

needlessly in watching bees, which a little knowledge of the matter would save, as well as to do away with much anxiety in the matter. As to when the first swarm of the season will issue, be the apiary large or small, I have never known it to fail that such a one came with the sealing of the first queen-cell, this being the rule with all swarms; but after swarming gets under headway in a large apiary, especially with the Italian bees, some swarms issue without any preparation for swarming at all; others, when eggs are laid in queen-cells, etc.; but I never knew such a case with the first swarm of the season. Understand, I do not say that a first swarm of the season never did issue without this preparation, but that I never knew one to do so. Then we have the sealing of the cell as the indications of a first swarm. Now, all persons familiar with queen-rearing know that the time the queen remains sealed in the cell does not vary much from seven days; hence in seven days after the old queen leaves with the first swarm, the first young queen is hatched. If a second swarm is to issue, this queen begins to peep or pipe when from 6 to 8 hours old. If she commences to peep I never knew a swarm to fail to issue, unless the object of the bees was thwarted by the keeper or exceptionally bad weather. This piping is kept up for from 36 to 45 hours, when, unless kept back by foul weather, the second swarm issues.

An item worthy of note is, that the weather must be very bad to keep after-swarms from issuing, for they often issue on 'cloudy days, or on the least streak of sunshine in a rainy day. Then, again, they come out at all hours of the day, from five in the morning till seven at night, while the time of issuing of first swarms is usually between 9 a.m. and 4 p.m. Then, as a rule, all second swarms may be expected in 9 days after the issue of the first swarm, instead of 12, as our friend quoted tells us. If the bees conclude to swarm still further, after the second swarm has issued, another queen is allowed her liberty, while the rest are kept confined in their cells, being fed through holes in the cells, so they are virtually of the same age and strength as the one which has her liberty. The queen let loose at once begins peeping, keeping it up for about the same length of time the others did, so that the third swarm comes two days after the second or 11 days after the first. If a fourth, fifth, or sixth swarm issues, they come out the next day after the third, and each other, so that, should the sixth swarm issue it would come on the 14th day after the first. Five swarms is the highest number I ever knew cast from one colony during our swarming period; but I believe as high as six have been reported.

As I believe all after-swarms are a disadvantage, I wish to tell the reader, before closing, what I consider the simplest way of stopping them when the first swarm is hived on a separate stand, instead of on the Heddon plan. If the first swarm issued according to rule, the first young queen will be hatched in 7 days, and unless prevented, lead out a second swarm on the 9th day. Taking advantage of this fact 8 days after the issue of the first, when the hive is opened and all queen-cells are cut off, when we have a sure thing in the matter, which can not be said regarding any other plan dependent upon the cutting of queen-cells. Where a person has not too many hives I find it as good a way as any to listen for peeping in the evening after it is thought that a young queen has hatched; and if the queen is heard you are certain of her presence among the bees. If not heard, then listen the next evening, and so on till she is heard, when you know you are safe in cutting all cells. In cutting these cells it is well to shake the bees off the combs or else you may fail to see all of them, in which case, if one remains a swarm is sure to issue.

This article is written mainly for beginners, for all of the older heads have established plans of one kind or another, which—ahem!—are probably any of them better than the above. If so, won't they tell us about them?

G. M. DOOLITTLE.

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From the New England Homestead.

THE SWARMING OF BEES.

SWARMING is the result of a natural instinct of the bees to increase and multiply. When colonies are populous and bees vigorous, it occurs early in the honey season, soon after settled warm weather. This desire to depart for a new home is usually brought on by an over-crowded hive with lack of room, either for brood-rearing, or storage, or both. It may also be caused at other times by lack of ventilation, an offensive hive, an entire lack of food or by the sun heating the hives so hot that the bees depart without even stopping to build queen cells.

In a state of nature the surplus honey of a colony is used in the spring to produce bees, resulting in swarms; the more honey the more swarms. The bee master changes the conditions, appropriates most of the surplus and has few or no swarms. He allows the honey (with other food) to be turned into bees, or causes his bees to expend the greater part of their energies to produce honey, as he chooses. A surplus honey crop is always produced at a great cost of bee