growth and development among larvae of the different polymorphic groups and is believed by SCHNEIRLA to be related to the amount of stimulative and trophic exchange between adults and brood resulting in varied levels of colony excitation.

The labial glands of mature *burchelli* larvae are bilaterally arranged, branched, tubular structures which lie ventral and lateral to the alimentary canal, and open on the labium. They are divided into the duct portion, the saccus portion, and the glandular portion, and extend from the labium to the eleventh or twelfth larval segment. These glands are the sericteries or spinning glands of the larva, and the terminology adopted here for their various portions is in agreement with that previously used for *Myrmica schencki* by STÄRKE (1948) and for *Eciton hamatum* by TAFURI (1951).

The duct portion of this gland is divided into the common duct of the labial gland and the paired branches of this duct, the ducts of the labial gland. The common duct extends from the opening on the labium to the prothoracic segment, where the ducts of the labial gland are also located. Each saccus portion extends from the posterior region of the prothoracic segment to the fifth or sixth segment; each glandular portion extends from this region to the tenth or eleventh segment where it branches dichotomously. One branch extends posteriorly to the twelfth segment where it terminates as a blind tube; the other turns dorsally and proceeds anteriorly to the region of the seventh or eighth segment, where it too terminates blindly.

In mature larvae of all the polymorphic size groups the three portions of the labial glands differ histologically although the entire gland is composed of simple epithelium arranged on a distinct basement membrane. During early larval development, however, the saccus and glandular portions are nearly identical and are composed of simple, cuboidal shaped cells. The lumina of the saccus and glandular portions at this time are extremely narrow and of uniform diameter (figs. 13 and 18). The duct portion is composed of high cuboidal-shaped cells which surround a distinct lumen (fig. 18). This early stage of labial gland development is found in all the smallest and in some of the intermediate larvae of the last statary day, and in some of the smallest larvae of the third and fifth nomadic day's samples.

In the largest and some of the intermediate size larvae of the last statary day, and in some of the larger of the intermediate and smallest larvae of the third and fifth nomadic days, the lumen widens at the posterior end of the glandular portion of the labial gland and the cells surrounding it appear larger than in larvae of the respective types at earlier stages. These cells are rather vacuolate at their outer, attached border, and the lumen they surround contains small amounts of a fine, basophilic-staining, granular secretion (fig. 19). The cells of the saccus portion at this time are gradually becoming flatter to assume a low, polygonal shape (fig. 17). Small amounts of the secretory material are