

...The Canadian Bee Journal

PUBLISHED MONTHLY.

NEW SERIES
Vol. VIII, No. 12.

BRANTFORD, ONT., JUNE, 1901.

WHOLE NO
436

Annual Meeting

Twenty-First Annual Meeting Bee-keepers' Asso., Ontario.

HELD AT
NIAGARA FALLS,
DEC. 4, 5, 6, 1900.

PRODUCTION OF EXTRACTED HONEY.

Paper by Alex. Dickson, Lancaster, Ont.

Mr. President, Ladies and Gentlemen,—I regret not having the pleasure of attending your valuable meeting. Your executive have favored me by asking me to have a part in the program, though unable to be present, I consider it my duty to help on the good work of the association, and at the same time to impart some knowledge on the production of extracted honey.

In the first place—what is honey? It is a sweet nectar gathered by the bees from different plants and flowers which they carry to their homes and store in their combs. When the combs are filled they are taken out by the beekeeper and placed in the extractor where the honey is thrown out by centrifugal force, after which it is the extracted honey. Grading extracted honey into good and bad; we do not get poor honey when the new beginner is too enthusiastic to get a large quantity, or for want of experience in having it canned before it is ripe, which is a great mistake. The

question would naturally arise in the mind of the new beginner—What must I do to secure a large crop and of good saleable quality? Previous to the first of June see that your colonies are in good shape, supplied with young queens the fall before. June having now arrived, watch closely if the bees are beginning to whiten them. If so, put on the upper combs at once with perforated metal between the upper and lower set. Here is the secret of good honey, and no loss of time with the bees. After the first story is filled, raise it up and put another between it and the lower. But you say—Why not leave it until the bees have finished the first, and then extract it? Not so, for while the bees are capping the combs in the raised story they are filling the second set. When the first set is capped from one-half to three-quarters it is ready to be taken to the extracting room. The above is what we call the "tiering up system." There is no loss of time with the bees; you have a better quality of honey, the bees having a better opportunity to ripen it, and further, they are not overcrowded. It is quite evident if you extract your combs before they are capped over you have a grade of honey just as the bees brought it from the blossom, and so, thin, and unripened. In this condition it will be very likely to ferment, and not be satisfactory to your customers.

Now a word or two about our honey room which contains our tanks. It only requires to be large enough to hold the number of tanks you require to use. The roof should be partly glass, and one large window facing the south, above all things be sure that it is bee proof. The tanks should be sixteen inches deep, eight feet long four feet wide, and lined with the best of tin plate. Have your tanks covered with cheese-cloth. It is well to use a strainer made of wire and cheese-cloth under the wire; strain your honey and let it stand to ripen further, for the temperature will run up to about 120 in your honey room, which is a good deal higher than in the hive. While extracting is going on you need to be careful not to leave combs lying around for it may induce robbing. We will presume that the clover and basswood flows are over; at this time you will need to go over all the hives and extract clean before the buckwheat and other fall flowers come in. When the fall flow is over begin to take off the surplus combs at once. I use the bee escapes; put them on in the evening and leave them until next night, and you will find that the bees will be all out by that time. I would not like to be without a bee escape at the close of the season; it avoids all robbing. The last honey that you take off is likely to be dark, extract those combs that are not capped over, and those that are capped reserve for feeding your bees for winter.

When your combs are extracted, put them eight in a box, place them say 150 feet from the yard, not less than that distance and allow the bees to clean them out. Put them out late in the evening and leave them out until the next evening. Begin with three or four boxes the first evening until the bees find their way toward them. You may put any number of

boxes out afterwards. After they are cleaned up they are ready to be stowed away for the winter. Have your tins thoroughly dusted, and label all honey intended for the market; have the tins put up in attractive crates, not rough boxes as many do. It is very important to have your honey neatly packaged. There are many things that might be said on the production of extracted honey, but I would say in conclusion that you cannot lay down any cast-iron rule to go by.

Mr. Newton: We are glad to have Mr. Dickson's paper if we have not got his presence with us to-night.

He mentions good and bad honey. This is a question we should never deal with; we should always place a No. 1 article on the market if we desire to preserve our reputation.

I cannot quite understand Mr. Dickson; he mentions in the first part of his paper about having honey "canned;" I suppose he means "sealed." Further on in his paper he says that he takes off the top stores when the combs are "one-half to two-thirds capped" and that at that time they were ready for extracting. I could not agree with the writer of this paper on that point, because I believe if we want No. 1 extracted honey, we must leave it till every cell is capped, in the extracting super and by the "tiering up system." There is no doubt but what he could have the same quality as is produced in comb honey. I noticed particularly in the discussion this afternoon when the question came up about the quality of extracted honey, that a test asked for comb honey or else extracted honey from combs that had been completely sealed, so as to show the proportion of water in the granules. I know that as far as the beginning concerned, he does sometimes make a mistake in putting out thin honey

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but we who know better should try and inform the novice in the business and try to get him leave his honey in the hive until it is in better shape.

I don't agree with the writer in regard to the honey room. I remember at our last convention we listened to a paper, by Mr. Holmes I think, upon the production of extracted honey.

He wanted a very large room; in fact he wanted a reception room in connection with it. Of course, the majority of us didn't agree with that; we didn't want too many visitors.

We like to have visitors to see that we do our work cleanly and neatly, but we don't want a reception room to entertain our visitors.

We want a place with lots of room to work in; we don't want a ripening tank, because we want that process to be gone through in the hive before the honey is taken from there, and then

we may safely "can" it as we take it away from the extractor, and have no danger of it spoiling.

I don't agree with the use of the escape; I think I can take off

the comb by the use of the bee tent much more quickly than by the use of the escape.

Among bee-keepers there are not many bee tents used in apiaries; if there were more used there would be less robbing, and the work would be finished up in a better shape both in the spring and in the

system.

With regard to cleaning out the combs, I cannot agree with the gentleman;

he just wants to put a few combs out to entice the bees and then usually keep coaxing them on.

