

sugar would make; as I wanted them to fill and seal over some combs to give to other colonies, they were not permitted to build comb at all, except capping cells. Well, the great difficulty in the way of the success of the experiment was, that so much syrup was consumed in the secretion of wax—wax that fell to the bottom board—a good deal of it in the form of wax scales. In hiving a new swarm on a full set of finished combs (or two full sets if you chose) we did not find very many scales on the bottom; but the bees filled up the corners, and built bits of wax all through the corners and crannies of the hives, and put considerable wax on the top of the frames. As this matter is one of great importance, I hope we may have more suggestions on the subject. Although we have foundation to sell, my opinion is, and has been for a long time, that, where the brood combs and honey boxes are all filled with foundation, more or less wax is lost. I hope you are right; but I fear you are not wholly so in your conclusions.

A. I. R.

—From *Gleanings*.

We recollect having some experience very much like friend Root, and we had about arrived at his conclusion, but on another occasion where we fed equally as much or more, no wax was secreted. So far as we could see it was done in this way. In the first instance, they apparently secreted the wax to cap the comb, but secreted rather more than they needed. We found many scales on the bottom board, but accounted for it in a measure by the cool weather, as it was late in the season, and it is not an unfrequent occurrence when the colony has too much upward ventilation, or where it is too small for the hive they are placed in that they drop many of their wax scales on the bottom board. Sometimes these scales are taken up and used again by the bees. The other case, however, rather changed our opinion. We took a large hive full of combs and bees, removed their sealed stores and all their combs. They being very strong we thought they would store it more rapidly, so we continued to feed them, and as fast as they filled the combs, and before they started to cap them, we removed the combs and gave them to other colonies, giving the bees empty combs. We continued in this way until they had stored a large quantity, and we saw no signs of wax on the bottom board or on the bees. We recollect

examining them carefully and they had not apparently secreted any wax. From other tests we have made we are now inclined to the opinion that bees do not secrete wax because they cannot help it, but do so simply when they require it, or imagine that they will require it. We do not pretend to argue that it is profitable to give full sheets of comb foundation when bees are managed most economically and for profit. Now when honey is coming in rapidly, and a full set of clean combs is given a colony, instead of remaining in the hive in a quiet cluster for days building combs, they go forth to the field and all appear to be engaged in gathering honey. I have frequently examined such bees, and have never found that they secreted wax, while on those hanging in festoons in the hive building combs, the wax scales can be seen easily. Circumstances, no doubt, have considerable to do with this matter, and one or two tests will not prove anything conclusively to us, but from our many observations, we are inclined to Prof. Cook's view of the matter.

The Promotion of Bee Culture.

SIR,—I visited to-day in the city of Kingston the winter quarters of 120 hives of bees, whose summer pasture is the township of Pittsburg, near the St. Lawrence. The owner has devotedly followed bee farming for several years and has found it a profitable occupation. He has sold of the crop of 1890, something over three tons of extracted honey. There is a bee farmer in Storrington township whose sales are considerable, and in the townships fronting on the Bay of Quinte bees won a fair reputation years ago, but I fear that of late with the removal of the forests they have not done so well. The region which invites the attention of those who would promote bee culture as a profitable addition to the agricultural resources of the country, is that of the free grant townships. The burnt woodland, with their second growth of willow, poplar, sumach, blackberry, wild cherry, raspberry, thistle, golden rod and catnip, afford, with the green unburnt timber of adjacent areas, maple and basswood, and with the abundant huckleberry on the rocky ridges, the finest bee pasture in the north temperate zone. I doubt if the natural pasture needs anything from the occasional buckwheat field and clover meadow of the settler.