

The...
Canadian Bee Journal

*Devoted to the Interests of the
Bee Keepers.*

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Whole No
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ANNUAL MEETING ONTARIO BEE-KEEPERS' ASSOCIATION

FOUL BROOD

(Paper by H. G. Sibbald, Claude, Ont.)

Foul brood is a disease that attacks the larvae or brood of bees. The most dangerous and destructive of any of the diseases that bees are subject to. This disease had made such headway in the Province of Ontario that the Ontario government a number of years ago passed a law and appointed an inspector for its suppression. Credit for obtaining this excellent law is largely due, I believe, to our Ontario Bee-Keepers' Association.

Since the inception of the law and regular inspection of apiaries has been established the disease has been checked, and is better understood by the mass of expert bee-keepers. Still, on account of the contagious nature of the disease, and the ignorance of a few in regard to it, the expert is constantly in danger as long as it exists and bees are in the hands of these few.

It is therefore a subject worthy of a place on our program and of a full discussion by those who, like myself have had to their sorrow more experience than is desirable or profitable.

The larvae or brood, in its early stages is attacked by the F.B. germs, which decomposes and settles in a shapeless

mass to the bottom and lower side of the cell, becomes yellowish brown in color at first, later assumes a brown or coffee color, gives off a very offensive odor, and if pricked by a pin or toothpick will be found ropy and will draw or string out a half-inch or so.

If the cell has been capped the capping recedes, presents a sunken appearance. In time the matter dries down, and is of such a sticky, gluey nature that it adheres strongly to the side and bottom of the cell, thus leaving what we call the scale or stain mark of foul brood.

Other forms of dead brood, such as chilled, starved, pickled, poisoned are different, and may be described as follows: The larva dies, but holds its form better, that is, shrinks and dries from the outside, gives off very little odor and less offensive, does not adhere so tightly to the cell side, and may be removed by a pin or toothpick, and when pricked will not string out, but appears watery, this class of dead brood will be removed by the bees themselves.

Not so with foul brood, however, for soon after the death of the larva, it becomes so foul that I verily believe the bees will not attempt to clean it out. The cells are apparently avoided until it becomes dried down, and the odor has become less noticeable. The bees then accept these cells again, and after polishing them fill them with nectar. The moisture thus applied softens

the scale or stain mark and releases thousands of foul brood germs which float in the honey or nectar, waiting only until fed to the larvae, thus coming in contact with congenial matter, causing its death and their further development and multiplication. Thus it spreads, more and more cells become polluted, the colony dwindles and dies, leaving its honey a prey to robbers, who unsuspectingly carry it to their homes, and thereby transmit the disease until an apiary will soon be destroyed and neighboring apiaries jeopardized.

Every person who keeps bees, whether they have few or many, should study to be able to detect the disease in its early stages, and know how it may be carried from one hive to another. Watch your brood, take an interest in it. Whenever you lift out a frame look at the brood; if it is all healthy, fat and white-looking, all is right; if not, apply the tests and find out what is the matter, and if you find the real thing, close the hive and mark it and consider. To cure it we must get rid of the combs and honey, for therein is the disease and germs.

Go to the colony late in the evening, when the bees will not fly or scatter to other hives, shake the bees off into the hive, and give a set of frames with foundation starters. We have thus gotten rid of the combs as far as this colony is concerned. Not so with the honey. As soon as we disturbed the colony the bees loaded themselves up with the honey, and we must still get rid of that. They also clean up any that shook out during the manipulation on the floor of the hive, and any that remained on bar combs or attached to the inside of the hive. This they would store if they had a particle of comb supplied, ready. We have only given foundation starters, however, and they must work it out. Wax secretion is necessary, most of the

honey is digested and used, but they soon have cells built, and may store some of the diseased honey therein. To make a complete cure it is therefore necessary to again shake three days later, same way as before, take away the new comb and starters and supply full sheets of foundation.

Melt up or burn the old combs, and the first set of starters, and the cure is complete if thoroughly carried out.

This cure can only be applied in the early part of the season, and during a honey flow. If no flow is on the bees must be fed or they will swarm out and perhaps scatter into one or more hives, and thus make matters worse.

If the disease is discovered late in the season, and the colony still strong, leave it until November, then take the combs away and supply honey from a clean colony in full sealed combs.

The queen is not now laying, and any honey they have picked up will be consumed first and thus out of the way.

If a yard of bees or apiary is badly diseased when discovered, send for an inspector or some one who has had enough experience. It is unnecessary for me to describe how to go about curing a badly infected yard.

In looking for the disease, hold the frame or comb so the light may shine into it. The stain marks may be seen by standing with your back to the sun and holding so the light will shine and into the lower side of the cell.

In dealing with foul brood, where only a few colonies are affected, the first loss is the least, and while it is well to cure as economically as possible, if we have a large number of colonies of bees and plenty to do, and the disease is not discovered until after the honey flow, it would be better, perhaps, to destroy the combs and the bees in these few colonies.

The top story or super combs, never used for brood-rearing, if very clean

and free from pollen, may be saved by having the diseased colony clean it out before curing. But in this case again perhaps the first loss will be the least, and it might be better to melt the combs.

Never put a diseased colony in winter quarters.

Always clip the queen before shaking to cure.

Mr. Sibbald—There is another matter in connection with this subject that will be of interest to the convention, and we will get some help from Prof. Harrison if I mention it. A year ago I thought of curing by the formalin method, and went to considerable trouble to get everything in good shape, according to the directions, as I understood them. I fumigated a number of combs, and I think I turned on the formalin gas for about two hours, and I used it pretty strong, because I could hardly take out the combs the next day, but the disease developed after I gave the combs back to the bees. I thought perhaps I didn't give them enough formalin, and so I kept the lamp going all night; not only was the box full of the gas, but the room also. I left them for two weeks in that box, covered up tight, and when I came to take them out I could hardly bear to reach down into the box, the formalin was so strong. I gave the comb again to the bees, and the disease developed again. Those combs I tried were combs that had stain marks in the cells, and were taken from just about as bad as I could find in the yard. The top story of combs that had honey in them I didn't see.

Mr. Deadman—Mr. Sibbald mentioned that after shaking the bees he either cleans the combs or melts them. What do you do with the brood in those combs?

Mr. Sibbald—I don't think it wise to advise people to try to save that brood. The first loss is the least, and if we

have a few colonies diseased it would pay us better to melt the comb and destroy that larvae, and lose that much, than to try to save it. I knew a party that had foul brood, and Mr. McEvoy came to inspect his yard, and gave him all the directions. Some other bee-keeper came along later that knew far more about it, or thought he did, and he said: "Why, save your brood; that is a great loss to destroy that larvae." He said he set the brood away and waited until they hatched out, and then shook them. The man, following this advice, took the hives of brood around to the other side of the barn and piled them up. The next day it was very cold in the morning, and there wasn't a flow of nectar from the clover, and the bees hunted up the diseased hives and robbed the whole thing out, and every colony in the yard, I suppose, would be in danger of having the disease then. When he found out what had happened he threw the combs into the furnace of the threshing engine right away.