There is no trouble about that part; he will find if he puts them out

on a nice bright morning he can take them in the same night, and he will

find his combs are all cleaned without any coaxing about it; at least

the bees find them; I don't know whether other people's do or not.

I quite agree with the writer that we should put our honey on the market in as attractive a form as we can. I believe what pleases the eye goes quite a long way and when a rough article goes on the market it does not sell nearly so well as if it were neat and attractive. Whatever we do, whether in our yard or honey house, let us try to do it with neatness, and let us put our product on the market in the same shape, and I think we will succeed better and receive better returns.

Mr. Hutchinson: Would you mind telling us briefly how you work with your bee tent in getting the bees off the combs?

Mr. Newton: My bee tent is about 5x3 and I think about 5 feet 4 inches high. I just go in, shake the combs, and take them away in a box and shut down my hive. If I were using bee escapes I would put them on in the morning; I think they will go down better when they are active.

Mr. Hutchison: How about the honey being of the right consistency to extract?

Mr. Newton: I believe, if my memory serves me right, it was Mr. Dickson I had a discussion with some few years ago. He claimed he could set them off on the ground here and there and then gather them up and take them in. I told him I couldn't extract my honey that way; my honey would never flow after getting cool. I am sure that you cannot extract honey properly that is sealed over and has stood all night, with a bee escape on, without warming up.

Mr. Gemmell: Not if the night was cold.

Mr. Newton: It would have to be a pretty warm night.

Mr. Heise: Is there any provision made at the top for the bees to escape from the tent?

Mr. Newton : The whole top can be opened when you want it and throws out everything. I use the tent considerably in the case of swarming. If I have two or three swarms, and I don't wish them to go together, I use two or three tents. I just set one tent over the hive where the swarm is issuing and then go to another and so on in that way.

Mr. Evans : How far are your hives apart ?

Mr. Newton : My hives, I suppose, are four or five feet apart.

Mr. Hutchison : You spoke about shaking the bees. Do you shake them off inside of that tent ?

Mr. Newton : Yes.

Mr. Hutchison : If you used the bee escape you wouldn't have to shake them at all.

Mr. Newton : No.

Mr. Hutchison : Couldn't you put on bee escapes and be busy extracting while the bees were getting off ?

Mr. Newton : I meant, of course, at the close of the season when some combs have honey and some have none.

Mr. Hutchison : You have reference to your last extracting ?

Mr. Newton : Just in the fall. The other time when the honey is coming in it is not necessary ; the robbers do not bother any.

Mr. Hutchison : In the fall when the weather becomes cold a bee escape might work pretty slowly.

Mr. Gemmel : Do you really object to a bee escape in warm weather ?

Mr. Newton : I must say I do.

Mr. Gemmel : If you just used one I don't think you would say that.

Mr. Newton : I have a dozen lying around. I will sell them cheaply.

Mr. Smith : They are the wrong kind.

Mr. Newton : They are the best Porter escapes ; that is about as good

as any made, unless Mr. Smith has something better of his own invention.

Mr. Hall : We have forty-one escapes and in extracting honey we do not use them except on the Heddon hive.

Mr. Dickenson : I think we thrashed this question out once before in regard to taking off honey after it was ripe.

I don't want the escapes until the last taking off ; that is, when we are finishing up, when there is danger of robbing, for when the flow is on there is no robbing. It is simply a matter of taking off crates eight or ten or twenty, if you like, at a time. Let the bees go out themselves. I have tried it over and over again and I know how it works and I have no difficulty in getting the honey out of those combs that I take off in that manner when I carry them to my honey house. I endeavor to have my honey ripe. I think I can prove that by the price my honey demands in the markets of the world. I don't know where the difficulty would come in with regard to getting the honey out of the combs. Simply place the crates just at the back of the hive, in a place convenient, and let the bees go out themselves. There are very few bees that you have to shake at all—merely the few that cannot fly—the small young bees that have never been out of the hive before ; you have to take these perhaps and brush them off the combs, but there are a few of them you frequently can take them out and carry them right away.

Mr. Hall : I think I can give you a pointer on extracting honey in large quantities ; I got it from my friend Pettit—the quickest way to get the nicest honey and the most of it. He goes to the hive and so do in the honey flow, with a wheel

row and when we find combs that are capped over we give them a good smoking at the top, pick them up and give them a shake and set them right on. Shove the unfinished ones to one side and fill the balance up with new and empty combs. Then you can pick these combs up and you need not shake them any more for the bees will brush off, and they will not sting. You only need to take the ripe honey, and you can take it very nicely by that process, and you will get it without interfering with the bees at all. I want to say something about the honey room, we don't need a honey room in the honey flow. If you put off extracting until after the honey flow you must have a bee-escape or a tent. I couldn't use a tent because my hives are under trees and there is no room for a tent.

Mr. Coggsall: With reference to the cleaning of combs, I let the bees go into them at once. Just throw the doors open and let them go in, and they clean them out in no time. After we have finished emptying a board, sometimes perhaps forty rods away from any house, if we have to knock up the house we pull down the screen a little bit pry open the door they can get in there, we have, of course, all the honey secured so that they cannot get at it except what is in the combs, these they clean out at their leisure. In taking honey I just go and take it off and put it in a wheel-barrow or cart. I take out empty combs enough to fill the hives and bring back full ones. We do that until we get the hive and take off entirely empty. Three hands will take off an apiary of one-hundred colonies in a day.

Mr. Hall: Do you recommend the evening cans?

Mr. Coggsall: No.

Mr. Hall: I put them immediately

into the packages they are to be shipped in.

Mr. Coggsall: We don't strain any; we use a honey extractor that has plenty of room below.

Mr. Fixter: How do you get the bees off?

Mr. Coggsall: We lift the cushion a little; blow a little smoke in and they are pretty nearly all gone in a minute or so, then we give a little shake. We shake every frame.

Mr. Newton: The quilt comes in handy.

Mr. Coggsall: Most assuredly.

Mr. Gemmell: Do you use a quilt?

Mr. Hall: The idea of asking a decent man such a question as that. (Laughter.)

