

inch long, black and with black spines and bristles, as the regulars were at their second moult, these are smaller, .22 inch in length, and russet in color, body, spines and bristles. After the moult, either not having fed at all, or but little, they gather in a cluster on a leaf or on the cover of the glass in which they are kept, and within twenty-four hours shrink to the length of .16 inch, and are broader in proportion than at first after the moult. This shrinking brings the bristles together so that the appearance is that of a brush, none of the skin being visible except under a magnifyer. In the second brood of the season from egg, the hybernators are about as 2 to 1, and in the last brood of the year all hibernate.

Immediately after arousing from lethargy in the spring the larvæ prepare for a moult, and this takes place either before any food has been eaten, or very little. On moving, the larva resumes its normal shape, becoming narrower and longer than when asleep, but still only .20 inch long. After the moult it is .22 inch, very nearly or quite what it was when the second moult took place in the fall. Color now black-brown, and the resemblance is close to the summer larvæ at second moult. Following a single larva in its changes, the second moult after hibernation took place 14 days after the first; length now .40 inch, and color and markings as in third summer moult. The next and last moult, or third after hibernation, took place four days after the preceding one, the weather having suddenly turned warm; length .60 inch. Eight days after the larva was in chrysalis. The mature larva measured one inch and resembled in all respects the summer larva at same stage. Other larvæ varied much in all their stages, as I shall presently show.

CHRYSLIS—Length .6, greatest breadth .18 inch. Similar in shape to *Phaeton*; cylindrical; abdomen stout, mesonotum rounded, moderately prominent, the intervening depression slight; head-case short, narrow, nearly square at top; on abdomen five rows of conical tubercles, two of them extending to mesonotum; the coloration varies extremely; some examples are wholly greenish-yellow, others pink-brown, others gray-brown; and usually in these there are but few dark markings, some patches of brown about head-case and mesonotum, and on wing-cases; the latter showing two parallel rows of brown dots along hind margins; the tubercles orange, each having a brown spot on its anterior side; others are brown streaked and spotted with black, and perhaps with more or less sordid white; and many, especially of the summer broods, are very