

hatch until the following spring; and it is in vain, says M. Robinet, to expose them to a temperature gradually raised, in order that the caterpillar may be quickly developed. Yet occasionally, without any known cause, batches of eggs are produced, which immediately begin to undergo the proper changes, and are hatched in from twenty to thirty days. From these and some other analogous facts it may be concluded that the Trevoltini silkworms of Italy, of which the caterpillars are hatched in from fifteen to twenty days, do not necessarily form, as has been maintained, a distinct species. Although the breeds which live in temperate countries produce eggs which cannot be immediately hatched by artificial heat, yet when they are removed to and reared in a hot country they gradually acquire the character of quick development, as in the Trevoltini races.<sup>71</sup>

*Caterpillars.*—These vary greatly in size and colour. The skin is generally white, sometimes mottled with black or grey, and occasionally quite black. The colour, however, as M. Robinet asserts, is not constant, even in perfectly pure breeds; except in the *race tigrée*, so called from being marked with transverse black stripes. As the general colour of the caterpillar is not correlated with that of the silk,<sup>72</sup> this character is disregarded by cultivators, and has not been fixed by selection. Captain Hutton, in the paper before referred to, has argued with much force that the dark tiger-like marks, which so frequently appear during the later moults in the caterpillars of various breeds, are due to reversion; for the caterpillars of several allied wild species of *Bombyx* are marked and coloured in this manner. He separated some caterpillars with the tiger-like marks, and in the succeeding spring (pp. 149, 298) nearly all the caterpillars reared from them were dark-brindled, and the tints became still darker in the third generation. The moths reared from these caterpillars<sup>73</sup> also became darker, and resembled in colouring the wild *B. huttoni*. On this view of the tiger-like marks being due to reversion, the persistency with which they are transmitted is intelligible.

Several years ago Mrs. Whitby took great pains in breeding silkworms on a large scale, and she informed me that some of her caterpillars had dark eyebrows. This is probably the first step in reversion towards the tiger-like marks, and I was curious to know whether so trifling a character would be inherited. At my request

<sup>71</sup> Robinet, *ibid.*, pp. 12, 318. I may add that the eggs of N. American silkworms taken to the Sandwich Islands produced moths at very irregular periods; and the moths thus raised yielded eggs which were even worse in this respect. Some were hatched in ten days, and others not until after the lapse of many months. No doubt a regular early character

would ultimately have been acquired. See review in 'Athenæum,' 1844, p. 329, of J. Jarves' 'Scenes in the Sandwich Islands.'

<sup>72</sup> 'The Art of rearing Silk-worms,' translated from Count Dandolo, 1825, p. 23.

<sup>73</sup> 'Transact. Ent. Soc.,' *ut supra*, pp. 153, 308.