

much interested that I did not need to call anybody to order. I take it that you appreciate the effort Mr. Couse has made. I have pleasure in calling on Mr. Smith to open the discussion.

Mr. Smith—We have had some experience in wintering in various repositories. Beginning back 25 years ago our first repository was simply a blanket, and the bees were packed in chaff. This was in Muskoka where the winters are cold. The bees wintered all right in that way. We tried a cellar, and thought it would save packing, but our experience was that they did not winter so well, and at the time we did not know why. Of course, I now know the reason, it was dampness. We moved to Bracebridge and had a special bee-house built and a special cellar, but before the cellar was finished we had to put the bees in, as winter came on. The frost got into the cellar and we lost more bees than we did any other winter. They were dry enough, but the temperature was too low and it was just the same as a refrigerator. A neighbor farmer had bees and he took very little care of them, and left them on a bench at the end of the barn, without any protection, and they wintered perfectly, although the temperature went down to 45 degrees below zero. The extreme cold did not last more than a few days, and another reason why they wintered so well was because they were on old combs. We built another cellar, a big stone cellar the full size of the house; we put the bees into it, trusting that the water would not get into it; we did not have a drain. There came a thaw in January and we had to bale the water out to keep the bees from drowning. They never wintered better. It was a mild winter, and I think the water purified the air. A neighbor on the next street had his bees in the cellar under his kitchen, and the bees came out in

perfect condition. Mr. Shultz, of Tilbury, put his bees in a cellar and towards spring the water got into it and when he looked to see if his bees were all right he found the hives floating around on the water, but they came out perfectly, there was room enough on the combs for the bees to crawl out of the reach of the water. I have noticed when bees are in a cellar that the bees on the lower rows will never come out as well as those above, if the temperature is low. If the temperature is high enough, I think the reason why bees do not winter so well in hives out in the deep snow is because the entrance gets blocked up and the moisture is retained in the hives. We have found that the cellar is the best method for wintering in this climate, but if the cellar is kept too warm, they will start breeding more or less before you can set them out. If they start in February and you set them out early in March, they do not dwindle for the simple reason that there is young bees coming to take the place of the old ones.

Mr. Holtermann—Three years ago I was attending a Farmers' Institute meeting and had supper with a farmer, and he took me out to his bee-yard and we looked at some stocks of bees that had been wintering in chaff hives. The hives had upper stories on them, and just the ordinary roof. They had no packing in the upper story, and these bees wintered successfully through that very disastrous winter. I attributed it to the fact that they had been kept absolutely dry.

The Chairman—You have heard of the fool's luck.

Mr. Holtermann—I have never had it, I think the first requisite is a dry at-