

able caterpillar are of great interest to the student. In the north, including the whole of Canada, the males and females are like our figure, having the ground colour of a pale lemon yellow, with rich black markings. The broad margin is more or less powdered with blue scales, particularly on the hind wings, which are further ornamented with a conspicuous orange-red spot, bordered with black and blue, near the hind angle, and in the females there is another large spot of the same colour at the upper angle. In the Southern States the specimens of both sexes are larger and more highly coloured, and besides a black dimorphic form of the female also occurs. No specimen of a black male has ever been taken. The only approach to this melanic form is the beautiful suffused variety which is figured below. The range of the Tiger-Swallow-tail is very extended. I have some specimens from the arctic circle and others from the tropics, while from east to west it occurs from Newfoundland to Alaska. The eggs are laid by the females singly on the upper side of the leaves of its food plants. They are about one-twentieth of an inch in diameter, sub-globular and smooth, at first of a pale transparent green, much yellower at the base by reason of a more or less abundant waxy substance which fastened them to the leaf; after a few days they turn reddish, and just before the young larvae hatch they are almost black. The time of hatching varies with the weather from ten to twenty days. The caterpillars are very different in appearance during their various stages. In the first stage the general appearance is black, with white spots and tubercles, and a conspicuous white saddle-shaped mark on the back. This mark also appears after the first and second moults, but is then of a pinkish cream colour. After the second moult the ground colour of the body usually changes to greenish brown. After the third moult the green colour is much more decided, and the caterpillar assumes more of the shape and markings of the full-fed larva. The thoracic segments are now enlarged and the saddle-shaped mark is almost obliterated. There is a yellowish band in front of segment 2, and another on the hinder edges of segments 5 and 12; that on 5 is followed closely by a black line on the front edge of segment 6. This black line does not show when the caterpillar is at rest. The head is pink brown. On each side of segment 4 now appears a pear-shaped yellow eye-like spot, the larger end outwards. This spot is edged by a fine black line; inside there is a heavy black line enclosing a violet spot.