

GENERAL.

How Swarming is Conducted.—Agricultural Editors Who Need Posting.

BY G. M. DOOLITTLE.

PICKING up an agricultural paper lately, I was surprised to read in the "bee-department," in reply to a question asked of the editor, that "only old bees go with the swarm," while in another paper I find that the young queen in the parent colony "hatches in less than twenty-four hours after the swarm has issued." Coming, as these statements do, from as high authority as editors, they ought to be correct; nevertheless, all my experience with natural swarming goes to prove them incorrect. If editors are not sufficiently well posted to know how, and under what conditions a natural swarm issues, it might be well to have a little light on the subject for the "rank and file" of bee-keepers, and especially those young in the business: so, with friend Root's permission, I will say a few words regarding the matter in *Gleanings*, the same being more especially designed for those who have not been in the bee-business for any great length of time. I have always used natural swarming as a means of increase, and experimented largely, to know under what conditions swarms issued, as a rule, and have found, as regards the age of bees, that bees of all ages in about equal proportion leave the parent hive, from the old forager to the bee that has not been out of its cell for more than a day or two. Many times have I seen the ground in front of the hive nearly covered with bees so young as to be unable to fly; and as often have I seen the veterans with their jagged wings hanging with the swarm, as well as those having their pollen-baskets filled with pollen. Thus we have the field-bees, the wax-workers, and the nurse-bees, in about equal proportions, thus showing that the all-wise Creator knew how things should be when he pronounced all which he had made good. If it were not for young bees going with the swarm, the hive would be nearly depopulated by the bees dying of old age, before the brood could hatch out to take their places. Again, if all were old or field bees, the hive could not be filled as profitably with comb; for when, in a normal condition, the bees between the ages of eight and twenty-four days old are the ones which do this work. That this division of bees in a swarm is just as it should be, is the reason that I prefer natural to artificial increase.

But, let us look inside of the hive when preparations for swarming are being made, and see if we can not arrive at the truth in the matter, as regards, the condition under which the swarm issues, when the first queen hatches, etc.

The first indication of swarming is the laying of eggs in the drone comb. While eggs in drone-cells are not a sure sign that a swarm will issue, yet, as far as I have observed, swarms never do issue with ut eggs being laid therein.

If the weather is propitious, the next step is the building of queen-cells, soon after which the queen deposits eggs in them. In three days the eggs hatch into larvæ, and said larvæ are fed an abundance of food by the nurse-bees for six days, when the cells containing the embryo queens are sealed over. If no bad weather has intervened, the swarm issues the next day, the old queen going with the swarm. Now, bear in mind that this is the rule with the black or German bees, and generally with all the other races; still, the Italians, Cyprians, and Syrians often swarm when the eggs are first laid in the queen-cells, and sometimes without the least preparation at all except drones, in a time when swarming runs high in an apiary. All good authorities admit that the queen larvæ remains seven days in the cell, as my experience also proves, and I can not see how any one could make such a mistake as to say the queen hatches in twenty-four hours. When bad weather occurs, the thing is barely possible for the swarm to be kept back for six days after they would naturally issue, in which case the first queen would hatch in twenty-four hours. But this is something I have had occur but very few times since I kept bees, for in such cases the bees generally destroy the queen-cells, and postpone swarming for an indefinite period. So I find, as a rule, that the first queen emerges from her cell from six to seven days after the first swarm. If more swarms issue, they usually come out two days after, or from the eighth to the ninth day after the first, and never later than the sixteenth day. As soon as it is decided that no more swarms shall issue, all queens in the cells are destroyed, when in from five to nine days the queen goes out to be fertilized, two days after which she commences to lay. If the apiarist stops all after-swarming by the cutting of cells, or any other means which keep all of the bees in the old hive together after the first issue, I find that the young queen is much slower in going out on her wedding-trip, and often does not commence to lay till the twelfth to fifteenth day. Where any one wishes to make artificial increase it is well