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# CANADIAN BEE JOURNAL

PUBLISHED MONTHLY.

NEW SERIES  
Vol. III, No. 10.

BRANTFORD, ONT., APRIL, 1896.

WHOLE  
No. 374

At the present date of writing, March 11, the Senate is struggling with the merits of the amendment to the Adulteration Act, which Dr. Sproule, M.

## Pure Honey.

P., has so successfully championed in the House of Commons, and for which we feel sure bee-keepers' and fruit-growers who are interested in the keeping of bees to assist in the fertilization of flowers, will be grateful. We sincerely hope that the Senate will pass this measure, which is of importance not only to the class mentioned above, but will influence the reputation of Canadian food products at home and abroad.

Above bill passed Senate March 24th.

We have decided to offer four prizes for the best articles on any subject having a practical bearing on the work of the apiary, also the marketing of

## Four Prizes.

honey. The conditions are as follows:—The article must be marked

prize competition. Only one side of

paper must be written upon. The

name of the writer must not appear on the

article, but must be enclosed in a sealed

envelope and sent with the article for con-

sideration, which is not to exceed 1200 words.

All articles for competition must reach

the office of THE CANADIAN BEE JOURNAL

on or before May 12th, 1896, and they become our prop-

erty. The prizes will be as follows:

1st. \$7.00 in goods or \$5.00 cash.

2d. 5 50 " " " 2.50 "

3d. 3.00 " " " 1.75 "

4th. 2.50 " " " 1.25 "

Should the success of this competition warrant it, we are likely to offer another series of prizes in the future. A list of the prize-winners will be sent to all the competitors.

Stringy Bark (what a name!), in The Australian Bee

## Experience Required.

Bulletin, says that "a lecturer is engaged by the Government and sent throughout the length and breadth of the colony telling people that enormous profits are made at bee-keeping; also that no skill or knowledge is necessary and no capital is required, and thus creating very wrong impressions as to the industry. Again, I say, there is plenty of scope for those who may think of entering into bee-keeping, but, I say, do not lead anyone into the belief that a livelihood can be earned at it without either knowledge or experience." We fully concur in the above opinion. Bee-keeping better develop more slowly and along legitimate lines. In Canada much harm has been done by circulating the idea that it required neither time or experience.

In The Deutsche Illustrierte Bienenzeitung a correspondent gives it as the

## East or West.

experience of an extensive bee-keeper, that the entrance to the east do better than those to the west. The experience is based on a large apiary, of which half the entrances face east, and the

other half west. It also covers many years. The editor, Mr. Gravenhorst, who has a world-wide reputation as a bee-keeper, in an editorial foot-note gives the preference to the entrance facing east.

\* \* \*

In Germany, and, we believe, in Great Britain and Ireland, it is quite customary to move bees, for better pasture they "wander." In Canada this has been practiced but little;

Moving Bees  
for  
Pasture.

it may, however, yet become customary. Better facilities for shipping bees and better express and freight rates would assist much in this. To the specialist, in many localities, moving apiaries to favorable localities may have decided advantages.

\* \* \*

The Department of Agriculture, Washington, deserves great credit for having issued that excellent and instructive work, "The Honey Bee." Everything points in the direction of a great development of bee-keeping, and this, with the development of dairying, leads us to

The Honey  
Bee.

believe that before the close of the century more than one land shall flow with milk and honey. In the work referred to, the first subject taken up is "Classification of the Honey Bee—the Different Species and Races." The common East Indian honey bee, *apis indica*, is reported as gathering very little surplus and being very small. The Giant East Indian honey bee, *apis dorsata*, is spoken of at some length. The writer, Mr. Frank Benton, says "he visited India in 1880-81 for the purpose of obtaining colonies of *apis dorsata*." And, again, the execution at that time of the plan of bringing these bees to the United States, was prevented only by severe illness contracted in India." We think Mr. Benton is mistaken. He was then working in connection with D. A. Jones, Beeton, and had gone to the East in Mr. Jones' interests. The impression he con-

veys is wrong, and he means bringing the bees to Canada. It was Canadian enterprise to which the eyes of the apicultural world was turned. But, to pass on, *apis dorsata* is spoken of as being much larger, and more easily handled, taking up quarters in hives without objection. Again, Mr. Benton says:—"Should these bees and the common East Indian Bee (*apis indica*), previously referred to, visit in the main only such flowers as are not adapted to our hive bees, their introduction, wherever it could be made successful, would, without decreasing the yield from other hive bees, add materially to the honey and wax production of the country. We certainly see no objection to the importation and judicious testing of the above bees; in fact, such an undertaking should be commended, but if in the above, it is the intention to convey the idea that these bees in one case being able to utilize blossoms with short carolla, or rather the distance shorter to the nectar, and in the latter case they can reach the nectar when the distance is longer, and therefore they will not interfere with our present bee *apis mellifica*, there is surely a mistake here. The larger bee, especially, in a poor season, is likely to interfere with the smaller.

Passing on to *apis mellifica*, our common bee, the Egyptian Syrian and Palestines, are condemned as inferior in temper and wintering qualities to the races of bees already here. The Tunsians, for similar reasons, are condemned also because they are great collectors of propolis, and he very justly condemns the idea of trying to sell these latter under the name of "Punic bees."

Of Cyprians, Mr. Benton says "they have produced the largest yield of honey on record, from a single colony, in this country—1,000 pounds in one season. Everyone who has fairly tested these admit their wonderful honey-gathering powers and their persevering courage in their labors, even when the flowers are secreting honey but scantily. They winter well and defend their hives against robber bees and other enemies with greater energy than

any other known race. When storing honey, Cyprians fill the cells quite full before sealing, and thus the cappings rest against the honey, preventing a semi-transparent and 'watery' appearance, which is undesirable. They are extremely sensitive, hence easily angered by rough or bungling manipulations; and when once thoroughly aroused, are very energetic in the use of their stings. These faults have caused a very general rejection of Cyprians, especially by those who produce comb honey. Even the producers of extracted honey do not seem to have learned how to manipulate Cyprians easily and without the use of much smoke, nor how much more rapidly they could free their extracting combs from Cyprian bees than from Italians." Again Mr. Benton remarks: "It would be easier by selection in breeding to reduce the faults of this race than to bring any other cultivated race to their equal in the other desirable points."

Then follows a minute description of these bees, which should be valuable. But, while recognizing that Mr. Benton should be in a position to know the traits of the Cyprian bees, he was sent out there by Mr. Jones, and had a somewhat extensive experience, yet we were at the time a student with Mr. Jones, and the Cyprians he sent to Beeton were difficult to handle, so easily aroused that a careful bee-keeper could often not control them. They were very prolific, and the result of their labors went in the direction of bees rather than surplus honey. One colony gathering 1,000 pounds of honey may be correct, but that even number and the size gives it a suspicious look. One trait Mr. Benton has not mentioned is the large number of queen cells they build. The only time we like to have the Cyprian or their crosses in the apiary is when we want queen cells. We doubt if there is a half Cyprian bee to-day on the American continent, and they certainly were received with open arms. Why then so universally discarded? Mr. Benton prefers Italians to the common brown or black bee. Of Carniolans

Mr. Benton says "These, the gray bees from the elevated Alpine Province of Carniola, Austria, are the gentlest of all races, and as, besides their other good qualities, they winter the best of any, it is not surprising to see that they have steadily grown in favor. Their sealed combs are exceedingly white, as they do not fill the cells so full that the honey touches the capping, and they gather little propolis, qualities highly appreciated by the producer of comb honey. They are quite prolific, and if kept in small hives, such as have been popularized of late in the United States, are somewhat more inclined to swarm than the other races introduced here. This tendency becomes more pronounced when they are taken in a country whose summers are hot, like ours, and they have been bred for centuries with only slight introduction of outside blood, in a climate where the summers are short and cool. Moreover, the practice in Carniola is to place the long, shallow hives used almost exclusively there in beehouses, and side by side, one above the other, with intervening air spaces, so that at most, only the front ends are exposed to the sun. This management, long continued, has doubtless tended to develop and fix more or less permanently in this race certain characteristics which should be taken into account in their management elsewhere."