Mr. McEvoy: Mr. Dickenson uses two supers on top, and when he comes back the bees have taken up the thin nectar and he can shake them off like dry sand from a board. It is the most ready way and with less smoke and feathers than any other. It is the best way.

Mr. Hall: Do you use full sized combs for extracting purposes?

Mr. Dickenson: I come along after half an hour. The crate of honey will stand there till the fighting bees go out. Use a little smoke just to put your hands under. When you come back to get your crates of honey, you certainly have to disturb the combs sometimes, but if there are any bees that are left you put them into a fresh hive.

Mr. Hall: You brush the young bees off?

Mr. Dickenson: Certainly, occasionally.

Mr. McEvoy: Give his plan a trial.

Mr. Newton: He does the same as we do, only he leaves his there waiting for a while, and we attend to ours more quickly.

Mr. Pettit: You just have one super.

Mr. Dickenson: I always use two supers. I wouldn't think of taking off a super of honey unless there is another super under it. I must have two supers.

Mr. Holmes: There is one point in the paper with regard to which it seems to me either the writer has made a mistake or a slip has been made in some way. 120 degrees of heat in our workshop or reception room, if you please. If that is actually necessary to success then I must confess that I am not in it; I couldn't work in that heat.

Mr. Dickenson: And nobody else.

Mr. Sparling: If I understand him aright, he does not work in that room.

Mr. Holmes: That is the reception room.

Mr. Hall: He doesn't wish to have his visitors to stay too long and he gives them a Turkish bath at the start.

Mr. Holmes: That is the difference between he and I. I certainly want to make it pleasant when they drop in.

Mr. Newton: We don't want them to stay long.

Mr. Holmes: Some of us do.

Another point is as to the manner in which he gets his comb cleaned up. If he but once put all his combs out on a nice afternoon and saw what a beautiful picnic the bees made of cleaning them up and then find the bees perfectly quiet the next morning he would discard the notion of putting out a few at a time.

Mr. Chrysler: The matter was mentioned to me of supplying every colony with a young queen each fall. I don't think I would care to do that which would mean to destroy some of my good queens, and besides the

trouble of re-queening my apiary every fall.

Mr. Newton: That question came up as one of our Oxford meetings and we had quite a discussion on the point, and I think we came to the conclusion by vote that we would not discard the queens.

My friend here, Mr. Martin, belongs to our Oxford society. He advocated replacing every year, and I know at our last meeting we had not convinced him any more than we had at our previous meeting that he was not right; and I think if we could have a good discussion on that point that it might probably be interesting and might enlighten him or enlighten the rest of us who belong to the Oxford society and do not agree with him.

Mr. McKnight: Do you think there is any person here who could instruct the people of the Oxford society? (Laughter.)

QUESTION BOX.

At the request of the President, Mr. H. G. Sibbald took charge of the question box.

Question No. 1: What is the best way to keep pollen out of sections?

Mr. Sibbald: I have never had any trouble in keeping it out. It should be started below, before the sections are put on and when they have sufficient room for pollen below then put on your sections. Use a shallow hive. It would be perhaps a good thing to put on a queen excluder.

Question No. 2: What is the best kind of can to ship honey in?

Mr. Sibbald: I think the sixty pound can is the best to ship in. Small packages are more useful for the retail grocers. For wholesale houses I advise large tins or barrels.

Question No. 3: How to run an apiary without an attendant being in place

there all the time?

Mr. Sibbald: If we go through our yards once a week and examine the brood nest we will know in what condition the hives are in; have your queens all clipped, and if there are indications of swarming you have got to look after and destroy the queen cells or else there will be a young queen that will lead the swarm away.

Question No. 4: What about working for long-tongued bees on short-flowered red clover?

Mr. Sibbald: I am sure that either would be all right. I have never tried anything along the line but I hope we will get bees with tongues long enough to reach the red clover.

Question No. 5: How best can the swarming impulse be controlled in out yards without an attendant?

Mr. Sibbald: In controlling swarming I believe in giving plenty of room and in giving it early; do not let them get too much crowded. Give plenty of ventilation. Shade the hive. All these things help.

Question No. 6: Is it advisable to exhibit at Buffalo, New York and Glasgow, Scotland?

Mr. Sibbald: I believe in exhibiting honey and advertising yourself as much as possible.

Question No. 7: If you had an apiary in Manitoba and had no cellar or suitable place for one, what method would you follow to make a success of wintering bees?

Mr. Sibbald: I don't know much about Manitoba, never having been there, only having heard of the climate they have. I fancy if I had not a cellar there I could winter by some of the reliable out-door methods employed here. I don't see why it would not work there just as well as here.

Mr. Fixter: In my case I would dig a pit every time if you can get a place where you are sure the water

won't get into it. I would not attempt to winter the hives above the ground.

Mr. Sibbald: I have heard that in Manitoba the frost goes down fifteen feet.

Mr. Fixter: In one of our winter experiments with the pit I found there was slight change in the temperature but I put a load of horse manure over it and brought the temperature right up. In Manitoba I would be very careful and watch the temperature and if I found it getting down too low I would cover up in that way with ordinary horse manure. In every case see that they have ventilation.

Question No. 8: What is the best material to use for smoker fuel?

Mr. Sibbald: I have always used cedar bark. I have heard of rags, pulp and shavings. Shavings work all right.

Mr. McEvoy: Sometimes you will have to change it. If you get hold of a pretty cross colony take some fine grass hay. It is just according to what you have got. I hold that if you have got an ordinary yard use cedar bark; if you get hold of a cross customer that you want to bring to time, use the hay.

Mr. Holmes: Cedar bark is the most satisfactory I have ever used.

Question No. 9: Is it best to re-queen and how often?

Mr. Sibbald: I believe in re-queening. I re-queen more than Mr. Hall does. He believes in keeping them three and four years. I have always found a larger per cent. of my colonies in good shape that contain a young queen. Perhaps that is a mistake I have been making in not getting the right breed of queens. We will have to work that out and think about it and experiment. Perhaps Mr. Fixter can help us a little on that line.

