

The only way to make positively sure of the presence of an old queen is to search for her. But there is a slight difference between the laying of a worn-out queen and that of one or more laying workers. The old queen lays but few eggs, and these are always at the bottom of the cells. She rarely lays more than one egg in a cell, this incongruity being committed only by laying workers, or sometimes by very young and very fertile queens which lack room, and have not yet reached their full ability in regular laying.

I have stated that it is easier to introduce a queen to a colony containing a laying worker than to a colony containing an old queen, unless this queen has been found and killed. I know that this statement will not be concurred in by many others, for I have often seen it stated that it is impossible to introduce a queen to a colony having laying workers; yet I have never failed. I speak from actual experience. Before I state how I have succeeded, permit me to say that a colony having laying workers is rarely worth saving. Yet there are times when such colonies are still powerful enough to make a good colony if a queen is successfully given them early in the season. The apiarist must decide this point for himself.

In order to show how to succeed, I will state under what conditions I tried the introduction of queens in drone-laying colonies. We used to import queens on a very large scale. This was in the '80's. We used to receive from Italy about a hundred queens per month during the summer months. As these queens were fatigued from their long journey, we always introduced them to full colonies of bees in our apiary, before re-shipping them to our customers in the United States. The price obtained was sufficient to reward us for such a course, and when a queen had been for three or four weeks in a full colony, she had fully regained all her lost vigor, and

was much more likely to be satisfactory to the purchaser than if she had been held in a very small nucleus or in a queen-cage. Besides, this introduction gave us new blood in the apiary. Owing to this course we had to kill a number of queens each month, usually of the common race or the hybrids. These spare queens were quite often prolific, and it seemed a pity to kill them. It was then that I attempted to save a good queen and a worthless colony at the same time, by introducing the one into the other, by the ordinary method of caging the queen for 48 hours in the hive, and releasing her by inserting a piece of comb honey in place of the stopper of the cage. This method has never failed, and I attribute it to the fact that the queen introduced was in each instance a vigorous laying queen in the fullness of her power.

In the introduction of queens that have been traveling there is almost always a delay in the laying; the new queen does not take possession of the empty cells immediately, and for this reason the bees that have one or more laying workers will have an animosity towards her that they will not entertain toward a queen that is able to lay eggs at once, and thus show her ability to fill the needs of the colony.

My conclusion, therefore, is that although it is more difficult to introduce a queen to a drone-laying colony than to a normal colony, this may be successfully done by the above method. But I would never risk a queen which has been confined to a cage for some days to any but a normal colony made queenless just before introducing her.

A good laying queen introduced to a drone-laying colony in May—if this colony has still enough bees to look after her brood—will rear a populous colony for the fall crop of honey, and will often prove a paying investment. For this reason, queens bought from reliable southern breeders in early spring are a great help to the northern bee-keeper.—Illinois Convention.