We think the above an excellent description of the traits of the Carniolans, and we think with proper management the Carniolan bees are yet bound to come to the front.

After speaking of the natural history of the bee, Mr. Benton passes on to the manipulation, and gives some very good hints in this direction, which can also be found in any good standard work on bee-keeping. His advice to beginners to begin in spring, to buy good colonies only, even if they cost a little more, is good. He condemns too much shade, which might produce dampness.

We have lately been studying German and French Bee Journals, and are surprised to find that so many in these countries hold

#### Foul Brood.

the idea that foul brood develops spontaneously. Germany and France are countries which have brought out our best bacteriological information, and they are a people fully aware of all the arguments that we have in opposition to this theory. It certainly would be interesting and important to have a solution to this to this question. If McEvoy should be right in his claim that it may develop from chilled brood, the province will not be large enough to hold him. But, Mr. McEvoy, please remember for the present take the safe ground, and keep quiet about it. Howard may be right, after all.

\* \* \*

Prof. A. J. Cook is already having an influence upon bee-keeping in California.

The following is from The American Bee Journal:

**Legalized.** "The Anti-Honey-Adulteration law of California has been referred to in these columns several

times recently. Mr. C. H. Clayton, of Lang, California, on July 1 wrote me as follows concerning it:

Referring to the editorial on Page 412, "Against Honey Adulteration," I take the liberty to send you a copy of our law on the subject. I think it will prove of interest to all the readers of The Bee Journal. There was another anti-adulteration law passed at the same session of the Legislature, which embraces in its terms all articles of *food* and *drink*.

C. H. CLAYTON.

The "copy" of the law kindly sent by Mr. Clayton reads thus:

**CHAPTER CIV.**—An act to prevent the sale of imitation or adulterated honey, and to provide a punishment therefor. (Approved March 26th, 1895)

**SECTION 1.** Any person who, by himself or an agent, sells, or offers for sale, or in any way disposes of, any substance or composition of the appearance of honey, or which in color, consistency and taste, resembles honey, but is not honey—the natural product of the bee, or a pure extract therefrom—upon the representation

or claim or pretence that the same is honey, or a pure extract therefrom, is guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of one hundred dollars, or by imprisonment in the county jail for three months, or by both such fine and imprisonment.

**SEC. 2.** For the purpose of this Act, "pure extract of honey" is honey extracted from the comb without the addition of any other substances.

**SEC. 3.** This act shall take effect and be in force from and after its passage.

Now if the California authorities will see to it that the above law is strictly enforced, the adulteration of honey in that State may soon be a thing of the past. Other States would do well to have a similar law enacted, then, with proper enforcement of them all, the conscienceless adulterators of honey would soon be driven out of their nefarious business."

The above just legalizes as honey everything that is stored by the bees, and if the bees can be induced to store glucose, glucose will become honey. Of course, this is in accordance with Prof. Cook's idea, but we predict it will not enhance the reputation of the California honey, although it may legalize the sale of sugar syrup as honey in California.

#### Foul Brood.

Wm. McEvoy.

At the Bee-keepers' convention held lately in Brantford, Mr. Evans raised the question by asking: "Should not the public be made acquainted with the fact that a person has foul brood." I replied that it would hurt the bee-keepers' business long after their colonies were cured, if that was done.

Mr. Calvert said Mr. A. I. Root published in his own paper the fact that he had foul brood, and it didn't harm his business in any way." Mr. Root is a manufacturer of bee-keepers' supplies, with a world wide reputation for turning out first-class stuff, and that made his case quite different from the bee-keepers that have to depend upon the sales of their honey and bees for what they make out of the business.

Mr. McKnight said:—"I do not think that our inspector should publish to the

world that any man's apiary is rotten with foul brood." I agree with Mr. McKnight that the word "rotten" was too strong a one to have used. Mr. Clarke's apiary is the only one that I ever published as having foul brood, and Mr. Clarke was the first to go into print on this subject about his apiary having the disease, and not me.

I have at all times strongly opposed the publishing of the names of those that had foul brood. Mr. Pringle said: "If you publish the names of those who have foul brood, it would be in your annual report, and at that time the publication would do no good, and a great deal of harm because the very man that would be published as having foul brood, would have got rid of it by that time."

Everyone agreed with Mr. Pringle when they heard his explanation.

Mr. Holtermann—"I do not think it would be advisable to publish the names in the journals." Mr. Holtermann is willing to publish anything in THE CANADIAN BEE JOURNAL that will be of help to the beekeepers, and he always does do that. But when he sees that things can't be arranged any better along this line than they now stand, he is right in thinking that it would not be advisable to publish the names of those that had foul brood. Nothing would be gained by the publishing of the names because it would lead to the concealment of the disease.

Mr. Frith said: "For the good of the association I think it would be unwise to publish the names." I agree with Mr. Frith, and know that it would be a great mistake to publish the names of those that had foul brood.

Mr. Evans: "I am continually buying bees," and I ought to know by some means where I can safely buy." Mr. Evans' question was one of the most important ones ever put to any convention, and I agree with him that he should know where he could buy bees safely, and so should every man that buys bees. I know of many heavy losses through the buying of colonies that had foul brood, and I have had some very large cases to settle, amounting to hundreds of dollars through the sales of foul broody colonies that neither the buyers or sellers knew of being diseased at the time of sale. Every man can buy bees safely and be saved from all trouble and loss if he will only write to Mr. R. F. Holtermann, the President of the Ontario Beekeepers' Association, to have me sent and examine the colonies before he buys them, which will not cost him anything to get done. Mr. Holtermann and I won't mention at any time who reports any apiary

for inspection, so that no one need warn us against that. We will go in for the curing and managing of the whole business in the most peaceful manner, and for the good of all.

Woodburn Feb. 15th, 1896.

## FROM MARINUS BACHMAIER- EGLFING.

### Some of the Questions Brought up at the Bee-Keepers' Congress in Paris, France.

(Translated.)

1. Are the artificially reared queens just as good as those reared under the swarming impulse?

Ans. The artificially reared are just as good when the colony is strong, and has plenty of young bees, the warmth of the hive must also be sufficient to allow the older bees to gather stores. When the artificially reared queens are inferior to those reared under the swarming impulse, the reason is in most cases that they are reared too early or too late in the season, or that the colony was too weak. Again by artificial rearing it is important to see that the old and young bees are in proper proportions, the older bees never take as kindly to the rearing of queens as do the young.

2. What is the best method of preventing after swarms?

In this case no unanimous answer could be given, as every one did as he saw best. Aside from the cutting out of queen cells, artificial swarming and a queen cell given, was suggested-cells that would hatch in about two days. The changing of the new hive on the old stand would give good results, and also good results as to honey.

3. What influence has the soil upon the quality and quantity of the honey?

The opinion offered led to the belief that a limestone bottom had a good influence. Abbi Combes said he had two apiaries, one in a limestone district, the other in a slate district. From the latter he had much superior honey, and also more of it.

4. Are wood or straw habitations best for the bees?

Here opinions varied. While one side praised straw, the other side maintained that there was no difference, at least not when the wood was covered in winter with a straw mat. All came to the conclusion it would pay to conduct further experiments in this direction.