Mr. Hoshal—Mr. President, I don't know that I could give the paper any better myself, or half so good. It is one of those things I don't altogether like to tackle. It has been only once in my lifetime, or twice at the most, that I have had experience with foul brood. I am not going to offer any criticism. I think I can endorse what Mr. Sibbald says. There are a couple of other things I would draw attention to. When I treated for the disease in my own yard, I don't think it had developed to the extent to which the descriptions of to-day would lead you to think that the disease at times develops, viz., ropiness and wastiness and bad smell that we talk of. Some of the colonies had that smell faintly, but that extreme ropiness was lacking to a certain extent. The dead larvae in the bottom of the cell was there all right, and dried up there, but a great deal of

the other larvae that was dead was not rosy at all, only watery. We have descriptions of such, and it is usually called, I think, in the journals, dead brood. I wish they would change that name and call it foul brood. That first stage, which is generally called dead brood, I think, is more properly foul brood, only in a different stage of development. It is not necessary, in my mind, to go through all this manipulation which is spoken of here to cure it if it is not too far gone, young queens will cure it. But when it gets up to that rosy stage and strongly developed foul brood, I wouldn't recommend that sort of thing. I have been applying the treatment recommended by friend Sibbald. When I find a brood that is not properly fed by the bees—a half-starved brood—if I find occasionally punctured cells and dark, yellow-colored dead brood, I am suspicious of such things, and I mark them, and I find a change of queens a remedy. But when it comes up to this salvy stage, and spotted through and through, and particularly when it shows in the bottom of the cells as described here, better not experiment with change of queens, but simply go at it with a vengeance. I think when a colony becomes affected from another one which is in such an advanced stage, it is the advanced stage of foul brood which develops at once, and hence the danger. But as long as you hold your yard down to that starved brood stage you can cure it by the change of queens.

Prof. Harrison—Then you would leave the queens something to do?

Mr. Hoshal—No, I wouldn't say that. When I went through this mill some years ago, in examining the yard, I examined colony after colony right through. Some of the colonies would reach nearly the stage described here, others a step below it, and others below that, till you could scarcely find a cell, but it would be there. When

you got to the other extreme, it was that distinct foul brood stage. The point is for us to tell where to draw the line; it is something like locking at the rainbow.

Prof. Harrison—You changed the queen because you hoped to get a more vigorous queen?

Mr. Hoshal—I don't know just that way. A queen whose descendants feed the larvae.

Mr. Holterman—May I ask what has caused the death of this brood in the comb. Is it the germ of foul brood?

Mr. Hoshal—I am not prepared to say that, only I am prepared to say that these first can be cured through a change of queens.

Prof. Harrison—Do you think the first queen you put in had been weakened by the disease?

Mr. Hoshal—No, I won't say that. What I go by is this, largely. You open a colony of bees and look at the brood carefully, go through the yard, one after the other, in some colonies the larvae will be floating almost in an abundance of food, and in others it will be lying in the bottom of the cell with food so to speak, all consumed. These latter are the ones I look at closely and expect to find foul brood.

Prof. Harrison—Do you think the dead brood is foul brood?

Mr. Hoshal—Yes, I think so.

Mr. Holterman—Do I understand Mr. Hoshal does not know whether that foul brood is caused by foul brood germ or not?

Mr. Hoshal—Yes, I understand that foul brood is caused by a germ.

Mr. Holterman—By changing the queen how do you get rid of the brood germ in those cells? I believe it is correct that a vigorous strain of bees—and you may get that by changing the queens—can resist the disease. That is the principle upon which in certain countries where brood has been prevalent it is weeds

out, and only that stock which was strong and able to exist remained, and you have a strain of bees which in a measure is immune to disease. I have no objection to changing queens, but what becomes of the disease?

Mr. Hoshal—I find this, that as you change those queens the bees will throw it out themselves. When it gets to the advanced stage the bees refuse to remove it.

Mr. Holtermann—Wouldn't you say they may?

Mr. McEvoy—No, they will.

Mr. Holtermann—Isn't it an exceedingly risky thing, even granting that that cell will be disinfected? Isn't it possible that they may miss a cell here and there which is in the more advanced stage. This year I had a case where I found some cells with dead brood and I looked at it and it didn't have the indications of foul brood. It was down in Norfolk county. I made up my mind it was not foul brood, and I showed it to a man who had seen foul brood pretty often and he said, it is not foul brood. I made up my mind to treat the stock, as I never like to see dead brood in the hive, and I cut a little piece of it out and sent it to Prof. Harrison. To my surprise the report came back that there were foul brood germs. I am afraid it would be very risky to leave any of those combs for fear there might be a cell which they wouldn't clean out.

Mr. Hoshal—In connection with that, with a cell of the more advanced type of foul brood, when it comes to that infectious stage, and the honey from that infected colony is spread throughout the yard the disease which develops from that colony is the rank hope at once.

Prof. Harrison.—You have there what we term in bacteriology as virulence. To illustrate, we have some diphtheria epidemics that are very

mild and some that are virulent, and very frequently an epidemic may be stopped in the mild type and gradually get more virulent, and we make use of that principle when we want to grow a very virulent germ by passing it through the living bodies of certain animals. For instance, if any of you are poultry men you will know there is an infectious disease of poultry called rupe, and you can take the germ and by transferring it to an absolutely healthy hen or pigeon we can cause an infection in that bird. It may be a mild one. If we again isolate that germ from the bird and pass it on to the second bird and from the second to the third and then compare the original germ we started with and the germs as taken from the third bird you will find that from the third bird will be more than three times as virulent. By passing it through the bodies of these birds that germ has acquired virulence. I think it is the same with foul brood. Certain germs may at the start be virulent and they may be made still more virulent by passage through larvae. It is a very difficult thing to have every condition under your control in performing experiments with bee larvae. I have had these observatory hives in my laboratory and kept them there on the quiet till forced to take them out and was told I was going contrary to the foul brood act. I had these legal difficulties, but worse than all, the technical difficulties in working on this question. There are lots of things I would still like to work at with regard to this question of virulence, but as I say, it is a very difficult thing to work with this bee larvae. That is only the beginning of the difficulties, but I think this question of virulence is a very important one.

Whilst I am speaking I want to say one or two other things with regard to what previous speakers have mentioned. First of all, with regard to

formalin, as I have stated this morning, I don't believe there is any specific method for the cure of foul brood. We have Europe using one method, and we have another method used in America, and as I said this morning, any of these methods will cure foul brood.

