

from each spring four hairs, separated at their bases, turned forwards and downwards; on 2, 3, 4 is a demi-row, mid-lateral, of similar but smaller and flattened tubercles, each bearing three hairs; lower down, and just below spiracles, on 4 to 13, are 2 hairs to each segment, from little tubercles not in line, but placed obliquely, so that the posterior tubercle is always a little above the other; along base, over feet and from 2 to 12, are 2 fine and short hairs to each, near together, turned down; some larvæ have all the large tubercles black, others have them light gray; the hairs are all light but black at base; under side and prolegs greenish-brown, the feet black; head obovoid, long, broader than high, depressed at top, the vertices rounded; black, the surface rough, with many fine black hairs; the larva from the first is able to project its tentacles, very short, pale brown-yellow, and so far as observed not bifurcated. Duration of this stage from 11 to 15 days.

After First Moulting.—Length at 24 hours, .18 inch; shape as in first stage; color velvet-black, the lower part of side and under side greenish-brown; the processes on body are much as at first stage, but instead of single hairs from minute tubercles over dorsum, there are now four rows of small glossy black flattened tubercles, placed just as were the others mentioned, namely, two straight cross rows on 2, one row on 3, 4 each, in all these four in the row; in the following segments two cross rows each, two tubercles to the row, on front and rear, the former near together, or dorsal, the latter more separated and sub-dorsal; each of these tubercles bears four short hairs, separated at their bases; the upper lateral tubercles are large, rounded, flattened, running from 2 to 12, and bear from six to eight hairs; the demi-row on side of 2-4 is nearly in line with the tubercles below spiracles from 5 to 13, and this may be considered as a continuous lateral row, the lower lateral; on 2-4 there is a single tubercle to each, size of the dorsals, but the succeeding segments have two each, smaller, close together, the posterior one of the pair always a little higher than the other; the first three have five hairs each, the rest four, except on 13, where the tubercles are very small, and bear one or two hairs only; the hairs vary in length on each tubercle over the body, and in addition there are scattered hairs from the surface everywhere; on the dorsum of 2 the interior tubercles coalesce and are enlarged, and the hairs therefrom bend forward over the head; from 2 to 12 inclusive, in line with the upper lateral tubercles, on the posterior part of each segment, is a deep yellow oval or rounded spot; and on dorsum, between and in line with the sub-