6. How much does a colony require from April 1st to May 15th in case they fail to be able to gather honey? Abbi Boyer knew of an instance in which one of his colonies lost 15 pounds, from 15th March to 15th Mays. A definite reply was not given to the question.

7. Is it the mother or the cell which has the greater influence on the size of the worker bee?

This question was asked to assist in solving as to whether it would be possible to get a worker bee of larger body and consequently longer tongue, so that the bees would be able to work on red clover. Mr. Legros claimed that already various tests have been made to cross *Apis dorsata* with our bees, so far without results—races will hardly cross kinds and families only—he had for five years, in various colonies put foundation with larger sized cells, viz, 6.4 m m (the ordinary worker cell measures 5.2 m m, that of drones 6.6 m m). In regard to tongue measurements he had found that the bees in these colonies had an average length of tongue of 7.5 m m, while the others had a length of only 6.5. He had undertaken this work at the solicitation of the late Prof. Harnet, who held that it was possible to improve our present race of bees by the above methods. The Congress thought it would be worth while to conduct further investigations along the above line. M. Julien made the claim that such bees as flew regularly to hether had longer tongues than others.

8. Which is the best method of introducing a strange race of queen to a native colony?

Method of M. Bellot. The colony must be made queenless, instead of brood removed, and the queen given in a cage. After two days, or with foreign races three, at sunset the cage door partially opened and a cork of sugar and honey put in the opening. Through the operation great care must be taken particularly when honey is not coming in freely.

Du Chatelle claimed, to shake the bees from several combs of the queenless colony at the entrance, sprinkle the new queen and the bees with sugar water and let all run in together.

The Congress came to the conclusion that success under no circumstances was assured, the fact was also to be considered that such resulted in the crossing of the bees, to say nothing of the danger of foul brood.

10. Is it a practical principle that two or more colonies with the brood chamber separated by a screen, which in consequence

have the same warmth and odor, can work in a common surplus honey compartment? Ans. Yes.

Does such a method give any advantage in securing honey, and in what respect?

The answer to this question was left for investigation until next Congress.

After the close of the above was brought up the world wide lamentations over the adulterations of honey and wax, and not to be forgotten the demand for state aid by means of Duty, Law and money in aid of the advancement of bee-keeping. Mr. Crousze remarked that in Belgium there was a law to forbid the sale of impure honey and impure wax.

### Something from British Columbia.

I have been intending to write a few lines on bee-keeping out here, but was waiting till the end of the season so I can report what shape the bees are in, for winter bee-keeping here, like any other part of Canada, is not a sure thing every year, though, I think, more than most other parts, on account of the moistness of the climate, there is generally plenty of flowers, if the weather is favorable for bees to work. That has not been the case this year, for it has been a very poor summer for bees, but good enough for anything else. I had fifty colonies in the spring, and they have doubled by natural swarming. The most of them are well filled with honey and in good shape for winter, but I only got 400 pounds of extracted honey. There was too much cool, cloudy weather, that only bee-keepers know is no good for bees to gather much honey. The bees commenced this year to gather pollen on February 1st. Honey comes from the different kinds of maple. In May the white clover is in bloom. That lasts all summer, but the honey comes in more quickly in August from a flower we call prairie queen. It is a large purple flower that grows on swampy and peat land. The honey is nearly as good as clover honey. As for wintering bees here, the best way is to put them into a good winter case packed with chaff. I have wintered them that way and they have come out in good shape; but they generally come on all right just left on the summer stands, for the winters are very light.

I will not write any more this time to take up your valuable space.

THOMAS W. COVERDALE

Chilliwak, B.C., Sept. 8rd, 1895.

## Robbing—Some Valuable Hints.

—J. W. Sparling.

In complying with your request to answer Beginner's Queries, "How to Stop and Prevent Robbing," I'll take his last question first.

To prevent robbing, keep all the colonies strong. Do not allow a colony to remain so long queenless that they will run down in bees. Keep the entrances of weak colonies and nuclei contracted in times of dearth, and do not leave honey exposed at such times. Should you inadvertently do so, do not take it all away; leave a little for the bees to work on; then when they have cleaned this up they will gradually leave the spot. More trouble is caused by this than any other one thing: Bees get started on some honey; it is all taken away; then they attempt to effect an entrance into the hives adjoining, and should any of these be weak, robbing naturally ensues.

Should such things occur and should you remove the hive, do not forget the caution just given: leave a hive in its place, with a comb or two containing a little honey for the robbers to clean up, and it is very unlikely that any commotion at all will ensue; it is well, as a precautionary measure, to contract the entrances of adjoining hives somewhat.

If robbers have got thoroughly started at a hive, 'tis a difficult matter to do much for them. This is a case where an ounce of prevention is worth a pound of cure. It may be heterodox, but I'm not sure but that you might as well let them finish the job, for if they are left to clean out the hive without the apiarist's interference, there is not apt to be any further trouble. You might save them if you could take the hive to another yard some distance away. Even if you were to put them in the cellar for a couple of days, as some recommend, the attack would very likely be renewed when they were returned to their old stand. A plan which has been frequently recommended is to change the hives, putting the robbing bees on the stand of the robbed and vice versa. Another plan is to pile hay or straw in front of the hive and keep it wet with water; it has also been recommended to use diluted Carbolic Acid on the straw.

In conclusion I would suggest to Beginner should he find it necessary to examine his

bees at a time when they are not gathering, to do so in the evening, when they are about done flying.

Bowmanville, Feb., 1896.

## Those Medals.

—George Wood.

Kindly let us know through the Journal what is the latest information in regard to the World's Fair awards, as I have heard nothing since what you had in the Journal last Spring, when you said you intended to keep your readers posted in regard to the matter. My own opinion is that the Yankees will never pay their debts if they can get out of it.

At the Indian and Colonial Exhibition in London a few years ago, if I am not mistaken, each exhibitor received a commemoration medal and diploma, and that without any necessary delay, but the people who claim to "beat all creation" will not give the awards to those who won them in fair competition, or so it seems; as the "big show" died over two years ago, and still no prizes have shown up. Give us the reliable business methods and honesty of Old England in preference to the "Spread Eagleism" and tricky ways of our neighbors to the south of us.

Last season was the worst for bees that I have experienced; no increase, and I fed 300 pounds more than I extracted, and have twelve colonies less than a year ago. I have still a little of my honey left (people are too poor to buy), and wintering 80 colonies. Speed the "good time coming."

Erasmus, Dufferin Co., Ont.

[It is certainly unfortunate that the World's Fair medals and diplomas have not been given. It is a reflection upon its management. Of course, the United States government has nothing to do with the matter. We have heard nothing more about the medals.—Ed.]

## Query.

Have you ever been able to overcome entirely the trouble or found the real cause of the combs in the outside sections of a half story not being filled out and filled with honey as quickly and completely as those in the centre of the half-story.

[Will some of our contributors please answer.—Ed.]



