

season favorable, two swarms per colony may be taken, and sometimes one from the first swarm. To replenish the losses of the past spring and winter many bee-keepers will, no doubt, be anxious for increase at this time, and but few will be studying how to prevent it. Different plans for the prevention of increase are practised and recommended, all of them more or less successful. But when the "swarming fever" once takes hold of a colony the best laid plans "gang aglee", and when they are actually stopped by some drastic process they usually go off into the salks in idleness and will not work. The best way, if you do not want the increase, is to keep the "fever" back. This can usually be done by giving them abundance of room and ventilation, always in advance of their requirements, and using the extractor freely upon them.

To prevent after swarms, I usually lift the frames from the hive just swarmed, before carrying it to a new stand, and shake all or nearly all the bees from them in front of the new swarm, where they will enter, at the same time cutting out all the queen cells but the best one. I sometimes practice the Heddon method, which, however, is not always successful. The plan is as follows: When the swarm is out and hived, place it on the old stand, and place the old hive close beside it, but falling away from it at about right angles to the old entrance. In a couple of days turn it around half way toward the old entrance, and in a couple more turn it completely round so that it will be exactly alongside the new swarm, close to it and facing in the same direction. In three or four days more carry it away to a new stand during the day, when the largest number of workers are out foraging. Of course, nearly all the outside workers it contains will return to the new swarm on the old stand, and the object is to so weaken them that they cannot swarm. But while this plan works very well in perhaps the majority of cases, it is uncertain and not to be depended upon. It not unfrequently happens that there is a young queen all ready to go out with the second swarm in three or four days after the first, and sometimes sooner.

DRONES.

This is the month for drones, their heyday and their harvest, when they appear to enjoy life to the fullest, with plenty to eat, excellent digestion and absolutely no care—nothing to do. They eat and excurt and excurt and eat, for to-morrow (next month) they may die or be killed.

But the drones are rather unprofitable to the bee-keeper. They get away with much of his surplus when they are numerous. Of course, they have one important function to perform,

namely the fertilization of the young queens, but the workers, in a state of nature, are greatly inclined to "over production" of these gentry for that purpose; and we must bring in some Malthusian or Besant "checks" to over production. A common practice is to behead the drones in the cells before they hatch, and let the workers lug the defunct carcasses out. But this is attended by a great loss of work by the bees in rearing them and then ejecting them. The proper way is to get rid of the drone comb, by cutting it out of the frames wherever it is present, and replacing it with worker comb or foundation. Of course, a few frames or partial frames of drone comb are requisite for the rearing of necessary drones, and these may be placed in the choice colonies from which we desire to breed. Sometimes when the brood-chambers contain much drone comb, the drones steal a march upon the apiarist and hatch in large numbers, when a drone trap will come in play, or they may be shaken from the frames along with the workers in front of the hive, and a Jones "bee guard" placed at the entrance, when the workers will re-enter but the drones will be excluded, when they can be destroyed. The "bee-guard" may also be used to great advantage in keeping inferior drones in the hive when young queens are being mated.

ALLEN PRINGLE.

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Read by Mrs. Harrison before Illinois Farmers' Institute.

Bees, and Their Relation to Agriculture and Horticulture.

BEFORE approaching the subject proper of this paper, it may be well to preface it with a few remarks upon the natural history of the honey bee. Honey bees can only flourish when associated in large numbers, as in a colony. In a solitary state a single bee is almost as helpless as a new born child, being paralyzed by the chill of a cool summer night. On examining a strong colony in the height of the honey season you will find

THREE KINDS OF BEES.

1st, one of a peculiar shape, having a longer abdomen than the rest; this is the queen or mother bee, she being the mother of the whole colony. 2nd, several hundreds of large bees, called drones; these are the males. 3rd, many thousands of a smaller kind, called workers, or the common bees, such as they are seen on the flowers. Many of the cells will be found to contain honey and bee-bread or pollen, and vast numbers of eggs, and immature workers.