

the lower front, where it is reddish-black. Whole surface granulated and much covered with simple tubercles, roundly conical, and of irregular sizes; around the top and down the sides at back of head a row of sharp and pretty long spurs; all these red, as are nearly all in front, but a few are black both on front and sides; on each vertex a stout black process, short, the top rounded, and at base of the arch are six little rounded elevations; behind this process rises one of the spurs of the back head, overtopping it by .01 inch.

One day later, or 30 hours after the 4th moult, all the dark parts became paler, the red more brown, the face and head paler; the crests of all the dorsal tubercles and those on sides quite white.

Still one day later, the red parts were changing to olive-brown, and the red leads had become blue. The next day the dark parts were entirely green, mottled light and dark, the dark being olivaceous. The processes on 3 had not at all changed color from the first.

Five days after 4th moult, the larva suspended, having reached a length of one inch, and two days later pupated.

**CHRYSALIS**—Length 1.1 inch; head case sub-pyramidal; the vertices have each a low elevation, triangular; mesonotum high, rounded, with a thin low carina which rises to a blunt apex, sloping either way about equally; wing cases much elevated above the surface on the dorsal and posterior sides, the middle being incurved; on middle of dorsum rises a process, broad at base but rapidly narrowing to a sharp edge, rounded at top, not quite circular, the anterior part having a more rapid curve than the other; the space between the base of this and the wing cases corrugated; abdomen sub-cylindrical, a little compressed laterally, rising to a low medio-dorsal ridge; color of anterior parts, head and mesonotum brown; the dorsal side of head case imperfectly silvered; wing cases deeper brown, the raised ridges blackish; the dorsal process same color as the wings; at base on either side is an oblique black bar which crosses three segments, and the space between these and the wing cases is silvered on a whitish ground; abdomen buff, mottled with gray-green or olive-green, on ventral side covering quite uniformly, but on the rest the dark shades are faint and do not much discolor the light; the last segments dark, like head. Duration of this stage 8 days. Two of the larvæ reached maturity and gave two female butterflies.