### Danger to Bees in Cellars.

I want to tell the readers of the Canadian Bee Journal how nearly I came to smothering the bees in their winter quarters to-day. My honey house is directly over my bee cellar, in which I have an ordinary common stove, connected by pipe with a chimney. I have a brick furnace in the bee cellar for occasionally warming it up a little in very cold weather, also for ventilation. This furnace is connected by a stove pipe with the pipe from the stove in the honey room above. Usually I leave the doors to the furnace in the cellar open, and a great deal of moisture is drawn out through the furnace and pipes, thus affording excellent ventilation. Whatever Mr. Dolittle may say about moisture in cellars, long experience has taught me I want just as little of it as possible. I also want a very little fresh air during winter. With these conditions and wholesome honey I have never failed to winter my bees successfully. For the past three or four weeks we have had extreme cold weather, and deep snow. To-day being moderate, I concluded to do some work in the honey room, where there had been no fire for over three weeks. I noticed a good deal of frost on the inside of the stove but by throwing in a lot of shavings and dry kindling I soon had a great smudge. Some how the chimney that usually had a good draft utterly refused to operate. After fanning the fire a while, thinking the frost in the chimney would soon thaw, I began to feel some concern about the 165 hives of bees in the cellar. The water was running down the inside of the pipe, and out of the pipe hole in the chimney in great shape, and the smoke was poring out at every joint. I had not intended to open the cellar at all, as there was a good deal of snow to shovel away to open the cellar door, but as the smoke was stifling in the honey room, I feared that some smoke might have penetrated to the bee cellar through the pipe coming up from the furnace. I was not long in getting into that cellar, and when I opened the door I was driven back by the dense smoke pouring out at the furnace doors. You may be sure I shut those doors tight, and opened the outside doors wide. The bees had set up a great roar, but as soon as the smoke had cleared out a little they settled back into a normal condition. A little examination soon convinced me that no great harm had been done. But suppose I had been less mindful of the welfare of the bees, or some careless or ignorant person had started that fire, what would have been the result? Perhaps you would say that it was a faulty

arrangement of pipes, and that I ought to have known better than to try to force smoke through a chimney filled with frost and snow. Well I will know better next time.

This incident shows how careful we should be in all our operations. Once I came near burning my workshop and barn, by letting a lot of beswax boil all over the stove, and getting afire. It seems that some of these things each must learn for himself by actual experience. Of course we kind of hate to acknowledge such blunders, but perhaps it may save some one else from similar mistakes.

As far as can now be determined the bees are wintering very nicely. They went into the cellar about the middle of November, and up to this time there are but few dead bees on the floor. The weather has been extremely cold for this latitude, the thermometer going as low as 25° below zero, but as the temperature does not go below 40° in the bee cellar, it makes little difference to the bees stowed there. Should this cold snap last long bees on summer stands will suffer.

J. H. DIBBERN.

Milan, Ill., Feb. 11, 1896.

The best capital for a boy is not money, but the love of work, simple tastes and a loyal heart.



T. S. SPROULE, M. P., Champion of Pure Honey Bill in the House of Commons.

## Bee-Keeping in Sweden.

Johan Forssell.

To the Editor of the Canadian Bee Journal.

DEAR SIR,—On account of the wet weather which we are having here at present, work in apiary is at a standstill, and I therefore take this opportunity of writing you a few lines about bee-keeping in Sweden.

I cannot give a better description of the method used here, however, than that given in the American Bee Journal for this year, No. 13, page 206, with the heading: "Shall we go back to box hives?" The only remark I have to make about this article, is that sections are very little used here, most of the honey used being extracted.

With very few exceptions bee-keeping in Sweden is only a side issue. Queen rearing is of course, very little practised here, queenening being done by taking queens from after-swarms, which are then put back into the original hive. When the comb in the box hive,—here made of straw, and in England called a straw skep—becomes old, the bees are driven in a new empty straw skep or transferred to a frame hive.

During the last three years, I have been experimenting with foul brood in my apiary, and have tested several statements and opinions on this subject. I take this opportunity of thanking Mr. Howard and Mr. McEvoy, for the description of their methods of curing this disease, which are the only ones I have found successful. But for eradication of the disease I have an idea which I have not seen mentioned before, by other writers on this subject, and it would be interesting to hear the result if some scientific bee-keepers would give it a trial.

As I have noticed that even in very bad cases of foul brood, some larvae—sometimes very few—are developed normal or agreeable with nature, it struck me that it would be a great advantage if I could rear queens and drones in such diseased stock, and breed bees from these queens and drones which had thus successfully resisted the disease. This I accomplished successfully, but have not yet had an opportunity of testing if such bees have become proof against foul brood, as I cannot get drones from the diseased hive only, on account of the presence of a number of small apiaries in the neighbourhood. However, I have killed up pieces of very bad combs—at present I have very little foul brood in my

apiary—and if I have an opportunity next year I shall isolate some suitable hive with foul brood, and place it on a lonely spot.

If foul brood cannot be completely eradicated in this manner—which I am doubtful about, as my opinion concern the origin of this disease, is that it belong to the kind of epizootics, as we call miasmatic; contagious, and develops both internally ("endogent" and "exogent")—I think it will at least become less dangerous than it was before. This I infer from the fact that it was very common in Germany in the later part of the century and the beginning of the present—in 1818, Dzierzon lost his entire apiary of 500 colonies by this disease—whilst it is now seldom so bad there as in England and Scandinavia. It should be very interesting to know if foul brood now is to be found in Cuba, Berlepsch says in "Die Biene," in Volume, 1873, page 202, that foul brood was nearly unknown in Cuba, ("so gut wie unbekant") but that feeder honey, after taken from that place caused foul brood in North America and Germany. I know a large apiary where they have had foul brood for many years, but it is diminishing and becoming less severe every year. When a colony from this apiary has been sent to an apiary where they have not had the disease before, the bees there become very severely affected. I think this seems to show that bees can become proof against foul brood by heredity. My idea is, therefore, to breed from bees reared in hives affected by foul brood on the principle of "the survival of the fittest."

At last I beg you to send to me with the next number of your journal, one copy of Mr. McEvoy's newest pamphlet: "Foul Brood, its Causes and Cure," published by the New Jersey State Board of Agriculture, Kolbach Sweden, July 26th 1895.

## Robbing.

SIR,—Would you please tell me through your journal if there is any way of stopping bees from robbing. I had a large hive well filled, and it was all taken out but some combs about half filled with dead bees, and not one might of honey.

I started with three hives last spring, and put away ten in cellar for winter. I am using the Langstroth hive that I got from you last spring, and I think that I will need more the coming spring. I will increase as I succeed.

You will please find enclosed \$1 for Bee Journal.  
JAS. BAILIE.

## Report of Brantford Meeting.

*Editor Canadian Bee Journal*

What is wrong with that report of the Brantford meeting? On Page 735 of C. B. J. we read: Committee appointed at the afternoon session to draw a By-law for the election of directors, report as follows, etc. Then we have a report signed by Allan Pringle, R. F. Holtermann and J. E. Frith. What did this Committee have to do with the By-law for the election of directors, or in what manner can their report be connected with the election of directors. As one of the revising committee I wish to say that the official report, as we received it from the stenographer, contained the same error, which we corrected in the best way possible. I also want to say for the benefit of those members who took who took part in the discussions at the Brantford meeting, (while everything is fresh in my memory,) that we (Mr. Evans and myself) have concluded our duties as the revising committee, and the report, as it left us, will now be in the hands of the secretary, and when the report is published and goes out to the world, if anyone who was present at Brantford is made to say something which he did not say at all, and things that he did say are left out entirely, please do not tread on the revising committee too heavily, because if we failed in making the revision, so as to have the report appear in its proper light, it was because it seemed impossible for us to do so; or perhaps because we had not the ability. I speak for myself, and not Mr. Evans, as regards ability. I want to say further, and I want to say it with all due respect to the reporter, Mr. Coe, that had I known that the report would reach us in anything like the shape in which it did, I certainly would have declined to act on that committee without the aid of Mr. Pringle or some other member of experience, and who has been through the mill. Some idea of the amount of work that we did on that report may be gleaned from the following: I met Mr. Evans by appointment in Toronto and we went carefully through the report, making changes and alterations wherever we saw it was necessary, and they were legion. I then asked permission to take the report home with me that I might again go through it and note other changes that should be made, as I was not entirely satisfied with the work we had done. Mr. Evans consented, and I went home (25 miles through a raging blizzard in the night) and went carefully through the whole of that report again, and when it left my hands, 143 changes had been made,

including additions, eliminations and various alterations, some of vast importance. In forwarding the report to Mr. Evans, I requested him to again go through it and correct any imperfections that he might discover, which I expect he did.