With special reference to this formalin treatment, I was talking to Mr. Sibbald, and so far as I can see from his description he certainly carried out the formalin treatment very well. But we know more about formalin gas than we knew a year ago. This formalin vapor or gas is now very largely used by all boards in the country for disinfection of rooms from diphtheria, tuberculosis and smallpox, and it is considered very efficient. I had this winter to disinfect nearly half a million cubic feet of buildings in connection with smallpox, and I think it has been very efficient. I am convinced of its efficiency for the "bacillus alvei" if it is properly done. In all these cases in the application of formalin vapor there is one point to be remembered, that is the gas generated is more potent, that is to say more germ-killing if the temperature is low, and if there is lots of moisture in the air—a low temperature—because it is easy to hold the moisture in the air when the temperature is low rather than high. In all these cases one has to either hang wet sheets in the room, or else get moisture in the room by turning on the steam jet, allowing it to cool a little. When the air is well saturated with moisture, and if there is bedding or anything of that sort to disinfect, we very frequently sprinkle it with water in order to get more moisture present, then the gas is much more potent and more effective. That is also true of disinfecting any combs you may have. I would strongly advise either the spraying or sprinkling of them. I suppose it would not hurt to dip them in water. Then, having generated the

gas, they should be left in this tight box for at least 12 hours. In disinfecting rooms, or in conducting disinfecting experiments, you should do it some time during the day, and leave the room shut up till the next morning—from 12 to 24 hours. Eighteen to 24 hours is the right time to employ in most cases, and I think that should also be done. I am not relying upon my own experiments with regard to the efficiency of this gas. I think a sufficient number of competent observers, bacteriologists particularly, who have examined the combs affected with foul brood after it has been exposed to formalin vapor, have found no living germs present. The Professor of Pathology in Cincinnati, Prof. Cayley in Switzerland, and Prof. Dunbar, of the University in Hamburg, Germany, have come to the same conclusion. With these observers widely separated, no collusion between them, their opinions are certainly worthy of credence, and we must therefore believe that this formalin vapor is very effective when properly and intelligently used. I don't want you to go away with the impression that I am an advocate of any of these treatments. What we are after is knowledge and truth, and if we can find any method which will save you money, which will save you labor, that is the method we want, irrespective of who brings it out. It was on that account—the saving of labor and efficiency—that I mentioned that treatment, but if you prefer other methods, I believe they are just as good. In Switzerland I had the honor and pleasure of spending a week or two with Mr. Bertrand, one of the famous apiculturists in the world, and he uses all together in his apiaries, and recommends in his journal the method of medicated syrups, and he uses formic acid in a substance which is used and helps preserve; it is the antiseptic manufactured by the bees themselves; when they close

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their cells they enclose with it a little drop of formic acid. He uses a large quantity of that, and a number of experiments have shown that this amount of formic acid which he exposes absolutely prevents the growth of foul brood. That is the method by which they are cured, and to a certain extent it prevents the disease. There is the further fact that they have so much foul brood in Europe that it has evolved a race of bees which are somewhat immune to the disease. We know that among human beings the white race has a considerable immunity to smallpox, whereas the black race, on the other hand, are extremely susceptible. That immunity is only explained from the fact that the whites have been more exposed to smallpox, and in the course of time they have got a certain amount of immunity to that disease. And it is the same with very many observations and many other facts like it. In the case of anthrax, which is an extremely deadly disease for sheep and cattle, the Algerian race of sheep are immune to anthrax, the only race that is. Why? Because they have been exposed to anthrax so often in Algiers that they have gradually got a race in immunity.

I am greatly interested in this question, and am always ready to do any work for the bee-keepers in the examination of specimens that may be sent in. You must remember that we at the College are in a sense your servants, and are always willing to meet you all in half-work and examine and report, if you wish, confidentially. No names are ever mentioned if you do not wish it known. We always send a letter, and nothing is ever said about it, and we will send you a report just as soon as it is possible to make a correct diagnosis from the sample you may send in. (Applause.)

The President—We are grateful to Prof. Harrison for the interest he has taken in this subject.

Mr. Hurley—A year ago this fall I had a very serious attack of foul brood in 17 colonies. I had some years previous to that met Mr. McEvoy at Toronto Exhibition for perhaps five or ten minutes, and I knew him from a ten minutes' acquaintance. I knew him as the inspector, and I wrote to him direct, and he came up and inspected my hives, and told me I had a very bad attack of foul brood. It was in every hive. It was discovered in August. I found the bees were standing still; I didn't know what was the matter with them. I found there was something wrong, so I sent for him, and I undertook to treat those bees in the fall. I shook the whole of them last fall, and I brought them through the winter—and I winter outside. I keep a few bees as a hobby and as a side issue. My experience is that Mr. McEvoy's system will cure foul brood if it is properly attended to.

In connection with the discussion that has taken place, I wish to say that the disease is only spread by actual contact with the germs, and those germs are carried from cell to cell by reason of the bees feeding diseased honey to the healthy larvae, and by that means the disease is spread. If you had one diseased cell in a hive, or half a dozen, and if by some means the diseased honey of those cells were not carried to other cells, the disease would not spread. Consequently, if the disease gets into a hive, it has got there by reason of being taken there. It cannot develop. I don't believe that foul brood develops from dead brood. It is a specific disease, and it must come from living germs somewhere else. If you have a diseased hive, and none of that disease gets into another hive, you can cure that hive, and you are free of the disease; but if it spreads you have it carried from hive to hive. I treated my bees. They were not strong, because they had the disease

in the hives all summer. I did not want to lose the brood, and this is the way I handled them: I shook down four colonies. I took the brood of those four colonies and set them on top of another colony that was diseased which had not been shaken down. I let the combs remain upon that one hive—the four supers—long enough to let the brood hatch out. The under hive being strong enough in bees to resist the robbers permitted me to allow the brood to hatch, and I saved the brood in the four hives piled on top. After they had stood long enough to be hatched out, I destroyed those combs. Then I destroyed the bottom hive, and destroyed it entirely, brood and all. Consequently, by the destruction of the entire brood of one hive, I saved the brood of four hives, and in this way prevented robbing.

Mr. Sibbald—Any man that had a diseased yard like you should send for the inspector, but if you only have two or three colonies, I wouldn't bother saving the brood.

Mr. Hurley—With Mr. McEvoy's advice I carefully looked into the matter, and gave them good attention, and I must say that had I not followed his advice as closely as I did, I would have lost the entire lot of bees, because it was in every hive. I think anybody who follows Mr. McEvoy's system will cure and get rid of it entirely. (Applause.)

Mr. Hoshal—There is a phase of the subject that has not come out at all, and I have often wondered why it has not. I have wondered why it is we desire to keep this thing covered up so thoroughly as we do. I had the disease a while ago, and I wouldn't like to be considered a criminal because I had it. It is no disgrace.

Mr. Holtermann read a paper entitled "The Past Winter Losses and the Lessons to be Drawn Therefrom."

JAMAICA

BY ARTHUR LAING

The Honey Crop.

Before leaving Ontario I read of a party in Jamaica extracting 300 pounds per colony from a small yard; another described the Island as a "bee-keepers' Paradise," and that the bees gathered honey every month in the year. From the foregoing remarks, and many others of a similar nature, I naturally expected to make a pleasant and profitable visit, but, alas! as Robbie Burns says, "The best-laid schemes o' mice and men gang aft a-glee." I took charge of over 500 colonies of bees on the 17th of October, and hoped to be doing a little extracting inside a few weeks from that date, but instead I found that the bees during November scarcely held their own, and dwindled so badly in December that the loss was quite heavy from weak colonies having to be united to avoid their being totally destroyed by moths. I understood that the principal crop was taken from December to about the first of May, but if what I secured was a fair sample of a honey crop in Jamaica, I want no more of them. During December we got a very light bloom of the famous logwood, and about Christmas the Christmas-bells, a white flower, opened up, from which we got a very little surplus. In January we got two more flows from logwood, but they were also light. We would, however, have taken considerably more surplus but for the heavy rains, which seem to blight the bloom. Up to this time, about the 10th of February, we had extracted from all sources, from the 500 colonies, about 3,000 pounds of honey, but we were still hoping for another flow from the logwood, and I