Question No. 10: Have you ever noticed bees gathering honey from apple tree buds just opened in the spring about two weeks before the blossoms from the same tree are in bloom?

Mr. Sibbald: I have noticed them around buds but I don't know whether they got any honey.

Prof. Fletcher: I am not quite sure about propolis being gathered from apple buds but propolis comes from the buds of trees.

Mr. Chrysler: I have noticed it; it is a small white drop of nectar. It is very sweet and tastes very much like clover honey when on the buds. I have noticed it only one season and on a common apple tree, one of the grafting varieties; I didn't notice it on other trees to any extent at all.

Prof. Fletcher: Prof. Cook mentions about finding in California, trees that had drops of delicious honey on them, which he said were secreted by the trees.

Weak Colonies in Spring—When to Unite Them.

By G. M. Doolittle

When colonies of bees come out weak in the spring, it may be beneficial to put two or more of these weak colonies together, so that one strong colony may be made from several weak ones. Some suppose that if there is any uniting of weak colonies to be done, the earlier in the spring it is accomplished the better the results will be, but from years of experience along this line I am positive that such early uniting is a mistake. If these colonies are left to themselves, the best we can hope is that they will become strong enough in bees and honey for winter; while by uniting just before the honey harvest I secure a good yield of honey from the united colony and get the two in good condition for winter. My plan of work in uniting, and

looking toward this end, is as follows:

As early in the spring as the bees can be looked over, all of the weaker colonies are shut on as few combs as they have brood, by using a division-board to contract the hive. They are now left until warmer weather comes, being sure that all have stores enough where they can conveniently reach them to carry them until this period. They are now built up as rapidly as possible by reversing the brood, etc., so that by June 1st the best of them will have five frames of brood, others four, and so on down to one for the very weakest. As soon as the best has its five frames filled with brood, down to the very bottom corners, a frame of hatching brood is given to one having but four frames, and an empty comb put in its place.

In taking a frame of hatching brood in this way I generally take all the bees there are on it right along, only being sure that I do not get the queen so that all the young bees on this comb help to give strength to the weaker, as the younger bees will not return to their old home.

In a few days a frame of brood and bees are taken from each of these two-frame colonies, and given to the one having but three frames, and so I keep taking until all have five frames each.

Do not make the mistake some do and try to strengthen the very weakest first, for by so doing from one half to two-thirds of the brood will be liable to perish with some cold spell, as these last colonies have at this time all the brood they can properly care for.

By the above plan we are always safe, and advancing warm weather is in our favor also. In a few days after all have five frames of brood we are ready to unite, and if all have

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been done as it should be, the uniting will be done about the time white clover begins to yield honey nicely.

To unite: Go to No. 1 and look the frames over until the queen is found, when this frame having the queen on it is set outside the hive. Now spread the frames apart in No. 2, when the brood, bees and all, from No. 1 are carried and placed in each alternate space between the frames of No 2, closing the hive. Return the frame having the queen on it to No. 1, placing beside it an empty comb; adjust the division board and the work is done. In two or three days, put the sections on the hive No. 2, and see what a pile of honey they will store up. At the same time place an empty frame, having only a starter in it, between the two filled ones in No. 1, and in a few days you will have a frame filled with as nice worker-comb as you ever saw, which is much cheaper than to buy foundation. Nearly all the old bees carried to No. 2 will have returned by this time, so that No. 1 is a splendid nucleus, the best right for building straight worker-comb, and by giving empty combs when needed, this colony will be in good condition for winter, while No. 2 will have given three times the honey the two would have done if left to themselves, or had they been united in early spring.—
American Bee Journal.

York County Association.

The York County Beekeepers' Association held its spring meeting in the council chamber, Markham, on Thursday, May 23. There was a fair attendance of members. Reports of wintering were given by the different members, which were, as a whole, very favorable. On looking over last two numbers of C.B.J. everything seems lovely, but

I am inclined to think that reports on wintering are a good deal like reports of honey crops. We don't send in reports of failures, as readily as we do of successes.

York, Ontario and Victoria counties are represented in our association and I think the losses would average fully 30 per cent. However, clover is very rank and if the weather is very favorable there will likely be a flood flow of honey, which will make amends for heavy winter losses.

Wintering and spring management were discussed in an informal way; most of the members taking part. Arrangements were made re grant to fall fairs and other business transacted.

A resolution was passed asking that legislation be enacted to make it compulsory for manufacturers of spraying implements to have directions relative to "spraying law" attached to all machines sent out; also requiring druggists to label all spraying mixtures sold with the same directions.

The secretary was ordered to send a copy of resolution to the Minister of Agriculture, also to Ontario Bee-keepers' Association.

After a pleasant and profitable time the meeting adjourned to meet again at call of the president. In regard to prospects of honey crop, as I have already stated, clover looks splendid; basswood is very full of bloom, but is being rapidly destroyed this spring again by two worm pests, one resembling that of a caterpillar and the other (the worst of the two) a light green worm about an inch long, don't know what the name of it is; we call it the measuring worm, from the habit it has of doubling itself up when it moves along.

J. L. BYER, Sec'y.

Markham, May 31st, 1900.

ONTARIO
BEE-KEEPERS' ASSOCIATION
THE
CANADIAN BEE JOURNAL

Devoted to the Interests of Bee-Keepers,
Published Monthly by

GOOLD, SHAPLEY & MUIR CO
(LIMITED)

BRANTFORD - CANADA

Editor, W. J. Craig.

JUNE, 1901.

EDITORIAL NOTES.

A number of our O. B. K. A. Directors have very kindly furnished us with reports of matters bee-keeping in their surrounding districts. We hope next month to again hear from them.

Three weeks of very unfavorable weather has interrupted the business of the hives very materially. We trust that this will not continue, as results will be bad; much of the benefits of fruit bloom has been lost.

We thank "Gleanings in Bee Culture" for the friendly editorial notice and picture of the editor of the C. B. J. We hope that the present good feeling may continue to exist between the editors of our Journals.

