

red and black ; the spines on face yellow or white. Duration of this stage 2 to 3 days.

After 4th Moulting.—Length .9 inch ; color deep black, the spines often very red, from deep red bases ; the surface much covered with tubercles, from small to minute, which are partly white, partly yellow, with many red ; the lines red, or red and yellow. In 2 to 3 days becomes full-grown.

MATURE LARVA.—Length 1.3 to 1.5 inch ; cylindrical, stout ; color dull black, with white and yellow and red tubercles on the cross ridges ; and longitudinal lines and bands of red and yellow, varying greatly in distinctness ; when most distinct, there is a band along the basal ridge ; a stripe running with second laterals, an oblique line from base of each first lateral outwards to the front of the segment, and one from front on either side of dorsals also to front of the segment ; when the lines are obsolescent, the yellow and red tubercles quite cover the surface ; under side black-brown ; spines in seven rows, one dorsal, three on either side, disposed as in *Comma* ; long, slender, tapering, with several branches at top, one being a continuation of the spine, the others arranged about its base somewhat irregularly ; these are of about equal length in the several rows, and others, which are shorter, are found on the sides of the spines, and are particularly numerous on the upper rows of the anterior segments ; the dorsals have 5 main branches, the 1st laterals 6, the 2nd and lower laterals 4 and 5 ; in most examples the dorsals and 1st laterals are red, except on 3, where they are red with black bases, and on 11 and 12, where they are usually black, the red being deepest on anterior segments : the second laterals are sometimes all red, and the lower row is always yellow ; over the feet from 2 to 10 is a simple red spine ; on 2 is a dorsal row of six simple black spines ; spiracles conspicuous, black in white rings ; head obovoid, rather flattened, deeply cleft, the vertices high, and each bearing a stout and short black process, ending in a long spur, with five others about its base, each hair-tipped ; the face covered with simple spines and tubercles, some minute ; on each side below vertex are four long spines, black, the rest are mostly white, each with hair ; color either deep red-brown, or red, about the ocelli a large black patch. From 4th moult to pupation, 5 to 6 days.

Chrysalis.—Length 1 inch, greatest breadth .3 to .32 inch ; cylindrical ; head case high, compressed transversely, at each vertex a long, conical process ; mesonotum elevated, the carina very prominent, thin, nose-like, more rounded on the anterior side than in *Comma*, followed by a deep