was given to understand from the 'big logwood flows' it was no uncommon thing for strong colonies to gather two supers, so we were looking for 20,000 to 30,000 pounds from the 500 colonies if we got a heavy bloom. Soon after this I noticed unmistakable evidences of an almost universal bloom, and about ten days later it came out in all its glory. It was truly a magnificent sight, and although the house was about 500 feet from the apiary, the roar of the bees passing to and fro was a sound to make glad the heart of any bee-keeper. I went down to the apiary one morning about 6 o'clock, and if I live to be 100 years old I never expect to see a more stirring scene in any apiary than I looked upon in that yard of 250 colonies. The bees seemed to be fairly wild with joy, and I must say it gave me a similar sensation to watch them. They kept up this pace for four days, which brought us up to a Saturday evening. I told my partner I should have to put on a lot of extra supers on the following Monday morning, but, alas! it rained that Saturday night, and next morning the logwood blossoms were as brown as though they had been burnt, and the flow was over. Six thousand pounds for the four days was the record. During the month of March we extracted 2,000 pounds from the brood chambers of one yard, making a total of 11,000 pounds for the five months, or a little less than 25 pounds per colony, and I found on enquiry that that was the average of several parties up to that date. Mr. Hooper of Kingson said he had only extracted once, and expected three more extractings, which would bring his average up to 100 pounds per colony, but the Honey Association thought the crop was at least half over, and, if so, the average would be nearer 50 than 100 pounds per colony for the present season. Prices we received ran from a small fraction below two cents per pound for dark, to a

small fraction below three cents per pound for the best, which was one of the finest samples on the Island, according to the opinion of the Honey Association.

In this and the preceding articles I have endeavored to outline things just as I have found them, and, as before stated, I believe we Canadian bee-keepers have a better opportunity for success here than we would have in Jamaica. I arrived in Hamilton on April 3, after an absence of six months, convinced as never before of the advantages and beauties of the land of my birth, and prepared to sing with all my heart

"The Maple Leaf, our emblem dear,

The Maple Leaf forever!

God save our King and Heaven bless

The Maple Leaf forever!"

Ash, Ont., April 21, 1905.

Honey for the Toilet.

Apart from the medicinal uses to which honey is and may be applied, are those connected with the toilet. A small jar containing honey should be kept on every washstand and in every nursery. Honey proves a panacea for most of the ills that flesh, or rather skin, is heir to, in the shape of cracked lips, roughness of the skin, blotchy patches around the mouth, which are most disfiguring to even the most beautiful, chilblained or chapped hands, sore and cracked heels, wind-caught ears, etc., which can all be prevented by this simple remedy. The application is so easy, and no one can object to it, as they do to so many other remedies. After washing any part of the body suffering from any of the above unpleasantnesses, apply to the part affected, while still wet, a very little honey, by dipping the finger into the jar and smearing over. To those who suffer habitually in winter from any of these distressing complaints, the continued use of honey will prevent them from appearing. Begin to use as soon as the weather gets cold, or as soon as the wind begins to nip.—
Irish Bee Journal.

THE CANADIAN BEE JOURNAL

Devoted to the Interests of Bee-keepers.

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Editor, W. J. Craig.

Brantford, May, 1905.

EDITORIAL NOTES.

The Freight Rate Committee of the Ontario Bee-keepers' Association met in Toronto on Easter Monday.

‡

A meeting of the O.B.K.A. executive will be called at an early date to outline the program and make arrangements for the annual meeting of the Association in November. If Hamilton succeeds in securing the Fruit, Flower and Honey Show, it is quite probable that the annual meeting will be held there also, and at the same time. It is earnestly hoped that a commodious place of meeting may be obtained in the vicinity of the exhibition. At Toronto last year the meeting room was altogether too small for the representation.

Later—Since the above writing it has been announced to us that the Fruit, Flower and Honey Show will be held in Toronto.

‡

We are always pleased to receive renewals and new subscriptions to The Journal, never criticizing the type or the grammar of the sender, and when need be, glad to make translations, but occasionally we are "up against it," through writers forgetting to sign their letter, or not sending a letter at all, merely making the enclosure. Just recently we received a dollar bill pinned to the front cover of a catalogue, issued by R. H. McDowell, Strawberry Nurseries, Tillsonburg. We wrote Mr. McDowell, but he does not know anything

about the enclosure. We would be pleased to hear from the party, who may recognize the description, so that we may give him credit on our list.

‡

The Honey Producers' League recently organized in the United States is, we believe, going to be one of the most useful movements yet inaugurated among bee-keepers. We understand that for the present, at least, the effort will be confined to the United States, perhaps by and by the organization will see its way to extend its border, and take in Canada. At any rate, we will be helped indirectly. Something of this sort may perhaps be taken up in connection with our Ontario Association, if space permits we will next month give the text of the prospectus and constitution.

‡

"Something That Promises Better Than Shook Swarming" is the title of an interesting article by our friend H. G. Sibbald in the "Bee-keepers' Review." The originality or priority of the system therein set forth is disputed by a number of writers and critics, and its effectiveness by others, nevertheless it is worthy of consideration and discussion. We understand that the conclusions drawn by Mr. Sibbald is the outcome of but one season's experiments—last season. Other features may develop later, and Mr. Sibbald will, with us, be pleased to have a full discussion of it among our Canadian bee-keepers. The following is a synopsis of the article in the "Review":

"When a colony is found making preparations to swarm, it is moved off its stand to one side, and another hive, with two empty combs and a few frames with foundation starters, is set in its place. One frame of brood, queen cells and adhering bees is taken from the colony set aside and placed between the two empty combs, care being taken not to take up the queen. The super, or supers from the old hive, with the

bees they contain, are now placed on the new hive. This concludes the first operation.

The field bees will return to their old stand, having been robbed of nine-tenths of their brood and their queen (but with bright prospects of having a new queen), and having very little brood to care for or cover, the bees in the new hive very soon lose their swarming fever, work very well, and as long as there is room in the supers they are not likely to build much, if any, comb in their lower hive or brood chamber. The two empty combs serve to store any pollen, preventing it being carried to the supers.

The old colony set aside will soon lose all its field bees, as they return to the old stand, and as no new honey will be coming in the bees in this old hive will conclude that there must be a famine in the land, or that the season is over. It is no time for them to swarm. They soon remove the larvae from, and destroy, every queen cell. The swarming fever has been knocked on the head here, and both hives are safe for ten days, or even a longer period.

The next operation will depend on what may be desired; if increase, move the old colony to the opposite side of the hive or old stand, thus again giving the lately-acquired field force to the colony, with the supers.

This may be repeated until we finally decide to set it away upon a new and permanent stand. Colony No. 2 (on the old stand) will requeen without swarming, as it has very little brood, and has lost all desire to swarm. It may require a few more combs, or full sheets of foundation, but even if left as it is, it will build all worker comb and be in good condition for the winter.

If increase is NOT desired, and the old queen is satisfactory, destroy the queen cells on the one frame of brood on the old stand, put it back in the old colony, and remove the empty hive, and set the old

hive or colony back on the old stand, thus uniting all again, when, with plenty of super room, they will not attempt to swarm again. If it is desired to requeen and reunite, wait until the young queen is hatched, kill the old queen, then unite.

