

Accordingly, external structural changes in certain cuticular modifications in mouth parts, and in the leg discs, and internal changes as in the labial glands, appear first (*i.e.*, at an earlier 'phase-day') in the larvae of greatest overall size, next in larvae of intermediate size, and last in larvae of the smallest size.

5. The significance of the developmental status of labial-gland structures among of the polymorphic series, in relation to the differential growth rate of structures such as the imaginal discs, is considered in view of inferences as to functional changes in the light of previous studies of insect polymorphism.

Evidence from a detailed study of the development of the leg discs and of the labial glands indicates that these structures develop at the slowest rate in the largest larvae, at a somewhat faster rate in the intermediate larvae, and at the fastest rate in the smallest larvae. Present evidence indicates that, as TAFURI found in the larval brood of *Eciton hamatum*, the HUXLEY allometry formula may also apply to the larval brood of *Eciton burchelli*.

6. This evidence is interpreted as supporting the hypothesis that the first-laid eggs in any one normal (*i.e.*, all-worker) brood of *Eciton burchelli* are first to hatch and at any one time thereafter are most advanced in their development, the last-laid eggs are last to hatch and at any one time thereafter are least advanced in their development, with eggs laid at intermediate times correspondingly differentiated according to their respective times of appearance in the colony. It is also concluded that, by virtue of differential growth rates in the brood, the time differential at egg-laying is considerably reduced at larval maturity, in the attainment of this stage by the largest and by the respectively smaller members of the polymorphic brood series of *Eciton burchelli*.

7. Evidence from a detailed study of the developmental history of the labial glands in this investigation, considered in its relevance for salivary-gland and spin-gland functions, is found to support conclusions made by SCHNEIRLA from his investigations with respect to the significant role of stimulative and trophic properties of the larval brood for colony behavior.

Résumé.

L'étude de l'anatomie, interne et externe, des larves d'un couvain polymorphe "all-worker" d'*Eciton burchelli* indique que, malgré le manque de différences significatives entre les structures globales ou partielles des individus appartenant aux divers groupes polymorphes, il existe des différences importantes dans la courbe de croissance parmi les individus des populations polymorphes. Des différences dues à la caste se manifestent lors de l'apparition des structures externes telles que les pièces buccales et les disques imaginaires des antennes, des pattes et des gonopodes. Des différences se manifestent également par des structures internes telles