

thoracic segments have become the largest segments, and the widest part of the larvae is in the abdominal region.

In preserved larvae representing very early stages (e.g., the last statary and the third nomadic days) the largest larvae show little ventral curvature in their anterior segments, in contrast to the considerable curvature noted in mature specimens (e.g., the largest larvae of the tenth nomadic day and the intermediate specimens of the last nomadic day). It therefore appears that a direct relationship exists between the amount of body curvature and body length in the preserved material. In all the polymorphic forms, just before maturity, the larger the larva the greater the amount of curvature.

B. Cuticle.—Although in most of the *burchelli* larvae studied the cuticle was characteristically papillose as described by G. C. WHEELER (1943), a relatively smooth cuticle was observed in many instances. This is probably related to the occurrence of moulting, for when a double cuticle is seen its inner cuticle is invariably papillose, whereas the outer cuticle is usually smooth. In the mature larva the cuticle is opaque in all segments except the head segment where it is slightly transparent, whereas in younger and smaller larvae the cuticle is very transparent so that the nerve cord, digestive tract and other internal organs can be seen through it. As development proceeds, the cuticle becomes opaque and may take on a chalky appearance in various regions.

Study of the appearance of cuticular hairs on the different regions of larvae in the successive samples, and the progressive development of the hirsute covering, revealed that at early stages (e.g., in larvae of the last statary day) the cuticle possesses hairs only in the largest larvae, (e.g., longer than 3.4 mm) and is smooth in larvae of the smaller sizes. This condition persists, substantially as described, in more advanced samples taken on the 3rd., 5th. and 7th. nomadic days. A relative change, i.e., appearance of a hirsute cuticular condition in the smaller castes, is indicated by the fact that minute, bristle-like hairs are present on the head and thorax of the 3.5 to 5.8 mm larvae of the third nomadic day and on the 3.4 to 5.0 mm larvae of the fifth nomadic day. Numerous short, simple hairs are present on the head, thorax and posterior end of the abdomen in the 5.7 to 7.3 mm larvae of the fifth nomadic day, and on all larvae greater than 3.4 mm of the seventh nomadic day. The largest larvae of the seventh nomadic day, and successively smaller individuals of further nomadic days, have progressively more hairs on their thorax and abdomen, another indication that hirsuteness varies in relation to body length and age. In samples taken at the tenth nomadic day, when the largest larvae have reached maturity, all the larvae throughout the range from smallest to largest are covered with numerous hairs quite evenly distributed over the surface of the body.

C. Mouth parts.—In the mature larvae, the mouth parts are the dorsally situated fleshy labrum, the dorso-lateral heavily sclerotized, sickle-shaped