"To increase by the nucleus plan, set hive containing the one frame of brood to the opposite side from the old hive, and return the old hive to its original stand."

In concluding his article, Mr. Sibald says that no shaking is required by this system; that there is absolutely no chance of absconding swarms; no looking for queens unless we wish to requeen; that it does away with destroying queen cells and after-swarms are unknown.



THE NEXT NATIONAL CONVENTION TO BE AT SAN ANTONIO, TEXAS.

We are in receipt of the following from the secretary of the National Bee-keepers' Association, U. S.:

"For years Texas has been asking that the National Bee-keepers' Association hold its convention within her borders, but there has always seemed to be some reason why the meeting should be elsewhere. There is now no reason why it should not be held in Texas this year, if it is ever to be held there. Texas is the largest State in the Union, and stands at least second, if not first, in honey production, while she has a good list of members in the National Association. Considering all of these facts, the Executive Committee has decided upon San Antonio as the place for holding the next convention. The exact date has not yet been decided upon, but it will probably be the latter part of October, after the busy season is over with the bees, when the weather is comfortable, even in the South, and when cheap excursion rates can be secured.

"W. Z. HUTCHINSON, Sec."

Hints for Beginners

R. F. HOLTERRMANN

To beginners perhaps, more than to any other class of bee-keepers, it is necessary to say, give the bees during the spring time a wholesome letting alone rather than be everlastingly looking at them. A child of an investigative turn of mind (you know the children are all that or something else wonderful, in the estimation of their foolish parents) will sow seed and then scratch it up to see how it is getting on. The beginner in poultry rearing will often remove the hen and see how the eggs are getting along, and so the beginner in bee-keeping with the same disposition shining through it all, is inclined to open, at seasonable and unseasonable intervals, the hive and pull the sitting bees off the eggs and do more or less damage. How few beekeepers really realize that in the combs is going on a process in many respects similar to that in the poultry yard. As the hen deposits eggs so does the queen each in its nest, by nature the hen's eggs are left in the nest until a sufficient quantity is laid and then hatched, but the egg deposited by the queen at once begins the hatching process, or rather, period of incubation. Just as the egg of the hen requires a certain temperature to have this incubation carried on, so does the egg of the queen. You can take this egg, or better, a piece of comb containing the eggs immediately after the queen has laid them, remove them from the hive and after a limited period return them to a hive and thus prolong the egg-stages very materially. Of course, the eggs will become stale, dry out and be

useless. Conditions more or less favorable will prolong or lessen the period after which it will still hatch but the comparison is striking. The egg ordinarily hatches three days after depositing, when laid they stand pretty well on end, that end being stuck to the base of the cell. The end of the egg at liberty gradually sinks and at the end of the third day almost lies on its side, when it hatches. This information is of value in telling the age of the egg, and also in detecting other conditions in the hive. Who can tell us what becomes of the shell or outer covering of the egg?

We have now the little larvae from the eggs or grubs requiring most careful nursing and they have to be kept warm continually. Being so small and delicate, they are easily injured; the young bee keeps on developing, a worker bee emerging from the cell 21 days from the time the egg was deposited, in the latter period of development previous to the 21st day the young bee develops a good deal of warmth itself and actually helps to keep the hive and its contents warm. Few consider this, and yet how many have seen young bees emerge from the comb days after it has been taken from the hive, and after the younger brood has perished owing to the reduced temperature. In building up weak stocks the brood to give is not that in the uncapped condition or even that in the early capped, but such as is almost ready to emerge from their cradle. Bees to return to the brood, much harm may be done by exposure during cold weather, and while I admit that an expert bee-keeper can, at times, assist his bees by manipulation, the beginner is more likely to do harm than good, at least until settled warm weather.

Again, how much damage is done by the improper return of combs to the hive. I know this has been mentioned

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before, but how many readers of the Canadian Bee Journal give this matter any consideration? Let us examine closely the brood chamber of a strong colony and we will see an order. An instinct or law divinely implanted in them is **order, system**, the honey towards the outside and above, bee-bread next, then brood. In a weaker stock we find the full combs of brood to the centre of the cluster and the least amount of brood towards the outside, and perhaps brood on one side of the comb and none on the other. All this has a purpose and is not mere chance. Man, in his imitative way, eyes, in his slavish way, furnishes his home as the whims and caprices of fashion dictates when there may be neither health, convenience or comfort about it, he would have the pantry in the attic and the parlor in the kitchen if some family with money and influence even if brains and morality were lacking, would only start the ball rolling. But bees do not in this matter act on caprice. Convenience, labor-saving, warmth where most required, and the like, is the outcome of their work, and not imitation.

And now, after saying all I have said and warning against inexperienced manipulation, I am going to bring before the readers of The Canadian Bee Journal, a matter which I think may be of value, one which, however, may be very dangerous in the hands of a novice, and which largely upsets all the plans of the bees, but which, in my estimation, on account of the violence of the change in a brood chamber, may give us with little trouble a result desirable at a certain season. We know that in many localities there is a dearth of honey coming in between fruit bloom and clover, at this season there is no difficulty in keeping down the warming by proper management, and of every contented bee we can produce means added honey, if there is a

flow to follow. If a colony should, in your estimation, have too much brood, then giving a comb or two to a stock less fortunate, taking that nearest hatching and **building up first the strongest of the weaker**, not the weakest. I have had some correspondence with Mr. F. E. White, County Grey (I will not give his post-office address, as he may not want to be pestered with correspondence), and in answer to a question from me, which was the outcome of a previous statement of his, he writes:

"You ask if I think that inverting hives between fruit bloom and clover is an advantage. I certainly do, if no honey is coming in especially, although I did not invert them last year. I think it pays, and I expect to invert all my hives this season. The only trouble is, if you find it necessary to put on upper stories while the hives are inverted, the bees are almost sure to carry some of the old honey upstairs (which gives extra labor to extract it before white honey flow starts), for as soon as you invert the hives the bees will start uncapping all the honey along the top bar of every frame, especially if the combs have any brood in them, and what part of the honey they do not use they will remove it above the brood, unsealed, ready for use. The way I think would prevent the bees from carrying any of the old honey up into the upper stories, when using 10-frame Langstroth hives, would be, at the close of fruit bloom, to go over all the colonies that have any brood in the two outside combs and not much honey, remove two combs of well-sealed brood and give them to some colony that has only five frames of brood, and take two combs with more or less honey to put back in the hive you took the two frames of brood out of; and any colony that has only four frames of brood, unite with another colony that has only three or four

frames of brood and fill out the hive, putting in two or three combs of sealed honey when you have done that. Now lay two half-inch strips, or strips the width of bee spaces, across the frames (if the frames are not spaced at the bottom, tack the strips on with small nails to keep the frames in position), put on inverted an extra bottom board in place of the quilt and cover and invert the hive, putting the back of the hive to the front. When inverted put on the cover and allow the hive to remain inverted for about a week; then return it to the right position and let it remain two or three days before you put on any upper stories, so that the bees will have time to place what unsealed honey there is in position in the brood combs. I like to have the upper stories on two or three days before the surplus honey flow starts. I do not know of any other way that you can get the old honey used up as fast and with as little labor as by inverting the hive, except possibly a double brood chamber, which I do not like. Try inverting a few hives yourself and let me know how you succeed."