We note that some of our U. S. railways have been threatening to take the same stand against receiving comb honey that our G. T. R.

has taken. We are wondering if our people, and especially the executive of the O. B. K. A., are not sufficiently interested in this matter to make an effort to have the decision of the G. T. R. altered.

By a very satisfactory clubbing arrangement with that Great Family Newspaper, the Family Herald and Weekly Star of Montreal we are enabled to offer to new subscribers the biggest value yet heard of.

For the small sum of 75c. we will send you until January 1st, 1902 The Family Herald and Weekly Star and the Family Herald's two great premium pictures, "Christ in the Temple" and "Home From the War." The Star is well known to most of our readers as a journal of excellent worth and does not require our commendation. The premium pictures are really works of art, alone fully worth the clubbing price. This offer is open only to June 30th as the supply of pictures is limited and cannot be promised after that date. To any of our present readers we offer The Family Herald and Weekly Star until January 1st, 1902, including the two pictures, for 50c.

An interesting article from Mr. C. Haskins is unavoidably crowded out but will appear in our next issue.

Fortune in men has some small difference made,
One flaunts in rags, one flutters
brocade.—Pope.

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Communications

Editor C. B. J.,

Dear Sir—President, Jno. Newton; Vice, J. D. Evans. 2nd Vice, James Armstrong and Secretary, W. Couse, the Executive Committee of the O.B.K.A., met in Woodstock on Saturday, May 25th, and decided to make an exhibit of honey, wax, etc., at the Pan-American Exposition at Buffalo, to the extent of three thousand pounds of extracted honey and two thousand pounds of comb. It was decided to ask that the extracted be put up in 60-lb. cans, cased, and the comb in dozen crates. The honey is to be shipped to Toronto to the Secretary's address, and then inspected by the Executive Committee as to quality, etc, and any that is not considered good enough to put on exhibition will be returned to the parties that sent it, and the balance forwarded to Buffalo. President Newton was appointed to put up the exhibit in Buffalo and take charge of it for part of the time, and the other members of the executive to assist at different times.

The Secretary was appointed to get out a circular and to send a copy to each member of the association, asking how much comb honey, extracted honey and what variety, wax, foundation, honey vinegar, honey plants and other things relating to bee-keeping each person could send, but as the space for the exhibit is only 300 square feet the committee cannot promise to accept all offered.

It is the intention of the committee to sell the exhibit of honey and to divide the amount of net sales to the parties sending same in proportion to the amounts sent. I will be

pleased to have offers of honey for exhibition, and will give full instructions in a circular as to where to ship, etc.

It was decided that the 10th of July shall be the date that the honey be in Toronto for inspection as the space is being held for the exhibit and should be occupied as early as possible.

I will be pleased to give any information possible to parties wishing to exhibit.

W. COUSE, Secretary.
Streetsville, May 27, 1901.

P. S.—I have been directed by the Executive Committee to get out suitable badges, and to send them to all members of the the O.B.K.A. for 1901, so that any of our members who purpose attending the National Bee-Keepers' Association, at Buffalo, in September, will be provided.

W. COUSE.

A BEGINNER'S EXPERIENCE.

Mr. Editor—When I subscribed for the Bee Journal you asked me to send you an item for publication. For me to contribute to a Bee Journal may seem somewhat presumptuous. I am an old man but a very young bee-keeper. Before I retired from farming I kept a few swarms in box hives, always intending to go into bee-keeping with modern appliances as soon as time would permit, but that time never came until two years ago when I sold my farm. Last spring I bought a swarm in an old box hive. I bought also two Goold, Shapley & Muir hives. I got a new swarm about June 18, which I put into one of the new hives with half sheets of comb foundation in the frames. I then drummed the bees out of the old box hive, took it to pieces, fitted the old comb into the frames of the second hive and got the bees into it.

All went well. In one week the new swarm filled the brood chamber. I then put on a super with starters in the sections and in less than two weeks the super was full of No. 1 honey. I took it off and put on a new super, but got no more honey in it. The old transferred swarm built up the brood chamber nicely, but never started to do anything in the super. The explanation of the sudden stopping of honey storing seemed to me quite plain—the white and alsike clover season was over.

I live in a country which is an unbroken clay flat, 90 per cent. being improved land. Consequently the honey must come principally from cultivated plants. The 10 per cent. unimproved land is principally along the creeks, where native plums abound. This, with plenty of dandelion and some willows, is all that is available for the bees. Then come the white and alsike clover. The white is indigenous on this land, and the alsike is sown by the thousands of acres. Now is the honey harvest. Afterwards not much can be expected. We have no basswood. Thistles used to be abundant, but the springtooth cultivator, the disc harrow and more frequent seeding to clover have done away with the Canada thistle. Golden rod is also getting yearly less. So to make bee-keeping here a success, it seems to me absolutely necessary to have the hives full of bees before clover comes in. The possibilities of the clover season are enormous. I wintered my two swarms in a cellar in which there is a cistern. The temperature stood for weeks about 32. The covers were taken off the hives and a chaff cushion put on, and an old cloth bed-quilt over all. The bees were put out on April 15 in good condition, no mildew on comb, very few dead bees, and plenty of honey. Now Mr.

Editor to the purpose of my letter: Would it have been advisable to feed, although the bees had plenty, and although the spring was exceedingly favorable, fine warm growing weather, and no night frosts? To the experienced bee-keeper all this may appear of no value, but I presume there are more beginners among your readers besides myself who might be interested in the doings of a beginner.

Yours truly,

F. KOSMARK.

Renfrew Co., May 13, 1901.

[Yes, we are interested and pleased to know of your success. We think that you would not have gained anything by feeding under the circumstances. A little judicious uncapping of sealed stores in the spring when there is a scarcity outside is advantageous, but must be done cautiously.—ED.]

BRITISH COLUMBIA.

