

higher order. By what powers of perception was this butterfly enabled to tell that this plant, which she had never seen before, that cannot endure our climate but must be kept in a warm greenhouse, belonged to that genus of plants which were the proper food of her young? We attain to such knowledge only by much study and comparison; she sailing past on careless wing, without having read the first lesson in botany, knows the foreigner to be a milk-weed, and stops to deposit her eggs upon it, that when the young larvæ hatch out they may have suitable food at hand.

The eggs she lays are very small, conical objects, about the twenty-fifth part of an inch long, white at first, but in two or three days turning yellow, and then just before the time of hatching they become a dull grey. If one of these eggs is examined with a microscope it is seen to be covered with a beautiful net-work of raised lines, the longitudinal lines appearing like ribs joined together by cross lines, and coming together at the apex. The lower part of the egg, by which it adheres to one of the leaf-ribs on the under side of the leaf, is flattened, giving the egg the appearance of a truncated cone, or of one of those conical bullets, which are used in breech-loading rifles.

If the reader will look at fig. 11, *a*, he will see a magnified representation of the egg, showing the longitudinal ribs and cross lines; and at *c*, the egg of natural size, attached to the rib on the

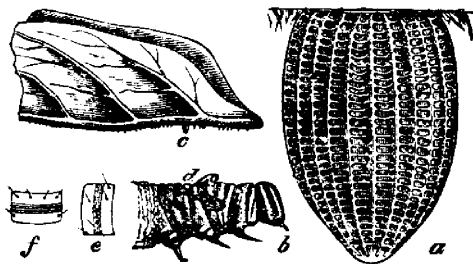


Fig. 11.

under side of the leaf, just as the butterfly places it.

In about a week after the butterfly has deposited the egg, there hatches from it a very small caterpillar, not more than the tenth of an inch long. It however grows very rapidly, and soon becomes too large for its jacket. But its jacket is very accommodating, and when the little fellow has got tired of it and wants a new one, the old one splits down the back, so that he can crawl out of it with a new jacket on, and looking as bright and gay as any new suit. And now it is a very pretty little creature, with transverse bands of black, yellow, and white, and a pair of black horns near the head, and another pair not quite so long near the other end. If it is examined with a microscope a few black