The above extract from the letter requires very little explanation. The idea, of course, is to get the honey moving about in the hive by placing it where the bees do not want it, and at a time when there would be a check in brood-rearing. As far as I am concerned, I would like the bees to remove the old and surplus honey to the supers, taking it out at the opening of the flow. This is just what I want, and it is my intention, season permitting, to try at least 100 colonies in this way. Perhaps other readers of The Canadian Bee Journal will also test the matter and report. Let me add that the beginner had better be very careful about this, and only experiment with good strong stocks, and contract the entrance, leaving enough room for ventilation and passage for the bees. Mr.

White is a very progressive, careful and thoughtful bee-keeper, and could no doubt contribute some valuable matter to our bee literature.

Brantford, Ont.

INCREASE

BY FRANK P. ADAMS

It has often been said that natural swarming is a slow method of increase, and I think that those who have depended solely on the natural swarms that issue from the hives during the season have usually found that their increase was not much more than enough to make up winter losses. Of course it is quite possible to let the hives throw out any number of after-swarms, dump each one in a separate hive, and come out in the fall with a largely-increased apiary, but such a method usually results in a poor honey yield and a lot of weak, miserable, nuclei that will go under during the winter.

There is a method of securing increase by a little judicious handling of the brood and young bees that are left in the hives after the first swarm issues, that has given me splendid results during the past season, and which I will give as clearly and simply as possible. Before going into details of this system, I would like to repeat here what has so often been said before, and it is that the proper development of the queen intended to head the young stock is the pivot upon which its success or failure depends. If the young queen-larvae has not been properly nourished, or if she has become chilled through, any cause during her development, then the chances are that the queen will emerge from her cell small, poor-looking and worthless. On the other hand, if the proper condi-

tions have been present during her growth she will emerge as nature intended, large and beautiful, and fit to be the mother of the future colony. The queen-cells left by the swarming of a strong normal colony will be nourished and hatched by the young bees left behind in such a manner that the young queens will be of the very best. The method of increase given below secures queens for the new colonies reared under the swarming impulse, and the workers also who bear her company are fully developed, and have not been half starved in the larval state as so many young bees are apt to be where the apiarist interferes. It will usually happen during the swarming season that several swarms will come off on the same day, or within one day of each other. Hive each of the swarms on the old stand and place the old colony containing the young bees and queen cells beside the new hive with its entrance facing in the opposite direction. Take the half-filled supers and put them on the new swarm in the way most bee-keepers are familiar with. Just a word of caution here—when handling any hives or frames containing queen-cells use the utmost care to see that they are not jarred in any way as such treatment will destroy a large percentage of the unhatched queens. The queen cells in the old colony if the swarm has been a normal one, will be just about ready to cap over when the swarm issues, and in a day or two at the most the best of them (which are the oldest) will have been capped over. Now we will suppose that this same procedure has been followed with two swarms that issued at the same time. If there is any choice in the stocks, that is if one has proven superior to the other in honey-gathering qualities, or in other desirable traits, then arrange to preserve the queen cells in it. Two or three days after the swarms have is-

sued, or when most of the cells are capped over, and when quite a number of young bees have come out of the hatching brood, shake the hive containing the cells, which you don't wish to keep, down at the entrance of its swarm, pinch off all the queen-cells from the frames, put the frames back in the super and set the super on top of the other hive containing queen cells and young bees. There will be enough young bees in this hive to look after both lots of brood. In five or six days from the time the swarms issued you will have a lot of ripe queen cells just about ready to hatch; most of the brood will be capped over and the two-storied hive will be crowded with young bees, the majority of which have never been outside. Now is the time to make the division—place eight or nine hives where you want the new colonies to stand; see that the same number of frames contain a queen-cell each; put two frames, one with queen-cell attached, and all adhering bees into each new hive, give each new hive an extra frame of honey if you can spare it, if not never mind, but look out later when the queen starts laying, and see that they all have plenty to keep them going; shut the little hives up tight until the evening of the following day if the sun is not too hot, if it is then leave them open. Avoid setting the new hives in a row so that their entrances all face in one direction; scatter them about in odd corners of the yard, or if you have an eye for symmetry in your arrangements you can put them in groups of four with the entrance of each hive in the group facing in a different direction from the rest.

It will thus be seen than from eight to ten stocks can be secured with the best of queens, from the brood of two old stocks and the young bees of one. Nothing is taken from the swarm, and

in fact one swarm is increased by its young bees.

The earlier swarms are the best for working in this manner, as the increase has more time in which to gather strength for the winter. If shook swarming is practiced in the yard, it will be a great help to give each one of these small colonies a frame of the brood from which all the bees have been shaken. This is best done before the queen starts to lay, as it will keep up the strength of the colony when most needed to look after the young brood. Insert an empty comb in the brood-nest from time to time, or if honey is coming in from the fields a frame of foundation will do. It will not be necessary to feed providing the division has been made early in the swarming season, and there is a fall flow of honey, but be sure that they all go into winter quarters with plenty of stores. "Bow Park," Ont.

FOUL BROOD.

How They Treat It in Arapahal Co., Colorado.

E. J. Atchley, assistant inspector for Arapahal Co., Col., in his "Colorado Notes" in The "Western Bee-Journal," some time ago, says:

"I have found about twenty cases of foul brood in Arapahal county out of 500 colonies of bees, and I have the only sure remedy yet found to eradicate this dreaded disease, and it has not failed in a single instance, and the best part about it is its cheapness in the long run. It is this—When a diseased colony is found it is marked, and I return at night, close the entrance, dig a pit, place hive and contents therein, and apply the never-failing remedy—coal oil torch, and when quite burned up I rake all ashes that might be on the edge of the pit, into the bottom and pull the earth in until all is covered up about two feet deep. All this is done just before the honey flows stop, and before any robbing takes place. This means total eradication, and no other remedy yet known will be so effective at all times. I leave no trace of foul brood behind me, and if I stay in this circuit another season, there will not be a single case left in Arapahal county.

WINTERING of BEES

The discussion of this important part of bee-keeping may seem a little untimely, now that winter is over, yet, on the other hand, everything in that line is fresh with us, and we should be the more able to deal with all the points for or against the two ways of wintering—inside or outside. The writer winters some of his bees in wintering cases, but a fully greater number in the cellar, and, although an advocate of the former system, yet does not altogether condemn the latter, as it is cheaper and probably attended with less labor, but the combs will not come out so clean as those in wintering cases. I am not prepared to say that unsealed honey will become watery more readily one way than the other, but for successful wintering there should be little or no unsealed honey allowed to remain with the bees in the fall. However, it cannot always be prevented. There is but little concern as to when bees should be cellared, but it is, to my mind, quite a problem to decide the proper date on which to remove them therefrom. Any time during the night will do once we have the date fixed, but there must be certain precautions used for that job at any time. We don't want a strong wind for first flight. A light breeze is all right if from the south or west, which in a warmish time in spring feels more balmy than from the east. I would advise that bees be not set out when the air is moving westward, as the east winds are treacherous. I have set out bees on what seemed to be the promise of a fine day—the breeze was from the east, the bees were induced to fly by the warmth of the morning,

Early in the day the air became so chilly that bees dropped in thousands and lay on the earth, or ice, as the case might be, for four days, during which period the nights were frosty, and yet after coming through that lots of them were again able to take wing, but would then be looked upon as intruders, and treated accordingly, if seeking admittance into their own hives.

