

jelly-fish is unlike an eagle. She cannot fly, of course. Nay more, she cannot even walk, and spends the whole of her life clinging to the cocoon in which she lay hidden as a pupa. On this she lays her eggs, arranging them in neat little rows, and fastening them down with a kind of natural glue. And, having laid them, she fails to the ground and dies.

Strange it is, to our minds, that her gay little lover should perceive in her any attractions at all. Yet no doubt, in his eyes, she is an exquisite and peerless creature, far lovelier and more lovable than if she were gifted with wings like himself, and could bear him company in his journeys through the realms of air.

I looked at the spray on which the caterpillar was sitting, and marvelled at his appetite. For he had stripped five or six leaves down to the very mid-rib, and was hard at work stripping another. By-and-by his pretty little furry coat would become too tight for him, and would split along the back, that he might wriggle his way out of it, and appear in a suit of bright new raiment. But how are those long feathery tufts packed away between the old skin and the new? And why do so many caterpillars consider it necessary to devour their old cast-off garments?

While I was looking at the caterpillar, I noticed that from many of the leaves—from nearly all the leaves, in fact, on the lower part of the bush—semi-circular pieces had been cut away with mathematical accuracy, three, four, or five, in some cases, from a single leaf. And this I knew was the work of the Leaf-cutter Bee.

This remarkable insect is solitary in its habits, and digs out a long burrow in the decaying wood of some dead tree—generally a willow—instead of making a nest. Having excavated the tunnel to her liking, she proceeds to make a series of cells, seven or eight in number, shaped like so many thimbles, and composed entirely of the fragments of rose-leaves which she has cut away with her jaws. These she arranges with marvellous skill and dexterity, carefully fitting them together in such a manner that

the natural, jagged edge of the leaf lies on the outside, and the smooth edge which she herself has cut in the interior. A second supply of leaves are fastened inside the first, and a third inside the second, especial care being taken that the junctions in one layer are covered over by the next. As soon as the cell is finished it is filled with a kind of reddish-yellow preserve, composed of pollen and honey (obtained principally from thistle-blossoms). An egg is then inserted, and the mouth of the cell covered in (like a pot of jam) with three circular pieces of leaf, each as neatly and truly cut as though it had been measured out by compasses.

When cutting them, in fact, the bee does transform itself for the nonce into a pair of compasses, one point being represented by her feet, and the other by her sharp little jaws. As she never shifts her feet while thus engaged, but revolves, so to speak, on her own axis, a perfect curve is always produced.

As the bee clings, not to the leaf itself, but to the fragment which she is cutting, it would seem that, when the operation was completed, she would fall to the ground. A second or two before the final cut is given, however, she balances herself upon her wings, and so, when the section is detached, is able to fly off with it in triumph.

One of the leaves upon the upper part of the bush, which had escaped both caterpillar and bee, was marked with a peculiar whitish streak, very narrow at one end, but widening out towards the other, and pursuing a curiously winding course. This was the burrow of a tiny grub, which some day would turn into a tiny fly, and had been busily feeding upon the soft substance lying between the upper and under surfaces of the leaf. Other leaves had been attacked by the caterpillars of a small moth greatly detested by gardeners, which had eaten out the interior in the same manner, and had carefully fastened the two membranes together with silk.

Finally, the young shoots were tenanted by two most interesting insects. But these we must reserve for a succeeding paper.

(To be continued.)

