

points of the same colour. The hind-wing is principally tawny-orange or reddish, with three rows of black spots in the posterior half. The first row consists of five round spots, the two largest sometimes touching each other; the next, of seven or eight small irregular diamond-shaped spots; while those of the third or marginal row are somewhat larger, and of a triangular shape, projecting out to the edge of the wing. About the center of the wing there is a large irregular spot of black curving across it. The base and front margins are black. The posterior edge is delicately bordered with crescents of yellow. The upper side of the body and the base of the wings are covered with fine long brown hairs.

On the underside the fore-wings are marked nearly the same as on the upperside, but the dark colours are not so strong. The undersides of the hind wings are beautifully dappled with olive-brown, white and grey, the veins being white. Near the posterior margin is a row of five beautiful eye-shaped spots, the two in the center being the smallest. Behind these is a slender chain of elongated light-blue spots, each with a narrow black border, and nearer the edge are two other faint parallel black lines, the outer one consisting of a series of short curves. The underside of the body and legs are yellowish-white, the clubs of the antennae tipped with the same colour.

The Larva.—The caterpillar is dark-brown, or nearly black, with greyish scattered hairs, and several rows of tufted spines. There are two very narrow bands of yellow along the back, divided by a line of black. On the lower part of each side there is also a stripe of a yellow colour, but not so conspicuous as those upon the back, on account of its position being nearly on the underside of the body. On each of the 2d, 3d, and 4th segments of the body there are four spines; 5th, 6th, 7th, 8th, 9th, 10th, 11th, seven spines; 12th, four spines; 13th, two spines. All the specimens I have observed are more or less speckled with minute spots of yellow, and sometimes these are so numerous, that the caterpillar has a yellowish instead of a brown or blackish colour.

The Chrysalis is about three-fourths of an inch in length, and of a light or dark-grey or ash colour, with three rows of golden tubercles on the dorsal side. There are nine of these in each of the outer rows, and six in the central. The latter are very small. Two of those of the outer rows, one large and a very small one beside it, are situated in the constriction of the back. On the sides of the head are two or three small projections.



CHRYSALE OF *C. CARDUI*. Fig. 1, View of the Dorsal side. 2, Ventral side. 3, Left side. 4, Right side.

Cynthia cardui was very abundant in the city of Montreal and around the base of the mountain, during September and the beginning of the present month of October. In the small common below the McTavish house, fifty or sixty of these beautiful insects could be counted at once, regaling themselves on the flower of the thistles growing in that locality. In one small yard, in the city, about twenty of the chrysalides were observed attached to the fences and projections of the roof of the shed. There were a few thistles growing in the yard, and these were much frequented by the caterpillars. The larva, chrysalis, and imago could be all well observed at the same time. A caterpillar was taken into the house on the

19th of September, and put in a box covered with a piece of gauze, and placed upright, so as to afford it a chance of suspending itself. It immediately crawled to the top of the box, and, in about half an hour more, commenced to spin a quantity of fine white silk from its mouth. The next morning it was found suspended in the usual position, with the head downwards. It remained in this position two days, apparently becoming smaller and shrivelling up. During the third night it was transformed into a chrysalis, in which condition it remained until the 13th of October, when the butterfly was produced.

Another, which suspended itself to a window-ash, on the 13th of September, has entered into the chrysalis state sometimes between that date and the 16th. On the 11th of October the butterfly appeared. A chrysalis was taken from the fence, on the 17th of September, and brought into the house produced a butterfly on the 2nd of Oct., the time observed being 17 days. How long it had been in the chrysalis state, previously, is not known. At this time of the year, therefore, this species remains in the chrysalis state from three weeks to one month.

This butterfly is one of the most interesting of all the Lepidoptera, on account of its very extensive geographical range, it being common in North America, New South Wales, Java, Africa, Brazil, and Great Britain. Its appearance appears to be somewhat irregular. Thus Westwood states:—"This is one of those species of butterflies remarkable for the irregularity of its appearance; in some years occurring plentifully, even in the neighborhood of London, after which it will disappear for several years. Indeed, instances are on record in which, owing to the vast numbers, migration has become necessary; and in the 'Annales des Sciences Naturelles,' for 1828, an account is given of an extraordinary swarm which was observed in the preceding May, in one of the cantons of Switzerland, the number of which was so prodigious, that they occupied several hours in passing over the place where they were observed. The precise causes for this phenomenon were not investigated, and the time of the year is remarkable."

In a paper, by Prof. J. P. Kirtland, of Ohio, on the Butterflies of that State, this species is noticed as having been introduced into North America from some foreign country. The author states that in some seasons it becomes extremely numerous, while in others the collector of insects will hardly discover a solitary individual. All the thistle family are eaten by the larva. Even the forbidding Canada thistle I have found in Wisconsin to be stripped of leaves by the larva."

Boisduval and Leconte, who describe it as a species of *Vanessa*, say that it is not so common in America as in Europe. "Cette Vanessa très commune dans toute l'Europe, l'Afrique et les Indes Orientales, est beaucoup plus rare en Amérique, quoique du reste elle se trouve dans presque toute l'étendue de ce continent."

Mr. Emmons has described it in the Natural History of New York, but gives no particulars as to its distribution in that State whether abundant or otherwise. He has also figured a caterpillar which does not at all resemble those we have observed at Montreal.

CYNTHIA HUNTERA (Fabricius).

At the same time that *C. cardui* was seen in such abundance below the McTavish house, *C. huntera* was observed in still greater numbers further up the mountain, and west of the monument. Several specimens were also met with on the top of the mountain. Although a diligent search was made, none of the larvæ or chrysalides were found. It was, however, most interesting to find these two beautiful species of insects on the same day so numerous in two localities which are only three or four hundred yards apart. This is also an English species, and as Westwood's description agrees exactly with our specimens we shall give it entire. He says "it measures $2\frac{1}{2}$ inches in the expanse of the wings, which are of a less tawny-orange colour than those of *C. cardui*; brown at the base, the orange disk much broken in the fore-wings by blackish irregular bars, the apex blackish with a long white costal spot and four dots near the apex, white, between which and the margin is a pale broken rivulet. Beyond the middle of the hind-wings is a slender interrupted brown bar, succeeded by four indistinct eyelets, a black submarginal bar, and two very slender submarginal dark lines. But the great beauty of the insect consists in the underside of the wings, the anterior being elegantly varied with white, brown and black, with two eyes near the apex. The disk of the hind-wings is white, with the veins and many lines and bars of brown; these form a double scallop beyond the middle of the wing, succeeded by a white bar of the same form; the terminal part of the wing being brown and ornamented by two very large eyes,