Now, while I have endeavored to perform the duty devolving upon me impartially and according to the best of my ability and knowledge (and I am sure Mr. Evans did the same; he can speak for himself), I do trust that when the report is published, it will meet with that degree of satisfaction that will allow me to meet with my brethren in Toronto in December (if I am permitted to live that long) without a police escort or a baseball mask to protect eyes and nose.

D. W. HEISE.

F. hesda, Ont., Feb. 18th, 1896.

## THE PAST SEASON.

### Bee-Keeping and Farming.

Enclosed please find \$1 to renew my subscription. I think every bee-keeper in Canada should be proud of the Canadian Bee Journal, and renew promptly, but dear me, what if their bees have done no better than mine, gather very little honey and had to be fed some to complete their winter stores. Ah, well, our farm crops were good so we have the necessary dollar.

During the twenty-five years that I have kept bees in this place there have been only two years that white honey was almost a failure. The summer of '89 was too wet, and the summer of '95 too dry. It seldom happens that clover, thistle and basswood all fail to secrete honey, but they did last summer. The summer of '94 was the best I ever saw for clover honey, we secured over a hundred pounds per colony of extracted honey, and nearly that of comb honey. Last summer buckwheat yielded well, but we are too far from the low land where it is raised for our bees to get much of it. I intend to move a part of my bees next season so they can easily reach the wild raspberries, buckwheat and goldenrod. Bee-keeping goes well with farming, if the flowers fail to secrete honey, the bees will not make much work, and the farmer can attend to his crops, but he hails with joy the season when his hives become too heavy to lift, and the cry comes almost constantly the bees are swarming, and he has to hire help to take care of his crops, and has to extract and remove honey almost day and night to keep his bees from swarming. Hoping that next season may be like that.

I remain yours truly,

ILA MICHENER,

Low Banks, Ontario.

## Worth Reading.

Just as soon as we got the new Weed process of making foundation nicely under way, we sent Mr. O. O. Poppleton, of Stewart, Fla. sample sheets of the product, and sample sheets of the old foundation, same weights and size. These he was to test in the apiary as soon as the weather would permit, to determine the relative sag or stretch of the two kinds of foundation in the hive. After he had made his first tests, he wrote us that the difference was slightly in favor of the new process; but the weather was hardly suitable to arrive at satisfactory results. A month or so later we heard from him again, under date of Feb. 19, giving more exhaustive experiments, the result of which showed that the sag by the old process, or dipped foundation, he had been trying, was nearly five times greater than the new process.

Mr. Poppleton, cautious as he is, desires to test the matter further, when the weather is hotter, and will report again. He adds: "It looks as though your claim, that the new method gives extra toughness to the wax, is correct." Any one who works the two kinds, the new and the old, in his hands can readily see the difference; and it is not surprising at all that the bees should discover the marked difference in favor of the new foundation. Incidentally it may be remarked that the bees can work this wax in a much cooler temperature than the old dipped product.—Gleaning in Bee Culture.

The above process has already been mentioned in THE CANADIAN BEE JOURNAL, the first machine was built at the Gould, Shapley & Muir Co., (Ltd.) Brantford factory, and we are prepared to make up customers wax or sell comb foundation at old prices. Correspondence solicited. Address, GOULD, SHAPLEY, MUIR Co. LTD.  
Brantford, Ont.

## Haldimand Bee-Keepers' Association.

The annual meeting of the Haldimand Bee-keepers' Association was held at Cayuga on Monday Jan. 13th pursuant to adjournment.

Members present—John H. Best, Esq., President, and Messrs. James Armstrong, Wm. Atkinson, Israel Overholt, Issac G. Wismer, J. J. Barry, Alex Stewart, R. Coverdale, James Jack, W. H. Lambier, and the Secretary.

The Auditors' report was presented, and in motion of Mr. Armstrong seconded by Mr. Overholt, was adopted. The report shows a balance of \$86.34.

The following officers were elected for 1896,

President—James Armstrong.  
Vice President—Israel Overholt.  
Sec. Treas.—E. C. Campbell.  
Directors—Wm. Atkinson, Robt. Coverdale, Issac G. Wismer, J. J. Barry and J. H. Best.

Auditors—Jas. Jack and Alex Stewart.  
Moved by Mr. Armstrong seconded by Mr. Jack, that this Association affiliate with the Ontario Bee-keepers Association and that the Secretary be authorized to send the usual fee of \$5. Carried.

Moved by Mr. Stewart, seconded by Mr. Jack, that Messrs Armstrong and Coverdale be appointed delegates to attend the Ontario Bee-keepers' Association at Brantford. Carried.

Moved by Mr. Best, seconded by Mr. Coverdale, that this Association recommend the appointment of Mr. Jas. Armstrong as a Director of the Ontario Bee-keepers' Association in place of the late F. A. Rose. Carried.

Moved by Mr. Coverdale, seconded by Mr. Overholt, that the next meeting of this Association be held a Nelles' Corners' on the last Saturday in May.

E. C. CAMPBELL, SECRETARY.

## Novel Advertising.

An apple-grower in the famed "lake region" of Western New York had long desired a trade-mark that would protect his particular brand of apples, which he had brought to a great state of perfection by grafting and years of special cultivation. He hit upon the following plan, which succeeded beyond his expectations: Selecting a fine tree, bearing the fruit of which his shipments were principally composed, and that had a good southern exposure, he prepared slips of sized paper in which he cut out or "stenciled" the letters of his name and when the apples were fully matured on the tree, and about two weeks before ripening or picking time, bound a slip of the paper around each apple, taking care to have the name part on the "sunny side" of the apple. He thus bandaged several hundred—enough to allow of putting one in the top of each barrel shipped. The sun faithfully performed its work, and when the time for picking had arrived, the name strips were removed, and on each apple appeared the full name of the grower in red letters on a green background.

One of these "name apples" was wrapped in tissue paper and placed on top of every full barrel before heading up, and the legend "look for the name" printed on the outside of the barrel head. His apples are now known and sought for in the market as "look-for-the-name" apples.—New Ideas.

# Annual Meeting

## Ontario

### Bee-Keepers' Association

HELD AT BRANTFORD, ONT.....

(Continued).

Mr. Pringle—The comb-honey that I have raised is all sold in the local market with very few exceptions. I did send a little to New York by special order this fall, and it went in perfect condition. I think that where honey is to be shipped a long distance, as Mr. Hall has said, that a full sheet of foundation to insure its attachment all around would perhaps be better. In that case, only the very best ought to be used. There is a great deal in the packing of honey to ship; did Mr. Frith inquire as to the packing?

Mr. Frith—I took a great deal of pains to inquire into all the details of the packing, and I was satisfied that the packing in many cases was not right.

Mr. Pringle—I do not care how your comb honey is produced or how much foundation you may have used. If you are shipping it a long distance, and if you do not pack it right you will break it. When I was at Chicago at the World's Fair, after I had opened all my honey not a single section was broken. The honey came in there from States not far off, and I saw it running over the floor of the Agricultural Building, enough to almost sicken a bee-keeper. It is all from bad backing. When you come to examine the sections you find they were all filled and attached all around but still they were broken up. It is true I superintended the handling of my own honey; still I think the honey I took would have stood a good deal of handling. The honey produced in my sections without any foundation is better than any honey you can produce with foundation.

