natural history—the reproduction of its species.

There has been much speculation and theory indulged in to account for the strange phenomena witnessed by the observing student, and opposed to the generally accepted idea from a biological standpoint, viz., the egg from an unfecundated creature hatching into life, but such is the fact beyond all doubt, and the virgin queen bee can lay any number of eggs which will produce only drones or males, and it is not until she has taken her wedding flight, high in the air, and had copulation with the drone, that she can lay an egg which will produce a worker or queen.

Here we are reminded of the wise provision Nature has made to perpetuate this insect for the use of man, to enable her virtually to effect her own fecundation in twenty-four days, should drones not be present in the district. After fecundation the queen can lay eggs that will produce workers or drones as she thinks fit, according to the cell in which she deposits the egg. Drone-cells are large, measuring four to the lineal inch, workers' cells five to the inch. This difference of size regulates the sex that will be found in them. But wise economy directs her to pass a drone-cell at such times of the year when drones are not wanted in the hive. In the swarming season she can pass from worker to drone-cell in quick succession, depositing an egg in each, which will produce the two sexes respectively.

Here I shall mention a few of the strange changes in this insect's progeny, brought about by the various conditions of breeding and mating, which, if well considered, will give food for thought.

The queen, if raised from an egg laid by a pure-bred mother, mated to a pure-bred drone, will naturally be pure herself. If the mother were mated to a black drone, our queen will be a hybrid, partaking of the characteristics of both parents. Presuming our queen to be raised from pure stock, she will produce pure drones, and if mated with a pure drone will produce pure workers also; but if she mates with a black drone, her eggs will produce pure drones (as he is the son of his mother only), but hybrid workers and queens and these last queens will produce hybrid drones and mongrel workers and queens of various degrees of variety, according to the drone she mates with.

Hard as it may seem to control the races, still it is within the power of a good queen-breeder to regulate the mating of his stock to a certain extent.

The old or fecundated queen always accompanies the first swarm from the hive, but not before the bees have provided several embryo queens, which in eight days after the swarm leaves will hatch, and one be accepted as the reigning monarch. Some three or four days before the old queen leaves, she gradually reduces the secretion of eggs in her ovaries, which also reduces the number deposited in the cells, thus making her size and weight considerably less, enabling her to fly with greater freedom in accompanying the bees to their new home, which may be a mile or so away.

Here we see another wise example of adopting the means to the end, for should the queen continue in the successive ovide position up to the time of her flight, she would receive a severe check and possibly harm, when she arrived at the new domicile, where there would be no cells in which to deposit her eggs until the bees had converted the honey in their honey sacks into wax scales and built the comb for her use, Nature having given them the instinct to take this honey with them specially for the purpose.

The next inmate of importance is the neuter, or undeveloped female, whose ovaries are only in a rudimentary form it is in the egg three days, larva five

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