicrographs of *E. burchelli* larvae.