

would gradually disappear. "But the bees would be sure to sting me," some one objects. What though they do, you will survive it. If you have not got courage enough to face the fire unprotected put on a veil and gloves and then you can feel perfectly secure. Whatever our political complexion may be, all bee-keepers agree that protection is a good thing some times. I am a firm believer in it. I have never attained to that state of perfection which the bees will not touch me. I once had a visit from one of this class, and so to test him I took him out to the yard and opened a cross hybrid colony and asked him to find the queen. They soon began to manifest an action in their after parts that was not at all pleasant, so, hastily replacing the comb, he made a bee-line for the house. I asked him what was the matter, the bees did not sting him. Oh yes, he said, but he had never handled them in that way before.

J. CARSWELL.

Bond Head, Aug. 5th.

Well done Friend Carswell. We knew that once you got into harness you would give us good sound facts. Such plain practical truths are contained in the above cannot fail to be of help to our bee-keeping friends. It will well repay a second reading. Since you have shown us what you can do we shall not be satisfied unless we hear from you regularly in future. If more ministers will take up the work with the same determination as Friend Carswell what an amount of good could be accomplished in every locality.

FOR THE CANADIAN BEE JOURNAL.

BEE DIARRHŒA.

ITS CAUSE AND THE MEASURES FOR ITS PREVENTION.

AS a disorder among bees, diarrhœa has several causes, which, operating in unison produce the effect, diarrhœa. In some cases one cause predominates, and in others another. Usually cold is the primary cause, and the other causes are developed consecutively. It does not appear that any one of the causes may, by itself, produce the affection. For instance, their honey and confinement in a moderately cool atmosphere may develop the mischief very early in Winter. Again, the stores being good, the hive small, thin-walled and insufficiently ventilated, the approach of con-

tinued cold develops the phenomena in order as follows:—Dampness in the hive, condensation of vapor, followed by unabated chilliness of the bees, excessive consumption of the food, and the ultimate causation of diarrhœa from slowing up the respirations and checking the pulmonary exhalation of water,

Cold as a radical cause, however, often produces as great havoc as bee diarrhœa. It has been held that the latter has been the source of more loss than all other causes of loss put together. This is a mistake, at least it is in some Winters. If the cases of spring dwindling be added to those dying of diarrhœa, they will still not equal the number lost the past Winter from the direct effects of cold. We will simply observe here that the result was forced starvation, the bees being unable to reach ample stores near by. In a very large number of cases the bees starved while protecting with a true mother's instinct, their brood. They chose to die rather than abandon it. If on the middle of last March the bees could have had one or two warm days so that they could have brought honey into the cluster, we would not have had so great and unprecedented a mortality to record. Seeing that great loss would occur from the continued severity of the cold, (the ground was frozen nearly four feet deep) last March, we took occasion to note carefully the condition of over 100 colonies that died here at that time and subsequently from spring dwindling. We found insufficient protection and badly managed ventilation in all cases. We noted especially that the bees were not confined to their hives over four weeks at a time. Up to January 10th they had flights every few days, then again on February 3rd and 28th they had free flights, especially at the latter date when all the bees were out, and very few colonies had died. Then again on March 26th all flew that were alive, but there were then hundreds of colonies in this county wrapt in the mysteries of death, and great numbers followed after from spring dwindling that did not cease till late in May. Of course there were plenty of cases of bee-diarrhœa but I wish here to remark that it is unlikely that since the bees had good flights as often as every four weeks that the bee-bread they consumed should have been the cause of their death. Those who hold to the pollen theory have told us all along that where there were frequent flights there could be no diarrhœa. Surely no accumulations of bee-bread could take place inside of four weeks to irritate the intestines! We take the pollen theorists to task right here for producing a highly unreasonable hypothesis. We examined minutely the discharges of the