

ording to cluster, then partly drawn out; then foundation, then partly drawn out, then full comb, and then the division board. The stores they have in their sacs, will be deposited in the full comb, while the wax will be used in lengthening out the partly drawn out comb and the foundation, thus giving the queen a fair show as well as the foragers. This was an exceptional fall flow, nothing like it since the fall of 1883, which, however ended on August 24th, when one of my colonies stored 56 lbs. in three days; 35 lbs. of this was surplus, the balance was included in their winter stores. I will forward you something new in the swarming line to be in time for use another year.

WM. TIPLING.

Fenelon Falls.

From the American Apiculturist.

Loss of Young Queens at Mating Time.

NOT a single author of our standard works on bee culture has ever thrown any light on this subject so far as I have seen. They all tell us that the young queens are lost by entering the wrong hive on their return from their wedding flight, or they may be captured by birds, etc. There is hardly a shadow of truth in the causes paraded to this day to account for so many missing young queens at mating time.

In the early part of May, 1884, I made up about twenty-five nuclei as a commencement of the queen-rearing season, and gave each of them a maturing queen-cell; but before the cells had time to hatch out there came on an unusually cold spell for the time of the year, and the result was the loss of about fifteen out of the twenty-five queen cells by reason of being chilled during the cold night. The weather continued cool for some days and there was delay in getting other cells ready and this delay brought on an abnormal condition in the nuclei, by reason of the presence of too many old and indifferent bees. The sequel was many of these nuclei were an entire failure. They "balled" every young queen given them—always at mating time, and this, notwithstanding they were supplied from time to time with hatching brood with a view to restore the nuclei to normal condition. Here I got my first clue directing to the real cause of the loss of young queens at mating time. The cause is the presence of old, cranky, jealous bees, not necessarily laying workers, for in the cases I have mentioned and in divers others since then, under careful observation, no signs of the presence of fertile layers could be discovered.

I have noticed that under these conditions the young queens are never disturbed till they attempt to seek a mate, and then the persistent

spiteful "balling" commences and nine times out of ten results in the ruin or actual death of the young queen. By means of smoke and a close watch over such abnormal nuclei I have saved the lives of many young queens but such rescued queens are hardly worth the time and labor bestowed on them, as they are generally maimed and cowed by the severe ordeal through which they have passed. The remedy is to give hatching brood to the nucleus, and when the young queen is three days' old, or thereabouts, move the nucleus hive to a new location in the apiary. This will draw off the old bees, as they will go back to the old stand, and the young queen will be left to mate and enter upon her life's labors under the care of young friendly bees.

G. W. DEMAREE.

From the American Agriculturist.

Preparing Bees for Winter Quarters.

THIS work is better begun as early as the first of September, and should never be put off later than the first of October.

During August and September, if little or no honey can be gathered, many queens entirely cease laying, and when winter comes on such colonies are stocked with old bees which must die in large numbers before spring. Bees that are hatched during the autumn months are the only available stock to withstand the winter. If the swarms are found without brood, they should be fed a small portion daily to induce brood rearing. Suspension of brood rearing occurs with colonies, whether they have a heavy or light supply of honey, and the only way in which we can secure a force of young bees at this time of year is by stimulative feeding. Usually one gill to one half pint of syrup daily is sufficient for this purpose. Feeding may continue a week or ten days, if the colonies have abundant stores to carry them through the winter; if not, they should be fed early and more heavily. It may be given them as liberally as they can store it away, until they have a sufficient supply for food during the winter. Bees should not be disturbed during winter by feeding or otherwise. It should be done early, during warm weather, so as to give the bees an opportunity to seal it over before cold weather. Late feeding is the cause of much unsealed honey in the hive. This is an unwholesome diet, as the moisture arising from the bees in cold weather condenses it and it becomes diluted. This produces dysentery, the dreaded winter disease of bees.

Every colony should have twenty-five or thirty pounds of good sealed honey to carry it through the winter properly. The only feed we would recommend is granulated sugar, thoroughly