

or are prevented by the worker bees. The sound made by these imprisoned queens is much deeper in tone owing probably to their being covered up in the cells. When the second swarm has left the hive it may be followed within two or three days by a third or even a fourth. These after-swarms are small and worthless, and are frequently accompanied by two or even three virgin queens. Practical bee-keepers of the present day do not consider it advisable to allow even second swarms to issue, because in doing so the parent hive is depleted of bees to such an extent that it is practically useless as a surplus honey producer for the remainder of the season. In order to prevent second and after-swarms the queen cells must be carefully removed three or four days after the first swarm issues, leaving one promising looking cell to provide the necessary queen. This cell must be carefully watched until the royal inmate is safely hatched, otherwise the hive might remain queenless. If the queen cells are all but one removed as early as the third or fourth day, the bees may, and probably will begin others, so careful are they not to trust the fate of the hive to one cell which may or may not produce a perfect queen. In order to do this they have to turn worker cells, containing larvæ not more than two or three days old, into queen cells and provide the inmates with "royal jelly" to feed on, instead of the ordinary liquid food necessary for the worker larvæ, in order that they may now become fully developed females. If this second supply of queen cells is started they must be destroyed as soon as there is a queen in the hive, otherwise all the precaution taken may be of no avail and a second swarm will issue when least expected.

When the season is unfavourable the bees themselves decide that there will be no second or after-swarms and when this is the case they allow the first young queen which hatches to destroy all other queen cells. This she soon does by tearing out the sides of each one with her powerful mandibles and stinging the inmates to death. If several queens have already hatched there is a battle royal and the "survival of the fittest." The young queen leaves the hive to mate with the drone about the fifth or sixth day after hatching, but several days frequently elapse before this takes place. After mating she returns to the hive and does not leave it again until she issues with a swarm, probably the following spring.

A newly mated queen usually begins laying within a day or two, and rapidly fills the now almost empty combs with eggs. If no second swarm has issued the parent hive will, if the season is favorable, give a considerable yield of surplus honey, and by