

T. X.—*Description of the Caterpillar of Epirranthis alectoraria.*

By GEORGE R. MARRINER.

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## Plate VI.

THIS caterpillar was found on the matipo hedges (*Pittosporum tenuifolium*) around Christchurch in large numbers about April, 1900. The full-grown larva is about 1 in. in length, with the body narrowest at segments 4 and 5, and thickest at segments 7 and 8. It consists of the head and 13 segments.

The colour is of a bright-green, dotted all over with pale-yellow spots, larger and more numerous on the dorsal surface, but smaller and fewer as they approach the ventral surface. Along the middle of the dorsal surface there is a fairly thick and very conspicuous bluish-red line, sometimes continuous from end to end or more or less broken, while at the joints between the segments the line is thickened. More conspicuous in the middle segments, but less so in the anterior and posterior segments, are thin but well-marked pale-yellow diagonal lines, thickest near the middle dorsal line, but become fainter as they approach the ventral surface, where a pale-yellow line runs from the 4th segment backwards.

The head is small, and narrower than the 1st segment, with five or six pairs of ocelli, arranged in a group on each side of the head.

Segments 1, 2, and 3 have each a pair of well-developed legs. Segments 1 and 4 to 11 have each a pair of spiracles. Neither of the segments 9 or 10 has a pair of fleshy pads, termed "prolegs" or "abdominal legs," but one pair situated at the junction of the two segments, and supplied with a half-circle of hooks on their inner surfaces. Segment 13 has a pair of abdominal legs, but they are modified to form flap-like claspers, being flattened along the line of the body, with the hooks on the anterior end of the claspers; there is also a tail-like projection at the extremity of the segment. The legs, claspers, and the tail-like projection are more or less coloured a bluish-red, corresponding to the dark colour of the matipo-branch.

The young larvæ are not so thick in proportion to their length, nor are the spots and diagonal lines so well marked as in the full-grown larva. The larvæ, after feeding voraciously

for some time, formed cocoons about the 8th May. These they constructed in several ways; some simply bound two or three leaves together with silk, others rolled up a leaf like a roll of carpet, either closing both ends or leaving them open.

The pupa averages from  $\frac{1}{2}$  in. to  $\frac{5}{8}$  in. in length, and the specimens in my possession are of a dull-brown colour, with the posterior end of a darker brown. Mr. Hudson, in his book, "New Zealand Moths and Butterflies," page 81, describes the specimens under his observation as being of a greenish-brown colour; but this variation may be accounted for by the fact that pupæ often take the same colour with which they are surrounded.

After remaining in the pupa stage for three weeks or a month, the pupæ reared by me emerged as perfect insects between the 10th and the 15th June,\* though the room in which they were kept was often lower in temperature than the air outside.

The larvæ no doubt do much harm to the matipo fences, as they devour the leaves with great voracity, often leaving only the petioles on the branch, thus giving the hedge a thin or dead appearance on the top.

Owing to its peculiar colouring the larva has a striking resemblance (no doubt a protective one) to a leaf of the matipo folded inwards towards the midrib. It holds on to the branch by the two abdominal legs, claspers, and the tail-like flap. These enable the larva to grip very tightly, and, as the abdominal legs and claspers are more or less of the same colour as the stem of the matipo, at a distance the caterpillar appears to be an outgrowth of the tree. Then, with the mid-dorsal line acting as a midrib and the diagonal lines as veins, its likeness to a leaf is almost complete. The effect is heightened by the larva often standing out from the branch at the same angle as a leaf. In this position it will remain for some minutes, so that it is almost unrecognisable in the green foliage from a folded leaf.

#### EXPLANATION OF PLATE VI.

Fig. I. Full-grown larva (enlarged): *a*, clasper; *b*, tail-like projection (the peculiar markings of the body are not shown).

Fig. II. Position of the clasping organs when clasping a branch.

Fig. III. Pupa (enlarged).

Fig. IV. Larvæ on a matipo-branch; natural size.

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\* This shows that there is an irregularity in the time which they emerge. Mr. Hudson says, "The moth first appears about the end of October, and is met with until the middle of March" ("New Zealand Moths and Butterflies," p. 81).