

THE SOCIAL ECONOMY OF THE BEE.

[No. II.]

The young queen soon afterwards forsakes it also, when these and others accompany her, and thus a second swarm is cast off by the parent hive. It is seldom a hive throws off more than two or three swarms, because those that remain, become few,—they cease, therefore, to watch, as formerly, the royal cells,—the young queens, therefore, come out as it suits them, when the strongest one kills the rest, and destroying all the royal larvæ, remains queen in the hive. Should a hive be so poorly stocked as not to build royal cells, there is no swarming that season.

The young swarm are no sooner put into their skep than they begin their work; and such is their activity, that it is said, within twenty-four hours, they will have made combs twenty inches long, and wide in proportion.—Others again, are stopping up every hole with propolis, to exclude insects and cold from the hive. It is about this time, according to Huber, that the virgin queen is observed to quit the hive, and after examining it, “she soars high in the air, forming spiral circles as she ascends.” Here it is, according to the naturalist referred to, she has intercourse with the male bees, which, as has been said, is sufficient to render her prolific for two years, (and as bees are not supposed to live longer than this) for the rest of her life. Within the space of forty-six hours after this, she begins to lay her eggs,—and until she is eleven months old, these, it is said, produce working bees only.—At the end of this time, which is generally in spring, she has her great laying of the eggs of males,—and during March and April, will lay two or three thousand, at the rate of forty or fifty daily. She has another smaller laying of eggs of males in autumn, and in other seasons they are all workers.

It is a common opinion, that bees collect wax in a prepared state, and bring it into the hive, but this is erroneous. The wax is a substance which exudes from the bee. It comes off in scales from the lower part of the body. After one scale is taken off, it is removed to the mouth, and being masticated, is impregnated by the tongue with a frothy liquid,—the wax is then fit for being applied to the roof of the

skep. Another scale undergoes the same process, and is placed above that already adhering. After one bee has deposited, in this way, all its scales, another comes forward and does the same, laying its wax in the same line with its predecessor, and so on with others in succession, until the wax swells into a small block,—the scapto bee, which is said to be smaller in size than the wax-worker, now excavates the block into a cell, and thus the work proceeds from the roof downwards. But, as has been well observed, “the construction of the comb of the bees, is a miracle which overwhelms our faculties.”

In addition to the above, I shall submit to the reader, a passage from the Naturalist's Library, illustrative of the social economy of the bee :—

“A hive consists of the queen, or mother bee, the workers varying in number from 10,000 to 20,000 or 50,000, and the males or drones, from 700 to double that number.

“The queen is the parent of the hive; and her sole province and occupation consists in laying the eggs, from which originate those prodigious multitudes that people a hive, and emigrate from it in the course of one summer. In the height of the season her fertility is truly astonishing, as she lays not fewer than 200 eggs per day, and even more when the season is particularly warm and genial, and flowers are abundant; and this laying continues, though at a gradually diminishing rate, till the approach of cold weather in October.

“An opinion has been entertained, that the queen is followed in her progress through the hive by a number of her subjects, formed in a circle round her, and these, of course, have been regarded as the queen's body guards. The truth is, however, that her bee-majesty has no attendants, strictly speaking; but wherever she moves, the workers whom she encounters in her progress, instantly and hurriedly clear the way before her, and all turning their heads towards their approaching sovereign, lavish their carresses upon her with much apparent affection, and touch her softly with their antennæ; and these circumstances, which may be observed every hour in the day, have given rise to the idea of guards. On one occasion we gave her subjects an opportunity of testifying their courage in her defence, as well as their affection and zeal. Observing her laying eggs in the comb next to the glass of the hive, we