

YOUNG LARVA—Length .08 inch ; cylindrical, thickest anteriorly and tapering from 2 to 13 ; color ferruginous ; marked longitudinally by many rows of low, conical, black tubercles, each of which sends out a black hair, and a few on the side on anterior segments several hairs ; of these rows four are dorsal, two being close together on either side of dorsum, and they run from 3 to 13 ; three are lateral, the upper two being on upper and middle part of side, and running from 5 to 12 ; the lower, or infra-stigmatal row, from 2 to 12 ; besides these are two short rows, one of two small tubercles on segments 3 and 4, placed a little below dorsals, the other of three on 2, 3 and 4, between the lines of the upper two long rows ; on 2 is a dorsal chitinous band, with five concolored tuberculous points and hairs on each side ; feet black, pro-legs red-brown ; head obovoid, a little depressed at top, shining black, with many black hairs.

As this stage proceeded a change in the appearance of the larva took place, and shortly before the next moult this reached its height. The tubercles of the two outermost of the dorsal rows became prominent and conical, the tops crowned by the black shields which at first had been at the surface of the body. Seen lengthwise these two rows now formed elevated, sharp ridges. The tubercles of the two inner dorsal rows rose scarcely if any at all, and were almost within the bases of the other rows and stood a little in advance of them. The tubercles of the second short row on 2, 3, 4 became still more prominent, that on 2 especially, and it was turned forward so that its end was even with the front of the head. At same time one tubercle of the upper lateral row, viz., that on 5, and one of middle row, viz., that on 6, also became prominent, and these five all gave out several divergent hairs from their summits ; so the remainder of second lateral row gave out three hairs, the other tubercles but one hair each. To first moult from 4 to 9 days according to the season.

After 1st Moult—Length .12 inch, same general shape ; color red-brown ; at the outer edge of dorsal area on either side, corresponding to outer dorsal row of first stage, is a row of fleshy appendages, one to each segment from 3 to 13 ; these are thick, tapering, bluntly rounded at top, and from base up are beset with short black hairs ; those on 3, 4, 5 are longest, next those on 11 to 13, the others are short ; on the lower part of side on 2 to 4 and on 6 is a demi-row of similar appendages, the two anterior ones longer than any dorsal, and the pair on 2 turned forward so that the tips are about even with front of head ; on 5, a little above the line above this demi-row, is another but very short tubercle ; over the legs