I am sorry this is a poor bee country, or rather a poor honey country. The trouble is too much bush of pine and cedar, nights too cold, and much too dry in summer. Bees winter well on summer stands, and with care build up well in spring, but store a little surplus honey. Fruit bloom now out full, and my bees are fairly strong, with four frames solid capped brood to swell the number in about a week. I think this condition is about general in the vicinity of Victoria, and I think we may have some honey to show at our fall fair. I was amused last summer when attending an agricultural show at Duncan, B. C., to note the honey exhibit which consisted of one 1-lb. section of comb honey. It was awarded first prize of course.

While making a display of the natural history of the bee a few weeks ago I took the trouble to sort out a lot of wax scales from some

DISTRICT INTELLIGENCE.

District No. 1.

Bees wintered well; spring has been fairly favorable. Considerable robbing has been indulged in. Weather during the past two weeks unfavorable, but grand prospects for clover. Bees in great demand and many bee-keepers are starting new apiaries; everything indicates a good honey season.

W. J. BROWN.

Chard, May 27th.

District No. 2.

White clover prospects good; can't say about the basswood yet. My own bees came out splendidly; some very strong now. Bees generally have not wintered in this section; many colonies have died and others came out weak.

If wet weather continues clover will "scald out" in low places. Weather has been favorable for building up.

J. K. DARLING.

Almonte, May 23rd.

District No. 3.

The month of May 1901 has not been a favorable one for bees in this district. Rain, rain, rain, too much rain. A few days ago I sent out a number of letters of inquiry to bee-keepers scattered over these counties and the answers in most cases showed that the stock wintered fairly well, but quite a percentage of loss in many yards has resulted from spring-dwindling. The losses in the different yards ranging from five to twenty-five per cent. Colonies that have "Weathered the Storm" are, at this date in fine condition and the clover is looking very promising.

Bee-keepers should not be afraid to give a full report of their work from time to time so that all may be benefited by knowing the general honey crop prospects, etc.

M. B. HOLMES.

Athens, May 30th, 1901.

...ne refuse and arranged these, the
...atural scales, into the word WAX,
...ut before doing so I weighed a
...umber on a pair of jeweller's dia-
...mond scales to find out how many
...went to the pound, for I could not
...ind any reference to this in any
...of my many books on the bee. I find
...here are just 192 to the grain and of
...course 1,474,560 to the pound. This
...them may be of interest to some of
...the readers of the C.B.J. In reading
...the April number of the C.B.J. I find
...some doubt expressed as to which is
...the best covering for hives, cloth or
...board. Well, my experience in On-
...tario was, best to use both in the
...proper season; in fall, winter and
...spring use the cloth, and a good chaff
...brush over the bees; in summer,
...when everything is as it should be,
...bees strong, days and nights warm,
...and the honey harvest on, then use
...the flat-cleated lid next the sections
...for extracting frames. I found the
...tops of sections cleaner, and when
...working hard with the bees, found
...the flat lid a great saving of time. I
...would just give it a twist to break
...connections, then lift off. I usually
...and many bees on the under side
...of lid, and when replacing lid on hive
...would reverse it, that is, put
...the inside that was, on the outside,
...and the bees could go home at their
...ease. By this method I had no
...need to brush off, and none were
...killed, for I always slid the lid on,
...and the bees soon made all tight
...again. In the evening I would scrape
...the propolis with a flat piece of
...metal, and all was clean and smooth
...I repeat the operation in a day or
...two; this method was such a great
...convenience that I am a strong advo-
...cate for the flat-cleated cover in
...reference to the gable roof.

E. F. ROBINSON.

Victoria, B.C., May, 1901.

District No. 4.

Bees that were properly prepared for winter came through in splendid condition, but, as many were not so prepared, there is a great mortality in bees with careless bee-keepers. Spring opened up fine and all colonies that wintered well built up very rapidly and at this date the strongest that I ever saw them. Some reported swarms on the 15th May. There has been a very excessive rain fall and prospects for clover are good.

C. W. POST.

Trenton, May 26th.

District No. 6.

Bees wintered well here and the prospect is good for a fair honey crop as there is a better spring of white clover than there has been for the last four years; of course much depends on the weather during the next two months.

J. D. EVANS.

Islington, May 22nd.

District No. 9.

My bees have wintered fine, only losing two out of seventy-five. At the present time I am removing the winter packing and find them in grand condition with lots of honey coming in from fruit blossoms and dandelion. The prospects never looked better for a big flow. Those who neglected their bees last season have had great losses during the past winter.

J. NEWTON.

Thamesford, May 23rd.

District No. 11.

As a general thing bees have come through the winter fairly well; about half in this section very strong. The exceptions were where they were dependent on the fall flow for their winter stores. Large quantities of decayed fruit juice furnished a portion of this, and where there was not sufficient early gathered honey or well ripened sugar stores in the hives,

dysentery resulted and consequently many weak colonies, but they have been building up very fast since April 15th.

Fruit bloom was principally over about May 20th, and has yielded splendidly, notwithstanding some very cold and backward weather. Clover has a better stand and more of it than for two or three years previous. Cannot see why we should not have a good honey crop this season.

W. A. CHRYSLER.

Chatham, May 27th.

District No. 12.

Bees wintered fairly well but dwindled off badly in the spring. I think that the loss will be about 40%. My neighbors have been spraying fruit trees when in full bloom, this may account for some, if not for a great deal, of the losses. I had one man summoned before a Justice of the Peace. He was fined a dollar and costs.

SAMUEL WOOD.

Nottawa, May 25th.

CALIFORNIA PROSPECTS.

The "Rural Californian" says—The bee men throughout Southern California are jubilant over the late rains, and say what otherwise would have been a very light honey crop will now in all probability prove to be an extraordinary good year, barring a few localities. San Diego county, so we are advised, owing to the light fall of rain, will not fare as well as some of the other counties in Southern California, but on the whole this year's output will be very fair. In many places in Los Angeles and Orange counties the bee-keepers are putting in additional storage tanks and engaging such competent assistants as they may be able to obtain. The work of extracting honey is now going on.

ASCENT ORGAN IN THE BEE.

