computed to collect a hundred weight of it in a season. Naturalists assign two purposes to which pollen is applied,—*first*, when mixed with honey and water, it is used in feeding the larvæ in their cells,—and *second*, that after being eaten and digested by the working bees, it is afterwards disgorged by them and wrought up into combs.

The propolis is a kind of gum of a reddish colour. It is collected, according to some, from the buds of such trees as the birch, the willow and poplar,—it has a pleasant smell when warmed, and is much more tenacious than the wax. It is used in filling up seams or crannies in the skep. No sooner is the young swarm placed in their new domcil, than their first care is to make a survey of it, and to stop up every place that might admit either cold or insects, and this substance is used for that end. In short, it forms the plaster of the skep, as lime does of a house, and like the pollen, it is carried by the bee on its hinder legs.

Honey is a substance not made by bees as many suppose, but found ready made in the flowers of plants, or on the leaves of trees,—this substance it laps up with its proboscis, and conveys into its stomach,—and thus concealed, returns with it to the hive, and disgorges it into the cells fitted up for its reception. Part of this is reserved for food to the young, or to the hive generally, in case of bad weather, and part is sealed up with wax for the use of winter, when the flowers have withered and the leaves have fallen from the trees.

The eggs are laid by the queen bee in cells appropriated for them. The egg of the bee is about a twelfth of an inch in length. It has one end thicker than the other, and both ends are rounded. On the third or fourth day from its being-laid, the larva or maggot appears, and is fed by some of the workers, for the queen takes no farther notice of the young, save the laying of the eggs. The food used is bee bread and honey masticated by the nurse bee, and this liquor being infused into the cell, surrounds the larva, so that it seems to float in it. When the larva is first produced, it lies in a curved position, but when fully grown, it lies straight in the cell, having its head turned to the mouth or opening. The workers now cover the cell with a lid of wax, and the larva prepares for its transformation. It spins a sort of web after the manner of the silk worm, and this forms a lining to the cell, or downy nest, in which the transformation may be more easily effected. In the course of a few days the larva is transformed into a nymph, which, when grown, bites through the covering of the cell and comes out a perfect bee,—for two days it stands about the mouth of its cell, where it is fed with honey from the mouth of the nurse bee, and after this it is able to join the swarm in their work.

The same process is observable in respect to the rearing of drones and queens. The egg of the drone is larger, and when in the nymph state, it may be known by the covering, which is convex.

The cells in which queens are reared, are different from those of the working bee. They are generally placed at the side of the comb, and have something of the appearance of a pear,—the wider end, which forms the bottom, is uppermost, and the narrower, which forms the mouth of the cell, is turned down. In such a position it might be thought, the larva would immediately fall out, but it is retained by the glutinous nature of the substance which supplies it with food. There are several royal cells erected, sometimes, we are told, from two or three to twenty, but rarely so many as this last number. And now when the larvæ in these royal cells are about being transformed, the old queen becomes agitated and seeks their destruction. She would, to accomplish this end, tear open the coverings and bite or sting the larvæ to death, but the working bees defend them and beat her back. The queen thus repulsed, runs up and down over the royal cells and communicates her agitation to a large proportion of the other bees, which, forming a new society, composed partly of young bees, and partly of old, fly off from the parent hive in quest of a new abode. In this way the old queen is the leader of the first swarm.

The nurse bees continue to watch the royal larvæ, which, as the eggs were laid at intervals, they do not come to perfection on the same day. One it may be, has been covered up for seven days, and now in the shape of a young queen, she puts forth her horns and would be free from her confinement,—the nurse bees, however, will not permit her to come out until she is able to fly; and it is supposed they judge of her capability by her voice. No sooner does the young queen come out than she manifests the same desire with her predecessor for the destruction of the royal larvæ. She runs over and over them eager to sting them to death, but being beaten back, she also becomes agitated, others participate in it, when a portion of the bees leave the hive and cluster on the outside.

(*To be continued.*)