Mr. Darling—I do not know that I have ever used full sheets of foundation. I have put them in just enough to start the bees, I have used the best, I do not ship comb honey at all. On one occasion some parties were going to Pilot Mound, that is past Winnipeg, and they wanted some fifty pounds of comb honey, and they applied to me. My honey being built on starters and not one section in one hundred that had not one pop holes around the edge. I felt dubi-

ful whether I could fix that honey so that it would go there safely, and they said they would take the chance, and I packed fifty pounds in a box and made it so that it fit in a trunk. I put in the best sections I had, I took the box to the man's house and put it in the trunk. I saw some of the friends of the parties afterwards, and I am glad to say it went not only to Winnipeg, but to Pilot Mound safe and sound.

Mr. McEvoy—I will tell you what I think about it; if we get the best wax, nice and white, about 11 or 12 feet to the pound, and fill your sections full, there will be no trouble about the fish-bone, and it will be all right.

Mr. Chrysler—Twelve feet to the pound 7½ and 8 feet to the pound might be brought to the same result by treating and building the foundation as far as the fish-bone is concerned.

Mr. Frith—When I spoke before I was speaking with reference to the foundation part of the affair. If you are satisfied with the questions of the foundation I would really like to make a more prominent question about sending honey away. I feel that there might be a very material improvement made in shipping comb honey. Mr. Pringle intimated he had no losses, and Mr. Darling said he had no loss in sending to Pilot Mound, but neither of them have said whether their method would be practical in shipping large quantities of honey to send out of this market, and perhaps some in this audience have tried their hand in sending their honey to Manitoba, and if they could devise some method of reaching that country with comb honey there would be a good opening there for years to come, and the probabilities are that when we have a good crop here they will have a poor crop on the other side of the continent.

Mr. Sparling—I think the great difficulty in marketing comb honey this year has been in getting it to market. I suppose in going to the Northwest the cars would be shunted a good deal.

Mr. Hall—I have shipped honey to the Northwest. I have shipped \$1100 worth of

a time and I have yet to find section broken down; but they have sent to me again and again for other lots and said nothing to me about it, therefore, I have taken it for granted that they were satisfied on receipt of it. In shipping comb-honey I put a paper dish in the bottom of every crate. I also put in stripes of wood to set the corners of sections on, which forms a spring and if one of them should be broken down, there is room for the honey or section, and these sections come out clean. There is nothing to stick to. If you want it to go from here to British Columbia you may ship in single crates, packed in crates, as I told you, or you put it in packing cases holding 200 pounds, with two handles so that two men can pick it up and carry it along. Either of these conditions will take comb-honey to England. It has gone in that way and fetches 60 c a pound, when it gets there and I am glad it did for the buyer only paid me 30 c. You may shunt your cars from now to the end of the year and it will not effect it; but it is dropping the crates 6 inches on floor that does the damage. If you put in 200 pound cases, one man cannot pick it up, he will have to drop it, or there will have to be two fellows pick it up. I will tell you how I came to use foundation, I thought these men knew I followed there example and put it in bigger piece, and I found they were getting it much faster with the bigger piece and then I filled it one-half full and then I filled it full.

At this time I was taking it in two pound sections. I would get 150 pounds or 200 or 300 pounds in a hive. People said, "how do you get so much?" and I said "we are making the bees work." I did not tell them about the foundation.

Mr. McKnight—I am surprised that Mr. Smith found so little Ontario honey in Manitoba, in that condition nearly all the comb honey I produce go to Manitoba, and a good deal further west than Manitoba, and like you sir, I have never yet had the first complaint of breakage or anything in that way. My system of packing is very simple and inexpensive. I will tell you how to pack it. I prefer having section cases that hold a dozen sections, they are pretty thick in the end. I would not use thin crates for this purpose at all, the end of my honey crates are seven eights of an inch in thickness, with a hand hold. I have my honey done up in sections, three of them, one on top of the other, and I put rows of ordinary laths on the face and edge and run around through each end, and one behind, then the face is glass. And I put along the face two laths diagonally, across the glass. I used to fasten these together by

screw nails, now I use ordinary wire nails. I have shipped all the comb honey I have produced, and I have still to learn of a single section that has broken. They lift the three together and they see what they are handling, and it is perfectly safe.

A member—Do you raise the sections from the bottom?

M. McKnight—Yes, I just use a thick piece of manilla paper. I quite agree with Mr Pringle that if you want a first-class article of honey, the less foundation you use the better. Anybody that takes honey with fish-bone in it and honey with the natural comb, they very soon discover how quickly one dissolves in the mouth and the other does not. I have always wondered why comb-honey was preferred to extracted honey. I have always wondered why it is that people prefer to pay 50 per cent. more for chewing this wax.

Mr John Newton—I would like to say that I have shipped several times to Winnipeg, and I have shipped in the same way as Mr. Hall. I do not agree altogether with Mr McKnight, although I have shipped honey in the same way as he has. In most cases you will find that the cases are soiled, and I think it best, for all the difference, to re-crate them in larger crates. I think they are cleaner and more fit to be seen when they are set up in the stores.

Mr. Pringle—Never put a section in for shipping, where it is not filled up all round. Be sure and put the handles on the boxes. Pack your comb-honey so that no matter which way the boxes turn, the section will not give. They will be close together, and pack them around with something that will make them tight. These are the essential points in shipping comb honey.

#### ELECTION OF OFFICERS.

President—R. F. Holtermann, Brantford.  
 Vice-President—J. K. Darling, Almonte.  
 2nd Vice-President—W. J. Brown, Chard.  
 Directors—Section 3, M. B. Holmes, Athens; Sec. 4, Allen Pringle, Selby; Sec. 5, J. W. Sparling, Bowmanville; Sec. 7, A. Pickett, Nassagwaya; Sec. 8, James Armstrong, Cheapside; Sec. 10, A. E. Sherrington, Walkerton; Sec. 11, F. A. Gemmell, Stratford; Sec. 12, W. A. Chrysler, Chatham; Sec. 13, H. N. Hughes, Barrie.

Auditors—J. D. Evans, Islington; D. Heise, Bethesda.

Foul Brood Inspector—Wm. McEvoy, Woodburn.

Sub-Inspector of Foul Brood—F. A. Gemmell, Stratford.

On motion it was decided that the next convention shall be held at Toronto.

Representative at Industrial Exhibition, Toronto, R. H. Smith, St. Thomas.

Representative at Western Fair, London, John Newton, Thamesford.

Moved by Mr Sherrington, seconded by Mr Pickett, that the annual meeting be held in December, instead of January, the date to be left to the Executive Committee. Carried.

Moved by Mr Chrysler, seconded by Mr Best, that a letter of condolence be sent to the relatives of the late F A Rose. Carried.

Moved by Mr Sparling, seconded by Mr Evans, that the premium to the members of the Ontario Bee-keepers' Association be the same as last year—"Canadian Bee Journal"—subject to the approval of the Board of Directors. Carried.

Thursday evening, Jan. 16th.

Meeting opened at 8 p. m.

His Worship Mayor Elliott in the chair, who, after calling the meeting to order, said:

Ladies and Gentlemen,—In the absence of the Hon A S Hardy, I have been requested to take the chair, and am afraid I will make a poor substitute for the honorable gentleman. The Bee-keepers' Association is assuming some proportions, and the industry in the Province of Ontario is extending. I understand you have already under the supervision of the government an inspector known as the "Foul Brood" inspector, whose duty is to see that disease is kept down and not allowed to spread from one bee yard to another, and I understand that your association is now endeavoring to get an act passed, providing that honey should not be sold or offered for sale that is adulterated. I think your object is commendable, and I hope you will be able to affect your purpose. I am not posted with regard to the bee, but I believe there are various kinds of bees—Italian bees, bumble bees and other bees. When I was a boy I knew more about the bee than I do now. I have a recollection of looking for bee nests, not bee hives, we did not want to find them as thick as that. We sometimes found them in a stump, and very often we had to destroy a hat in keeping them at a respectable distance. I hope this convention has been a benefit to those who are here. As a citizen of Brantford I bid you welcome, and hope you have enjoyed yourselves, and have thought so well of Brantford that on some future occasion we will have you here again. I will now call upon the "Telephone City Quartette" to give us a selection. (Applause.)

