

seems substantiated by the fact that in almost all these cases very few dead bees were left in the hives and in only now and then one had the bees last to perish preserved the form of a cluster to the last.

Quite a strong effort was made to determine if possible whether sealed covers were, in cellar wintering, a disadvantage, and a large number of hives with such covers as well as those with loose covers were set apart and carefully examined with the result that where the colonies were of fairly normal strength there was no apparent difference—almost every one of that class wintering very satisfactorily. About the only advantage of loose covers was that the combs were preserved dry and clean. It was also observed that the entire removal of the bottom board, leaving the bottom of the hive entirely open, served largely the same purpose as a loose cover, though not to quite the same extent. In some of the larger hives having a bottom board as well as sealed covers, the combs outside the cluster were very wet and mouldy. In the case of the weaker colonies, sealed covers were comparatively detrimental. Of course all this is in a cellar where the temperature was maintained during the entire winter at 45 degrees and over, and it can readily be believed that the class of colonies that would fail to cope with the conditions induced by sealed covers out of doors would be very considerably enlarged; not, I think, because the moisture would induce the disease known as dysentery but because it would require stronger colonies to ward off the encroaching chilliness caused by constant excessive evaporation, so that the health and vigor of a larger number would be undermined and finally destroyed.

Of course so far it does not appear that sealed covers have any advantage in any case, but inasmuch as they cause wet and mouldy combs it would be well worth the while to loosen all covers when the bees are put into the cellar and certainly so unless the bottom boards are entirely removed.

The losses I have incurred speak plainly of the importance of giving strict heed to the old rule: Keep all colonies strong. By doubling up about one-third of my colonies in September I should have escaped with practically no loss.

With a hope of learning something bearing on the subject of out of door wintering I made the following experiment: In November, at the time I was putting the bees into the cellar for winter, I selected six colonies of good average strength, each in a single story Heddon hive. Then the hives were placed one above

the other with nothing between them except a single sheet of wire cloth so prepared that each colony was provided with its proper entrance. Of course the lower hive retained its bottom board and the upper one its cover, but the rest of the covers and bottom boards were entirely removed. The lower hive was raised about ten inches from the ground, then the whole was well packed below, and with about four inches of dry planer shavings on top and on all sides except about four inches in width of the front left for the entrance. The cover was left sufficiently loose to allow the escape of moisture into the packing, and the entrances were closed to within about an inch in width. During the winter these bees had comparatively frequent flights and seemed to be doing well. About the 20th of March some of the upper ones brought in considerable pollen, but the two lower ones exhibited but little signs of life. Then came a blizzard the last of March and first of April and when that had passed and other colonies began to bring in pollen these remained ominously silent; indeed the silence seemed chronic and an examination revealed that it really was so, they had all passed away. The combs were dry and clean and the stores abundant, but there were no live bees and very few dead ones. There was very little if any appearance that they had finally perished in a cluster. Unless the arrangement of the hives and the thoroughness of the packing had deluded the bees into thinking that it was so warm that they might with safety try the open air and thus untimely perished. I know not how to account for their utter destruction.

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### Brant Bee-Keepers' Convention.

A meeting of the Brant Beekeepers' Association took place here on Saturday, May 15th. There was a good attendance. Among other items of business, the proposed legislation at Ottawa was discussed. Members were all strongly in favor of the bill now before the House of Commons. It was moved by Mr. John Shaver, Cainsville, seconded by Mr. C. Edmiston, Brantford, and unanimously resolved that the Brant Beekeepers' Association hereby endorse the "Pure Honey Bill," brought before the Dominion House by Dr. Sproule, P., and that a copy of said resolution be forwarded to Dr. Sproule at Ottawa.