

are produced from eggs. A few, such as some plant lice, do not lay their eggs, but retain them within their bodies till the young are ready to escape. Others invariably lay their eggs where their young, as soon as they are hatched, will find a plentiful supply of food immediately within their reach.

There are three periods in the life of an insect, more or less distinctly marked by corresponding changes in the form, powers, and habits. In the first, or period of infancy, an insect is technically called a *larva*. Linnæus, with happy application, adopted this name from the Latin word signifying a *mask*; justly considering that the real form of the insect while it remained under this covering was disguised or *masked*. There are two terms in common language corresponding to this, although by no means so expressive, and in themselves indefinite. The larvæ of butterflies, moths, and insects of the same class (lepidoptera) are called caterpillars; while those which are white, somewhat inactive, and are found either in the ground, or enclosed in other substances, bear the common name of grubs or maggots. This name *larva* is applied not only to caterpillars, grubs, and maggots, and to other insects that undergo a complete transformation, but also to young and wingless grasshoppers, and indeed to all young insects before the wings begin to appear. In this period of their lives, during which they eat voraciously, and cast their skins several times, they continue a longer or a shorter period, some only a few days or weeks, others several months or years. It is in this larva or caterpillar state that they mostly do the greatest injury to vegetation.

After the larva has attained its full size, the second change takes place, wherein those insects that undergo a partial transformation, retain their activity and their appetites for food, continue to grow, and acquire the rudiments of wings, while others at this age entirely lose their larva form, take no food, and remain at rest in a death-like sleep. This is called the *pupa* state, from a slight resemblance that some of the latter present to an infant trussed in bandages, as was the fashion among the Romans. The *pupæ* from caterpillars are commonly called *chrysalids*, because some of them, as the name implies, are gilt or adorned with golden spots.

We come now to the third and last state of an insect. After continuing a certain time in the pupa or chrysalis state, it again casts its skin and issues forth a perfect and full grown moth, fly, or beetle, to deposit its eggs for future generations. When an insect assumes its adult or perfect state, Linnæus termed it an *imago*, because having laid aside its mask, and cast off its swaddling bands, being no longer disguised or confined, or in any respect imperfect, it is now become a true representative or *image* of its species, and is qualified to fulfil the laws of nature in perpetuating its kind.

The body of a caterpillar generally consists of a head and twelve segments. In winged or adult insects, two of the transverse incisions are deeper than the rest, so that the body seems to consist of three principal portions, the first of these is the head, the second or middle portion the thorax or chest, and the third or hindmost the abdomen or hind-body. The eyes of adult insects, though apparently two in number, are compound, each consisting of a number of single eyes closely united, and incapable of being rolled in their sockets. The eyes of grubs, caterpillars and other completely transforming larvæ, are not compound, but consist of five or six eyelets clustered together on each side of the head. Some, such as maggots, are blind. Near to the eyes are the *antennæ*, two jointed members, corresponding in situation with the ears of other animals, and are supposed to answer the purposes of feeling and hearing. The mouth of some insects is made for biting or chewing, that of others for taking food by suction.

The parts belonging to the thorax are the wings and the legs. The former