"Telephone City Quartette" then rendered a selection in excellent style, and were loudly applauded.

The Chairman—I am sure we have all enjoyed the song, and I have no doubt we will enjoy the address to be given by Mr. McKnight, of Owen Sound.

Mr McKnight—Mr Mayor, ladies and gentlemen, I need not ask you, Sir, if you know the trying ordeal it is to be called upon to stand up and address an audience, especially when you have nothing to say. I may say, ladies and gentlemen, ladies especially, and gentlemen who are citizens of Brantford. that the association of bee-keepers present has adopted the itinerate principle of holding meetings; it roves from place to place; it is here this year, yonder next year. We find this policy both profitable and pleasant. Of the profit of the policy, I need say nothing. This, however, largely consists in the fact that it gives us an opportunity of meeting with and becoming acquainted with the citizens of the various towns and cities through the country. In connection with this, we have especially the practice which all of us enjoy very much; that is, one evening during the course of our meetings, of laying aside the ponderous, serious questions, that it is our habit to discuss learnedly and moderately and holding an open meeting, so that the citizens of the town may meet with us and enjoy with us a thoroughly pleasant evening, and it is not an evidence of weakness on the part of bee keepers to say that we feel flattered, for wherever we go we are always honored with the presence of the mayor and ministers, and men whom the country delight to honor. Last year at Stratford we had the honor of having as our chairman that sturdy commoner, (then Speaker of the Legislature of Ontario), the Hon. Mr. Ballantyne. Last evening we had the honor of a visit from the oldest colleague of the veteran Premier of the Province, under whose administration our industry has been fostered and promoted by liberal aid. I assure you, Mr Mayor, that I speak the sentiments of my brother bee-keepers when I say we feel highly highly honored by our meeting being graced by the Chief Magistrate of the City of Brantford on this occasion. My name is down for an address. Well sir, I have no address, but I do not think much of the man who finds himself in a tight place and does not make an effort to get out of it. I will make an effort this evening by giving you another man's address; it is an address with which you are all familiar, an address that I have known since I was a wee boy. it is the address of Tell to his native Alps. The speaker then delighted the audience with a magnificent display of oratory, interspersing his remarks with

well-rendered recitations of poetry. Referring to Canadian patriotism, he said: "We enjoy and appreciate the advantages of our country as keenly, and what is better, as intelligently as any people on the earth, and the liberty and peace we enjoy we will not very easily relinquish. You know it is not long ago since there was a threat made somewhere or other that our peace was about to be destroyed and our liberties taken from us. You know just as well as I do that our sentiments of "home love" rose and swelled up in our hearts, in the hearts of every Canadian, and you know too, sir, that when it was threatened, or, at any rate, declared, that they could, and would, if anything happened, come over and destroy the Welland canal in about twenty-four hours. Well, they would have to get there before they could do it, and when they got there and made the attempt, there would be half-a-dozen bloody fights along the "Tow paths" of that canal that would go down into history as so many "Rorkue's drifts." (Applause.)

The Chairman—Mr McKnight is a thorough representative of his own country if he can say all that when he has nothing to say, what could he say if he had something to say. The remarks on patriotism call to my attention an article I saw in The Buffalo Express. They referred to the fact that when the trouble took place in the Transvaal, Mr. Olney, Secretary of the United States, requested England to see that the American citizens were taken care of; so they have to call on the Old Lady yet to take care of her children. (Applause.)

The Telephone Quartette then rendered another song in excellent voice.

The Chairman—The next is an address from the President, whom the bee-keepers have elected for the next year. We who are citizens of Brantford know the energy Mr Holtermann has thrown into this industry. I have no doubt he will give a very instructive address, and when he gets through we will have more knowledge than we have about the lively bee.

Mr. Holtermann—Mr. Chairman, ladies and gentlemen, one of the objects in having these meetings in the cities in which we gather, I believe, is to try and bring out the citizens, and at the meetings bring up such matters as will give them a greater knowledge of bee-keeping, the value of honey as a food, and in that way to benefit both the bee-keepers and the citizens. There is a distinct line between bee-keeping in the present and bee-keeping in the past; that is before the invention of the movable frame hive. At that time we had a box hive and saw skips, and we were unable to apply

the skill and study to the same extent as we can at the present time. The invention of the movable frame hive, by the late Rev L. L. Langstroth, has enabled us to make great progress in bee-keeping. Before that it was a matter of placing these boxes or straw hives on a stand in the fall of the year, selecting those which should be kept through the winter, and those which should be smothered. Since the invention of the movable frame hive, we have invented the honey extractor and the comb foundation. Now the great difficulty with bee-keepers during the past has been that a great many have attempted to keep bees with the limited amount of skill, experience and time that was used in the old box hive, and the result has been that a great many have been disappointed, and they have not made money, but have actually lost everything they have put into the business.

At the present time the Bee-keepers' Association receive a grant from the Province of Ontario, which grant is used for the purpose of enabling us to perfect ourselves in the art of bee-keeping and also to increase the bee-keeping industry throughout the Province, and we have also received from the Legislature a great deal of wise legislation. As you are aware at the present time, the Dominion Parliament has made a promise that they are going to assist us in marketing our honey in foreign countries. In the last report of the Department of Agriculture at Toronto the number of colonies of bees in the possession of farmers in '94 was given as 200,094, valued at \$1,051,574, while 195,823 colonies were reported in 1892. In 1894 the honey produced was a trifle over 30 pounds per colony. Eighteen ninety-four was not a good season—it was below the average.

As an association and as bee-keepers, I do not think we have done enough in educating the general public as to the value of honey. A great deal that can be said along these lines of educating the people as to judging a good article of honey. Now a great many people buy granulated honey, and they have an idea that it is an adulterated article, whereas the fact of the matter is it is rather an indication of purity. And there are some who actually set that honey aside and do not use it, because they do not know how to liquify it. If you set it in hot water (without boiling), you bring it back, and it is just as good as it was before. Then again, some people buy adulterated honey for a pure article, and they are not likely to buy it again. Then other people take comb honey and put it in a cellar. Honey absorbs moisture very quickly, which causes the honey to



become sour and ferment, and if extracted honey is put in a damp atmosphere, unless sealed, it deteriorates in quality. My opinion is that we can increase the amount of honey sold in our own province and Dominion very materially. I think a great deal can be done to develop the "bee industry" just as the dairy industry has been developed. Prof. Robertson and Prof. Dean are working to improve the "dairy industry" and to increase the sale of the article at home and abroad, and I think we can develop bee-keeping in the same way. Some have had the view that it is inadvisable to increase the keeping of bees throughout the Province, but as long as we try to improve the quality and to increase the demand in the market, we are all right, and I think we have a great future before us, because there is no country which is so well adapted for bee keeping as the Province of Ontario and other parts of the Dominion. In speaking of the foreign market, I would just mention that The British Bee Journal gives the honey importation as \$270.38 and which, at 7 cents a pound, which is about the price we get for our honey if we export it, would be four million pounds in one year. Of course, we cannot secure the whole of the market, I fancy a considerable portion of that honey is of an inferior quality and comes from such countries as Chili. There are districts throughout Ontario where a good deal of buckwheat honey is produced that can be sold at the same price. I may say it has been suggested that the Dominion Government handle our honey throughout Great Britain, in which they propose handling meat. I spoke to Prof. Robertson about it, and he said he would not undertake it for some months, and it would be impossible for him to think of handling it before June or July. Of course, till that time we will not have any honey, and if they can do it then, that is just the time we will want them to.