We have looked at the cold side. Let us now look at the opposite, for there is danger both ways. On the morning of the 29th ult. I set out about a dozen colonies. It was so warm that they were flying quite strong by 6 o'clock. The day warmed up until the mercury reached 73 degrees in the shade. It is allowed that bees fly one mile per minute, but methinks their speed was doubled that day. My case-wintered bees had had their cleansing flight six days previous and now jubilated with those from the cellar the bee war-whoop, or robber hum, was very evident. There was excitement everywhere, which in some cases would no doubt cause the balling of queens. That night about midnight I carried the balance of my bees (some 50 colonies) from the cellar with the mercury standing at 54 degrees outside. The entrances were full open all winter, with back of hive raised a little from bottom board, and carried to the yard in that way. The bees seemed quiet when I started operations, but some of them gave me their attention before the work was over. There was just enough light from a lantern burning low in cellar to barely show me the hives, and they were carried to their summer stands by the light of the stars. Took about two and a half hours to do the work, retired shortly after 2 a.m., the atmosphere was still warm at that hour, but fancy my surprise when going out in the morning to find the temperature down

12 degrees with a breeze from the north and threatening rain which did come to quite a shower. By about 10 a.m. the day cleared up, however, and although the mercury only rose to 50, the bees set out the previous night had a fine airing, whilst but few of those which had had their cleansing flight ventured out, and I felt pleased that I hadn't got them all out the previous day.

My case-wintered bees had their first fly on the 23rd ult., with the mercury at from 48 to 50, with a breeze from the south, this I consider is as low a temperature as it is wise to let bees have their first airing; after that not many will seek daylight at so low a degree.

Wintering cases should have an entrance at least four inches square with a sloping bridge from that to the hive entrance which allows the one in charge to control the entrance more easily, it also affords a pocket into which straw can be stuffed to keep out the winter storms and also darken the entrance on sunny days in early spring, when yet too cold for bees to fly (pea straw preferred). I use four inches of packing (forest leaves) all around the hives, about the same amount below and considerable more on top weighted down. My case-wintered bees (some 40 odd colonies) have wintered well, but just wintered as well, I fancy, a year ago, when there was so much mortality reported.

The advantages of case wintering are these: 1st, no carrying to and from the cellar. 2nd, if there is a day fit for a bee fly in February or March they are on hand and benefited. 3rd, combs scarcely ever show mould. 4th, should a cold spell strike us, such as has been since 1st inst., to time of writing (and it might have been worse) they are still in winter quarters, so to speak, and can stand it better than those from the cellar or unprotected.

Would be pleased and grateful for advice through the C. B. J., from any successful cellar winterer as to how he (or she) decides the date to set the bees on their summer stands and all preliminaries connected therewith.

D. CHALMERS.

Poole, April 14, 1905.

NOTES AND COMMENTS

By a York County Bee-Keeper

Heddon Hive Not Infallible.

After reading Mr. Hoshal's lengthy but interesting address as given at the Toronto convention last fall, was led to think that in common with all other hives, the Heddon has its disadvantages as well as its advantages.

Mr. Hoshal admits a heavy winter loss, and candidly I believe that if I had to winter outdoors, in our locality, in a single Heddon case, I would have a similar report to make every spring as long as I had any bees left. Have I ever tried them? No, but with a dozen or so Langstroth hives wintering beside my deep framers, results have been of such a nature as to quite convince me how the Heddon would do in my hands. If ever it falls to my lot to use the Heddon hive, into the cellar they shall certainly go. To be sure many lost heavily in the winter '03-'04, who used deeper frames than the Heddon. However, not many bee-keepers of the calibre of Mr. Hoshal suffered so very much, and while not presuming to put myself in the class of apiarists referred to, would make the bold assertion that with abundance of good stores in the proper place, can winter outdoors every colony worth putting into winter quarters, unless we

have worse winters than it has been my fortune to pass through.

Improvements at Industrial Exhibition

Mr. Grainger's letter should strike a responsive chord in every bee-keeper interested in the advancement of our pursuit. That the suggested improvements are needed is a foregone conclusion, that Mr. Grainger, our representative is willing and in earnest to do all in his power is evident by the tone of his letter. Mr. Grainger well says: "stock men, dairymen, etc., get what they want by persistent effort and sticking to it." the same thing can be said relative to government assistance to the various industries, and if we deem bee-keeping an honorable calling on a par with dairying, fruit raising, etc., seems to the writer that it is about time we were up and doing, or, in the near future we shall be "up against it," with a vengeance.

Large Hives Versus Small Ones.

We had not purposed to mix up in the "scrap" likely to follow friend Holtermann's articles, but one particular paragraph in said write-up is so true in my experience that I cannot help endorsing it. I refer to where he says that "12-frame hives sitting side by side with 8-frame hives, and otherwise receiving the same attention, there will in the spring and fall be as few frames unoccupied in the 12-frame hives as in the eight." As intimated before, we have about a dozen 8-frame Langstroth hives in one yard, right with them are 12-frame hives, a good deal deeper than Langstroth, and every spring and fall conditions are as before mentioned. Colonies in the large hives are nearly always ready for supers first, and as for honey yield we at least get twice as much, as we do from the small hives. Of course, if we were to treat the small hives differently by the various manipulations such as "hoisting brood," etc., commonly advocated by small hive

users, results would likely be different. With us in the busy season, this is too much "finkering," and our limited experience convinces us that with a large hive we secure the maximum amount of honey with the minimum of labor. Before leaving Mr. Holtermann's article, we wish to call attention to one thing advocated by him with which I cannot agree, viz: early spring stimulating. While it may be possible to "stimulate" strong colonies to brood-rearing in bad weather, my observation has convinced me that for every young bee reared by reason of said stimulus, about three old bees are sacrificed by the effort.

In the hands of the veteran no harm can come through Friend Holtermann's suggestion, but to the beginner would say leave the bees alone in early spring, provided they have sufficient stores in the hive.

Extracted Honey Production.

As is well known, by readers of apicultural literature, that extensive and wide-awake Michigan bee-keeper, Mr. Townsend, is a staunch advocate of producing well-ripened extracted honey. In a recent article in "Gleanings" he says that over-production is not the cause of the stagnation in the honey market, rather the production of a lot of unripe honey that is doing the mischief. Believe that like conditions and circumstances are doing incalculable injury to the apiarists on this side of the line as well. Too bad that the honest, careful bee-keepers have to suffer for the fault of men who imagine that they can secure more honey (?) by extracting raw nectar.

Editor Root, in a foot-note to Mr. Townsend's article, endorses the views expressed, and deplors the fact that some of the extensive bee-keepers are not producing the quality of goods that they should. While we have in a measure enjoyed recent articles in different journals from the pen of that able

and extensive New York apiarist, Mr. Alexander, we never see Mr. Alexander's name mentioned without thinking of his advice in the "Review" some time ago, advocating wholesale extracting without waiting for the combs to be sealed. Granting, for the sake of argument, that in his hands such methods are all right (a doubtful proposition), we fear that such advice given promiscuously cannot help but do a large amount of harm. If we had a whole lot of literature on the line of Mr. Townsend's article, and the paper by friend E. H. Hind of Fenelon Falls, read at Victoria county meeting, we might have hopes of a speedy removal of this bane of the bee-keepers.