The Scent Produced Forms a Means of Communication Between a Swarm or Colony.

By F. W. L. Sladen, in British Bee Journal.

Last Summer I made a number of experiments with some of the burrowing species of humble-bees, keeping them in artificial nests and taking notes as to the way they behaved from day to day. One nest of "*Bombus terrestris*" I kept under close observation for about three months. Among several interesting things I noticed, one that struck me as being especially remarkable was that I was unable to find no evidence that these bees were able to perceive ordinary sounds, but rather the reverse. The sense of smell, on the contrary, seemed to be very acute, and as humble-bees do not ordinarily emit sounds in their nests, neither can they see [the nest being in darkness underground] it seemed to me likely that they must distinguish objects and one another in the nest entirely by the senses of smell and touch, unless they possess some other sense which is unknown to us. In many of my experiments I have been surprised to notice how keen the sense of smell seems to be in these humble-bees.

I was led to turn my attention to this subject in honey-bees. Many writers on bees state positively that honey-bees can hear, but I have not yet found any certain proof of this. In *Bees and Bee keeping*, by W. B. Doolittle, pages 107 and 108, mentions the "joyful hum" and the "piping" of queens as indicating that bees can hear. I have been told by several bee-keepers that young queens when "piping" in the hive before the issue of a swarm, have been heard to answer one another, but I have not

known them to do this myself. The phenomenon of the "joyful hum" is specially interesting. In the "British Bee-keeper's Guide Book" we read, on page 26, that the "joyful hum of the bees as they enter the hive will entice others to follow." Is it only the "joyful hum" or is there something else that attracts the bees? It was in asking myself this question that I was led last summer to make certain observations and to form a theory of which the following is a summary. If in summer-time a comb be taken out of a hive and the bees on it be shaken off on to the alighting-board, several of them will gather around the mouth of the hive and stand with their heads towards the entrance "fanning" their wings and sounding a peculiar hum. A few dozen such bees have a magical effect in attracting stragglers, and the greater the number of hummers the stronger is their influence over the stragglers and the further does it extend. When humming in this way the worker-bee adopts a certain peculiar attitude. She stands with her head towards the hive-entrance or any other object to which she seems to desire to attract attention of her comrades and she elevates the tip of her abdomen and exposes more or less of a narrow white membrane which is situated at the base of the sixth dorsal segment and which when at rest lies hidden under the fifth segment. It is a noteworthy fact that the elevation of the abdomen brings this membrane specially into prominence, and it seems reasonable to suppose that the abdomen is raised specially for this purpose. It is also remarkable that when bees are "fanning" merely for the purpose of ventilation, as they do at the mouth of the hive on a very hot day, this membrane is not, or, at most is scarcely exposed.

In the light of the above and other

facts that I have observed, it suggested itself to me last July that this membrane may contain scent glands, and these, when the membrane is exposed, are stimulated to produce a certain scent which the fanning of the wings helps to distribute, and which forms an important means of communication, by attraction, between the members of a swarm or colony.

One may frequently see a few bees standing on the alighting-board of a hive humming and protruding the above-mentioned membrane, especially during and after a general flight on a warm day in spring. If these are watched it will be noticed that they cease humming occasionally and walk a few steps nearer the entrance, where a halt again is made, and then the protrusion of the membrane and the humming are recommenced with greater force. These actions are continued alternately until the bee often only finally stops them far inside the entrance. This process is evidently not for the purpose of ventilation. It is apparently the instinctive action of any bee that has, after more or less difficulty, found the entrance of her hive, and while it is evidently an act of pleasure, it also answers the far more important purpose of indicating the position of the entrance to others outside who may be still searching for it; and thus the one or two bees that "call" may be the means of guiding into the hive hundreds of their comrades that otherwise might have perished outside. It is interesting to note that when a far larger number of their comrades are in search of the hive-entrance, as in the case of a swarm, the "calling" instinct is much more easily excited, and its effects are more marked than at other times. One instance that came under my notice when I first suspected the function of the above-mentioned membrane, last summer, struck me as being very re-

markable, but probably many beekeepers can recall similar experiences. A large and restless double "cast" was hanging near the ground in an old quick-hedge behind my apiary. The bees had "balled" two or three, if not all, of their queens, and seemed very excited. I did not know from what hive the swarms had come, so I fetched an old fertile queen I happened to have in a cage, and held the cage to the swarm. Twenty or thirty bees immediately gathered on the cage and set up the well-known "joyful hum," protruding the before-noticed membrane to its fullest capacity. I then tied the cage, with the bees on it, up in the skep, which I placed on a large board on the ground close by, and shook a few bees on to the board. These also started humming vigorously, even one of them, and raising their abdomens they protruded to the utmost the membrane. I remember being struck with the fact they did not immediately run into the skep as one would have expected; but they all stood still, clearly for the purpose of attracting their comrades composing the cluster. But this is not the point I wish to illustrate. As soon as the bees on the board began "calling" the whole cluster, though over a foot away, was visibly affected, and the bees began rushing together, forming "points" in various directions. One "point" was formed in the direction of the ground, and the bees at this "point" (which was nearest the board), became more excited than those at the other "points." The "point" quickly extended down the tree and along the ground until it was only a few inches from the "calling" bees on the board. The bees at this "point" then began to "call" too, and presently the magnificent spectacle presented itself of a broad stream of bees pouring pell-mell in the great

est hurry and excitement down the tree, along the ground, and up the board around the skep. Of course, there were now thousands of bees "calling" on the board around the skep. I put my nose down close over this mass of "callers" and I certainly recognised a somewhat pungent odour, which, though not unknown to me in my bee-work, I had never before smelt so strongly. It seemed to bear a faint resemblance to the odour of formic acid made, by a nest of 'Formica rufa' (the large red wood-ants) when disturbed. I was unable to say for certain whether this odour was produced by the membrane in question, but I need hardly say I strongly suspected that it was.*

It is difficult to make bees "call" unless they are put near a queen or the mouth of a hive to which they belong, or want to belong. This is easily illustrated. Pick up a half-chilled bee from off the ground near the entrance of its hive and place her on the alighting-board. She will crawl aimlessly about for some time, but directly she seems to find out that she is at the mouth of her home she is almost certain to stand still and "call." Except in a case like this bees seldom "call" alone. "Calling" is infectious; when one begins all those near her are inclined to take it up if they are sufficiently animated. This is well illustrated by keeping a queen with a few attendants in a cage for some time. At intervals a large number of bees will hum and protrude their membranes.

