

SHEATH-BEARING INSECTS.

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It has been said that man is the only animal who is born naked, and the only one who can clothe himself. This is not strictly true. At any rate quite a number of caterpillars are expert tailors.

The smallest of the English thick-bodied moths is *Fumea nitidella*. As soon as the tiny caterpillar of this insect bursts from the shell, it commences to make itself a coat. The workman in his finished work, seen by the naked eye, resembles a minute pillar of pith set on end. Seen through a microscope the covering is thimble-shaped, and appears as if made of tissue-paper of variegated colours (Rev. E. Tearle in Ent. Int. No. 147); and the caterpillar, seen through the same medium, resembles that of *Cossus ligniperda*. The young exquisite, when sporting its elegant attire, walks with its fore legs, and holds its coat on with its hind ones, toppling about unsteadily. Sometimes it is quite extinguished by its apparel. It reminds one of a little child wearing its father's hat—you see the laughing face for a moment, and then the big *chapeau* slips over it, and it is gone.

As the *Nitidella* grows, it finds it necessary not only to enlarge, but to strengthen its coat; so it attaches to it ribs made of small pieces of pine-needles, or of stems of grass, which seem to answer the purpose admirably.

The coat of the *Nitidella* is an important article. It is not only the winter clothing of the caterpillar, it is also the case which protects the chrysalis. The female, indeed, never leaves her coat; she creeps as a perfect insect. (In one sense, perhaps, she ought not to be called a perfect insect, for she has only rudimentary wings.) She creeps from under her coat and then takes her seat upon it. She sits upon it with as much determination as an old lady in a railway station sits upon her trunk to keep it safe. She holds her court upon it. She lays her eggs around it, and at its foot she dies. The coat is her home in life, and her monument in death. Her infant progeny, opening their eyes to the light, see her good work, and go and do likewise—they take, severally, in paper of their own manufacture, a pattern of the coat.

The Coleophoræ, of which forty-one are described by Stainton in his Natural History of the Tineina, afford remarkable instances of caterpillars having the power to clothe themselves. Mr. Lane Clarke, who turned one of these insects out of its case, thus describes its proceedings for the formation of a new one:—

"It had fixed near the edge of the leaf, and was carefully eating out the parenchyma of each serrature, leaving the edges untouched, as it thereby saved a seam in the tent, yet emptying each tooth to make it light and less brittle. When all was clear, the larva measured a gentle curve a little larger than its body, and began to draw the cuticle together on the opposite side to the serratures—tacking it loosely at first, and biting the membrane between the fibres, sewing it more neatly then, and careful not to cut the supporting braces formed by the nerves of the leaf. Then it rubbed the interior of the case with its head, as if to smooth it, and presently began to darken it with a web of fine silk, rendering further operations invisible, only I perceived that one end was left open,"

* * * "and that the fibres were cut mysteriously away, when the tent, by powerful muscular action, was raised from the leaf, and the Coleophora marched off to refresh himself in a new excavation." (Int. Obs., vol. IV, p. 4.)

In Europe the Coleophoræ are met with at every turn, on the heath of the commons, on the elms in the green lanes, on the plants by the way-side. They look like moving atoms of the plants they feed on; and they have the power of throwing themselves strangely into position to deceive the over curious eye.

Of the case-bearers of this continent, the apple-tree case-bearer (*Coleophora malivorella*, Riley) is an interesting example. The larva of this insect feeds upon the buds and leaves of the apple tree. The case it constructs for itself is curved like the handle of a pistol. The moth appears in July. It is mottled, brown and white, and is about half-an-inch in expanse of wings. The young larva feeds on the under side of the leaves, until the frost comes; then it fastens its case to a twig, making itself comfortable for the winter; in spring it feeds up upon the buds of the tree, and in June it goes into chrysalis.

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For the convy forth, in alphabeti have been found by As far as possible, particular enemy in general use, but I complete as possible entomologists, such mission at Washin Saunders, of Long *Insects Injurious to grower in Canada.*