When reading over the constitution of the 'Honey Producers' League,' the thought came to me, "They can fight successfully honey adulteration, but how are they going to get at the producers of unripe honey?" While this organization has plenty of difficulties in the way, think the one mentioned will be one of the most formidable. What's the matter with the Honey Producers' League, anyway? We think it a splendid idea and hope that in some way arrangements can be made for us Canucks to take part in the work, and, of course, take part in the benefits. What say you, brethren?

A Healing Balsam.

A Healing Balsam, really valuable in case of wounds or injuries to the skin, is prepared in the same way in a bain-marie: Take of wax from the cell cap-pings 1oz; of fresh propolis, 2 oz; of the finest honey, 7 oz. After all is well mixed pass through a close cloth, and press out well; replace in the bain-marie; add a little cochineal and a few drops of essence of lavender; then beat the mixture well with a fork, and fill into small pots, which fasten down closely.—Rucher Belge.

Queries —AND— Answers

[Department conducted by Mr. R. H. Smith, St. Thomas, Ontario. Queries may be sent direct to Mr. R. H. Smith or to the office of the Canadian Bee Journal.]

Question No. 1.—Kindly inform me through the Canadian Bee Journal if bee-keeping has been tested in Southern Alberta, and if so, with what results?—E. A. J., Queenhill, Ont.

Answer—I am not aware that bees have been tried in Southern Alberta, but I have no doubt they would succeed if there are any bluffs of timber that would afford shelters, and which, as in Assiniboia, will provide a greater variety of bee forage. In 1884 I tried bees on the open prairie in Assiniboia, but found the winds were too much for them at times. After moving them to the shelter of the bluffs they built up well and gave a good surplus in section honey, which took first prize at the fair held at Indian Head.

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Question No. 2.—Would be pleased if you could give me a plan or description of a convenient extracting and store room for handling 200 colonies of bees, run for extracted honey. Barrels will be used mostly for storing.—E. A. J., Queenhill, Ont.

Answer—We find it best to build an extracting room on the south side of the apiary, with windows on the north side so arranged that the apiarist has a view over the yard when inside. It has been said to be a good plan to build a honey house one-half larger than you think large enough. I would think a building 20x30 feet and 8 feet high inside would give ample room for

work and storing space, and if it is proposed to winter the bees in the cellar, it would be a good place for a cellar under the honey room. A building for this purpose should have screen doors and windows fitted with a simple bee escape, and should be accessible for a team, so that supplies may be hauled to and honey from the apiary. Material and cost of such a building would depend on local conditions.

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Question No. 3.—I am 70 years old, and do not feel like removing the old hive away when swarming. Will you please tell me the best way to work them?—W. M. S., Madoc, Ont.

Answer—If you are producing extracted honey, by giving the bees plenty of super room before they get the swarming fever swarming may be prevented to a great extent. Another way is to divide the colony when they have queen cells started, but it is not a good plan unless increase of colonies is wanted. If they are run for comb honey, the swarms may be hived and placed on a new stand, and any sections that may be on the old colony may be placed on the swarm. When no after swarms are desired the queen cells should be cut out on the seventh, or not later than the eighth, day, leaving one of the best cells to requeen the colony; or a young laying queen may be introduced if a change of stock is desired, after removing all queen cells. If the old colony is still populous, a super should be given them, and they will rarely swarm again the same season.

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Question No. 4.—Is it advisable to keep bees in the cellar as late in the spring as possible if they can be kept quiet?—Peterboro.

Answer—If the weather was fine I would set bees on their summer stands about the time the first pollen could be gathered—about the first week in April in your locality.

St. Thomas, Ont.

R. H. S.

"GREEN GOODS" IN THE BEE-KEEPING BUSINESS.

(By E. G. Hand, Fenelon Falls.)

(Paper Read at the Spring Meeting of the Victoria County Bee-keepers' Association.)

One of the greatest factors in keeping down the price of extracted honey is the "dumping" on the market every fall of tons of stuff which has been produced in such a way that the producer is afraid of it, and must get it off his hands almost immediately, lest it will turn sour or ferment. What becomes of it after it is out of his hands, and he has got his money for it; does it seem to bother him very much? That's the business of the man who bought it, says he. And what does become of it? The great consuming public, with his head full of stories of adulteration, gets a dose or two of this thin, unripe honey, knows there is something wrong with it, but doesn't know what, and naturally thinks he has had a glucose mixture palmed off on him, and doesn't buy any more honey. The result is, the market is loaded with this perishable honey, the people are suspicious of it, and the only way to get them to use it is to cut the price—and there you are.

On the other hand, by producing a good article of ripe honey, the bee-keeper has something he is not afraid of. There is no particular rush about getting rid of it, and if he does sell it outright, the buyer can keep it as long as he wishes without its deteriorating, and when the consumer buys a can of this thick, heavy, delicious, aromatic honey, he knows that he has found the pure thing and scrambles for more at the same price—and there you are (or should be) again.

This isn't theory; it's fact. I know, for I've been watching the working of it from the other side of the fence, and if every bee-keeper would get out of himself and look at this matter from

the viewpoint of the consumer, whose ignorance of the why and wherefore of quality in honey is amazingly profound, he would decide that it would be dollars in his pocket to sell only the best honey he knows how to produce.

And what is the incentive for the marketing of this miserable apology for honey? Many bee-keepers have a crazy notion that they get far more honey this way than by allowing the bees to finish it as nature intended it should be finished. To such a man I would suggest that this season he run half his bees for the production of good, ripe honey and the other half for this scourge of the honey market, and see just how much difference there is in pounds—not in gallons—for honey sells by weight and not by bulk.

The average "green goods" man thinks he catches the honey before the greater part of the water it contained when stored has been evaporated; but if he will take the trouble to read up the reports of the tests made by the chemist of the Experimental Farm, he will find that the extreme difference in water contents between ripe and unripe honey was found to be only five per cent, and in some instances much less. And what reasonable, unselfish man would extract his honey green, to the demoralization of the honey market, on the off-chance of getting five per cent more of a crop?

It is up to all of us who have the welfare of the bee-keeping industry to jump on this green honey business with both feet, and keep on jumping until there is nothing between us and the solid rock of "quality."

NORFOLK COUNTY BEE-KEEPERS' ASSOCIATION.

The Norfolk County Bee-keepers' Association will meet at the residence of the president, Mr. Edward Trinder, Simcoe, Ont., on Saturday p.m., May 27th.

ROBERT EMRICK, Sec.

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The spring meeting of the Middlesex Bee-keepers' Association will be held in the City Hall, London, on Saturday, May 6, 1905.

E. T. BAINARD, Sec.

BRANT COUNTY BEE-KEEPERS' ASSOCIATION.

Brant County Association will meet in the Court House, Brantford, on Saturday afternoon, May 13, at 2 o'clock. Visiting brethren will be cordially welcomed.

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