Bees that were brought into my honey-house on combs, where they clustered in knots on the benches near the windows, under certain circumstances set up a "call-note" without possessing either queen or brood. The "calling" was quickly taken up by

those bees that were standing close to those that commenced "calling," and that were too far off to join in the "joyful hum" were quickly attracted by it to the spot.

(TO BE CONTINUED.)

* On March 13, after the above was written, while dissecting the abdomen of a bee, I perceived an odour which I at once recognized to be the same pungent odour which I smelled last summer in hiving the swarm and in the experiment with the queen mentioned. I immediately separated Nasonoff's membrane, with as little of the connecting tissue, as possible, and placed it on a piece of card. I placed the whole of the rest of the abdomen on another card. The card with the membrane on it gave out the odour strongly for some minutes but the card bearing all the rest of the abdomen (the sting had been removed) produced no perceptible smell. I repeated this striking experiment with another abdomen, and the result was the same. To my mind this experiment practically proves the theory stated in the early part of this paper.—F. W. L. S.

OUT APIARIES.

(Third Article.)

G. A. Deadman, Brussels.

Managing an out apiary so as to have no natural swarms, is practically the same as the home apiary without swarms, excepting that in the home apiary the work does not require so much forethought to avoid extra labor in going to and fro to attend to some small matters that might only require but a few minutes. To make an out apiary profitable the work requires careful planning, otherwise if you reckon the time spent in going and coming you may find at the end of the season that too much has been spent in this way. If your out apiary, however, averaged you \$10 a day for the time spent there, I should judge that you either have a good locality or have wisely planned your work, or both. An apiary of this kind is excellent for figuring up the profits in the bee business, as it is a very easy matter to keep a record of the number of trips taken and the time occupied with each. As stated in a former article we purpose discussing an out apiary so managed as to have no natural swarms. The two ways previously described are practicable

but I am not satisfied with either. The plan I propose adopting this year is the same that I carried out in the home apiary last season when I did away with swarming entirely. You may call it artificial swarming, but while it answers the same purpose, there is no swarming about it but simply prevents it. The frame I use is the same depth as the Gallup but $1\frac{1}{8}$ inches longer. The hive accommodates twelve of these, running parallel with the entrance. An ideal colony should have at the beginning of the white clover nine or ten frames with brood and the balance with honey. Now it is a well-known fact that if you wish to prevent swarming, you require to put on the supers for extracted or comb honey before the bees get the idea of swarming at all. Don't wait till the white clover is in bloom, but rather have them on some days before. If you have cleaned sections they are about on a par with extracting combs for accomplishing the end in view. Now if your supers have been on in good time you need not expect any swarms for at least one week after clover begins, unless perchance at the close of fruit bloom, but then this can be prevented also by having the supers on early, except in occasional instances when colonies are exceptionally strong. These I would examine to see if they were preparing for this event. About one week after white clover has begun to bloom and the bees have started in the supers, I take out five or six frames of brood and bees, selecting those which have the most sealed brood, and in their place I put as many frames with foundation. I go to another hive and do the same thing, the number of frames I take away depending on the strength of the colony, not more than seven nor less than four, but usually five or six. These I place together in one hive on

a new stand, filling up the space, if any, with a division board. The queens of course are left in the old hive, and a queen cell given to the new colony, or they are allowed to raise a queen of their own; the latter is preferable because if you do not want their queen to hatch you can examine in nine or ten days, destroy, and give them one you prefer. It keeps them so much longer without a queen, which is better, unless you have a fall flow of honey; but even then I think I would rather get more clover which you certainly would. If your queen cell is within a day of hatching, and none on the frames of brood you took out, then it would save time to give them one. In any case, however, it would be safer to leave them for nine days, and then either examine as stated before, or move to a fresh location and let all the flying bees go into the adjoining hive. If you purpose doing this you should place your new hive as close to one of the old colonies as you can. By this plan your increase is one for every two. If you do not desire increase you can unite in the fall; with this in view I would place them along side of the old colony when making the division. At the end of nine days move to a fresh location, and by means of a perforated division board give the queen access to say one-half the number of frames. You will then have more honey and less bees. If your colony is well started in the supers, the probability is, that it will be some time before all the foundation will be drawn out, and in some cases they may be so intent in storing in the super that they will neglect it. If the colony is preparing to swarm before you begin, you must be careful of course to destroy all cells that are started. There are other matters in connection with this subject that will leave for another article.

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Devoted to the Interests of Bee-Keepers,
Published Monthly by

GOULD, SHAPLEY & MUIR CO.

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BRANTFORD, CANADA.

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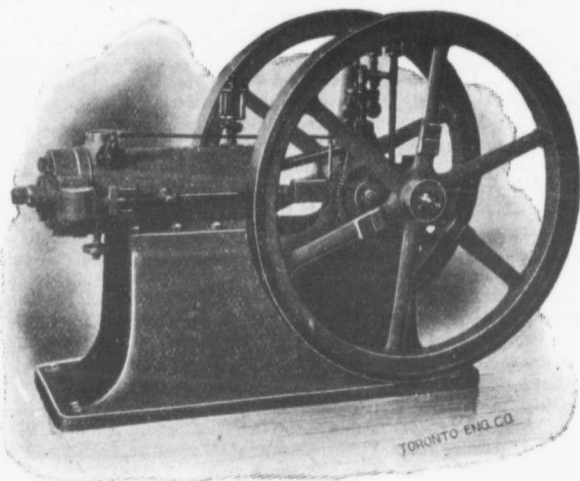
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