

FOR THE CANADIAN BEE JOURNAL.

A HASTY GLANCE AT WINTERING THEORIES

VOLUMES have been written on wintering troubles, and volumes more will probably be written before its true causes and cures will be fully understood. As you already know, Mr. Editor, I am one of those who believe that the causes of winter disease among our bees are not one, but many, and that the causes are changing, more or less, as the character of seasons and climates change. Many of us had supposed that we had solved the difficulty and got the upper hand of it, only to be met with an entirely different season, with new conditions, and the old, old story of disease and death has again to be told. I do not believe that any one will ever discover the causes and cure for this disease at one bound, but that the work will take years of patient investigation on the part of scores and hundreds of investigators, each of whom will add a little to our stores of knowledge, and bring us a step nearer success. Again I do not believe that we will ever have absolute mastery of this matter of successful wintering, for seasons are always changing more or less, and new causes of trouble will always be arising.

Undoubtedly, we now have a much better knowledge of these causes than we had a few years ago; each year's experience adding to these stores. Probably the greatest impediment to any accurate knowledge of the causes, is the well known fact that bees quite often winter well when some or nearly all of the supposed causes of loss are present. This fact is continually leading us astray in our conclusions.

Of course no special pleadings can do away with the fact that our long cold winters, with their attendant conditions, are the prime causes of the winter disease, there being none of it known in warm climates. We can neither prevent cold weather here, nor practice moving our bees to warmer localities in Winter, therefore we will have to study into all the reasons why cold weather causes disease.

Many are the supposed causes of loss, among them being long confinement, want of proper protection from extreme cold, dampness, poor quality of food, starvation, too many old and two few young bees, the use of pollen, improper ventilation, too great exposure to sweeping winds, etc.

I am fully satisfied that all these alleged causes may at times be prime factors in causing loss, yet bees quite often winter in excellent condition, with one or more of these conditions present in a marked degree.

"Long confinement" is one of those causes which materially aggravate all the others, yet bees frequently live five and even six months without a flight in excellent condition, when other conditions are all right. The "proper protection" from extreme cold is one of the disputed points. Some think no place is equal to a cellar, while others are just as certain that some form of protection out of doors is best. Undoubtedly each way is best in certain localities, and I cannot agree with any one who advocates either of those ways as being decidedly superior generally to the other way. Cellar wintering has, I think, been gaining in favor during the past three or four years, but I have of late heard more inquiries from experienced bee-keepers about the details of out-door wintering than ever before, showing that the current is turning the other way. In the section of country in which I reside it seems almost impossible to find cellars that will winter bees successfully, while 50 or 100 miles south of here cellar wintering has proven much the safest. Prof. Cook is reported to have asked, "What is packing in such a Winter as the last?" As a partial answer, I would say that in this county, situated in extreme northern Iowa, Chickasaw, and which contained last Fall considerably over 1000 colonies owned by at least a score of bee-keepers, good chaff packing saved 75 per cent. of all colonies wintered that way, while cellars saved about 45 per cent. We have much yet to learn in both cellar and outdoor wintering, but as yet no one is, I think, justified in claiming a decided general superiority of either method over the other.

How far "Dampness" is an important cause of Winter disease, is still an earnestly disputed point. The principal argument against dampness being a cause is the undoubted fact that bees have wintered well in cellars so damp that water stood in drops on the walls, and in other cellars containing running or standing water, but a similar argument can be used against every alleged cause. A neighbor tells me that he has an underdrained cellar in which water sometimes stands all winter, that during such winters nothing in the cellar moulds, but at all other times mould forms abundantly on everything. Right here is a vital point, Any kind of dampness that causes mould to form freely is highly detrimental to bees, but any other kind of dampness is, I think, beneficial. I think there is no doubt but the weight of testimony is, that dampness is a decided injury in a majority of cases.

A "poor quality of food" being one of the causes, has many advocates, and seemingly with good reason. I presume that nearly all old bee-keepers have noticed the fact that the heavier