

be misled, and so a word ought to be spoken." The Prof. must be aware that there are a great many old bee-keepers who believe in the hibernation of bees. Are they not worthy of some thought as well as the young ones? I do not like that word "misled," but will charitably hope it is not meant to convey the idea that any body is trying to mislead the inexperienced in regard to this matter. The following is what the Prof. deems it necessary to say for the benefit of juvenile bee-keepers:—

"This winter I was at Dr. Miller's. His cellars were at the regulation temperature, 45° F. We carefully examined hive after hive, and the bees in every case, if we watched patiently, could be seen to move. I examined several colonies in my own cellar, with temperature at 38° F., and again, at 30°. In every case a little patience would detect the bees crowding into the cluster. I have several winters kept nuclei in observatory hives. By careful attention, I found the bees were never stationery for any considerable time. I say then that if bees sleep in winter, their slumbers are, in every one of the numerous cases that I have examined, under very varied conditions, very frequently disturbed.

"Bertie, in splitting wood the other day, came across some black ants. They seemed utterly dead. Pinching or rough treatment of any kind would not arouse them at all. They were brought into a warm room, and soon were wide awake and lively. These ants take no food the winter through. The same is true of wild bees. The bees move, and must eat, or die. If we say the bees hibernate, what do the wild bees, wasps, and ants do?" [Ans.—Hibernate in a more profound degree. W.F.C.] "I think the word hibernate had better be used to designate the ant's winter state, and quiescence or inactivity that of the bees. If bees truly hibernate they would not consume more honey in a cellar whose temperature was 32° F., than in one with a temperature at 45° F., but I am sure they do. Now, Mr. Editor, I would suggest that writers for our bee-papers do not write from mere closet meditation, or simply from the outpourings of their inner consciousness, but that they go to the bees and question them, and give us facts, then we shall have less chaff."

I have but little criticism to offer on the foregoing paragraphs. They assume that hibernation has only one degree; that it must be absolute, and perfect, or else it is some other condition. We had that black ant illustration from Mr. Doolittle long ago. Now, Prof. Cook is well aware that the scientific books clearly declare hibernation to be partial in some cases, and

complete in others. It is not necessary that an animal or insect should sleep all winter long, never awaking or partaking of food, to constitute it a hibernating animal or insect. The squirrel wakes and eats often, yet it is a true hibernator. If wild bees, wasps, and ants,—relatives of the domestic bees,—hibernate in the fullest sense, it would seem highly probable that our tame bees have the same habit, though in a less degree. If bees do hibernate, it is in a favorable temperature. At 32° F., they cannot settle down into that state of "quiescence" which the Prof. describes as their "winter state." I should say they cannot hibernate in so cold an atmosphere. They are obliged to take exercise to keep them warm enough, and exercise creates a demand for more food.

I do not know to whom the Prof. alludes in his closing fling; perhaps to myself. If so, he is barking up the wrong tree. I do not write from "mere closet meditation." My apiary is about the same size as his, and I very much doubt if he spends any more time in watching his bees and questioning them than I do mine.

WM. F. CLARKE.

St. Thomas, March 21st, 1888.

For the Canadian Bee Journal

Interesting Report from Rev. Mr. Carswell.

THOUGH you were kind enough to give me a place on the list of contributors to your JOURNAL, I have not for a considerable time availed myself of the privileges of this position. I do not suppose that anyone would have noticed this had I not mentioned it, nor do I think that any of your readers have lost much by my reticence. I have always felt that the field was so fully occupied, and the topics upon which I would have written been so much better handled by others, that the best thing I could do in the interests of bee-keeping was to maintain a judicious silence and "tarry at Jericho until my beard was grown." I have however been a very interested reader and have tried to put into practice the information communicated as far as it commended itself to me, and hope some day to attain to manly proportions among the bee-keeping fraternity.

I have recently filled up the schedule received from the Bureau of Industries as follows:—

No. of colonies commencement of season 1887	30
Increase	14
Put into winter quarters	44
Lbs. extracted honey received	2630
" Comb	100
" Wax	25

Had the season been of the ordinary duration and the honey flow continued as good as it was during the short time it lasted, my yield would have been very large; still, compared