The existence of the bee is not really for gathering honey, but the primary object is to assist in the fertilization of flowers. The whole construction of flowers is to secure as much as possible cross fertilization. We have the pistils and the stamens, one containing pollen, that is, little fine dust, and it is necessary for that to come in contact with the corresponding parts of the flower in order to secure fruit. For instance, in the apple it is necessary to secure five distinct fertilizations. It is really the fusion of five fruits. Take the apple and cut it across and you will find the core is divided into five parts. If you find one seed that is not properly developed, and it has not been injured externally, cut that across and you

will find that the pips in that part of the apple are shrivelled and shrunk. In that case we have had two, three or four fertilizations, and not the 5th. In our Dominion we have really an artificial condition in plant life. By that I mean we have in our immense orchards, which have so many blossoms in the spring of the year, an artificial condition that is not natural to this country in the forests, and therefore to correct that, nature has to help itself, and it is trying to do so with injurious insects, and by means of the honey bee, you have an artificial country. Most of the other insects perpetuate themselves by means of a female that lives through the winter, and just a few of them, but with the honey bee we have a large number of workers, perhaps ten, fifteen or thirty thousand in a hive, and just as soon as the sun shines out, these fly out, ready to carry out this work of fertilized blossoms. And we have the artificial condition of plant life on the one side, and artificial condition in insect life on the other. Bee-keeping takes absolutely nothing from the fertility of the soil. The dairy men have pushed that idea everywhere very prominently. The constituents in butter are those that come from the atmosphere, and honey is the same. It takes nothing from the soil, and in these days when farms are decreasing in fertility, it is an important point. Again, bee-keeping displaces no other crop on the farm. We avail ourselves of the flowers which naturally exist in the neighborhood, while there are many men who are not adapted to keeping bees who go into the business, yet there are farmers' sons and daughters who might remain at home on the farm and with a small capital engage in the keeping of bees, and perhaps make an independent living in that way.

Bee-keeping is very interesting. The queen is the mother of the hive. She deposits all the eggs. We have also drones and the worker bees. The queen is the mother, the workers are also females and the drones are the males. Under certain conditions the bees will build queen cells. We have here a frame which contains queen cells. The conditions under which they will build queen cells, are that they either want to swarm or they have lost the queen. From the same eggs that will produce a worker bee we can develop a queen. The instinct of the queen is just simply the production of eggs, and the tongue and stinging of the queen is not developed to the same extent as the worker bee, and in the queen bee we have an insect which will live from three to five years; the worker bee will only live from six weeks to six

months. There is only one queen in a hive. If many of these young queens hatch at the same time, as soon as one hatches she begins to look around for these queen cells and begins to tear them down. If five or six hatch at the same time, they go around the cells until they meet, and then they have a royal combat, and it is only the strongest and most active that survive in the hive, and in that way we get the survival of the fittest. It takes twenty-one days to develop the worker bee. The worker bee has the instinct to carry on the work of the hive.

Now, after these few rambling remarks will conclude. If they will lead us to study a little more some of the habits of the bee, and if some of the citizens who are present will understand better how to handle honey when they buy it, I will feel that that the few works I have spoken have not been entirely in vain.

Chairman—I am sure those of our citizens who are here will agree with me when I say that the remarks of Mr. Holtermann have been instructive. I knew the bee was rather a warm insect to handle, but as to how it despoiled the honey and gathered it I did not understand. The next time the bee-keepers have a meeting in Brantford, if they want to have a large gathering, they ought to have a few small pots of honey around to give away free, and there is no doubt you will have the house crowded.

After the Telephone City Quartette rendered another song Mr. McKnight moved that the best thanks of the meeting be tendered to the mayor and the quartette for their attendance, which was carried.

The meeting was brought to a close by the singing of "God Save the Queen."

The members attending the convention were then entertained to a supper by the newly-elected President, R. F. Holtermann.

Friday, 17th January.

Meeting opened at 9 a. m.

The President, R. F. Holtermann, in the chair.

Mr. McKnight discussed the financial position of the association, spending nearly half an hour's time without any benefit to those present or the association.

Mr. Hall contended that the Association was in a good financial position.

Moved by Mr. Pettit, seconded by Mr. Gemmell, that Messrs. Heise and Evans be the Revising Committee. Carried.

Mr. F. A. Gemmell, of Stratford, who was to have read a paper, apologised for not being able to do so, as he had not been able to prepare one on account of sickness in his family.

SOME EXPERIMENTS BY R. L. TAYLOR, OF LAPEER, MICH.

It is an encouragement to the experimenter that an experiment conducted for one purpose is often found to open up other avenues of investigation and throw light upon other points than the one particularly under consideration. An experiment made last autumn, partly to determine the results that would follow an attempt to produce comb honey by feeding under circumstances which were in violation of most of the generally-accepted canons on that subject, is a case in point. The unusual character of the season as indicated by an almost total absence of swarming, as well as of the honey flow from white clover and linden, made it necessary to use desperate measures in order to make at all some of the experiments for which plans had been made, and in this case I was compelled to use syrup made from granulated sugar. The syrup was made by boiling together equal quantities of sugar and water. It was reduced in weight in making by evaporation, so that on the average the sugar and water from which the sugar was made exceeded the weight of the syrup by 14.65 per cent. Making use of this fact we find that 122½ pounds fed to colony No. 1; 78½ into that fed No. 2, and 73 into that fed No. 3. Now, assuming that the bees in handling it would reduce the syrup to a weight equal to that of the sugar from which it was made, we find by subtracting the increased weight of the supers and the brood chamber in each case from the weight of the sugar used in making the feed for that particular colony, that during the 30 odd days of the continuance of the experiment, colony No. 1 totally consumed 53 13/16 pounds of sugar, No. 2, 11 6/16 pounds, No. 3, 19 11/16 pounds. (See accompanying table). But probably the weight of the syrup could not be reduced nearly so much, and if we assume that one pound of sugar would make 1½ pounds of well-cured syrup, which would likely be nearly correct? We see that colony No. 1 consumed during the time stated, disregarding fractions, the large quantity of 8½ pounds; No. 2, 31 pounds, and No. 3, 38 pounds.

During most of the time there was a moderate flow from fall flowers to the extent that the stronger colonies of the apiary gained in weight from 20 to 30 pounds. The colonies employed in the experiment, owing to the feeding, undoubtedly, did not gather so large a quantity as they would have otherwise, and likely on account of different dispositions, gave different degrees of attention to the nectar in the flowers. This seems the more pro-

bable on account of the great difference, as shown in the table, between the amount consumed by colony No. 1 and that consumed by each of the other two. But in the case of No. 1, if we allow the utmost that can be claimed, that it gathered no honey from the fields at all, we are still confronted by the fact that in addition to large quantities of pollen it consumed during this period of activity, as feed for brood and bees, and for maintaining the proper temperature, and also for the production of the wax necessary for working out, and capping combs from full sheets of foundation contained in sections filling two section cases, 84 pounds of well-ripened syrup being at the rate of upwards of 2½ pounds per day.

This would seem to have some bearing upon the questions sometimes raised as to how much honey a fair colony requires for its own purposes in the course of a year. My space will not allow me to inquire into the question now, but I wish in a word to direct attention to that other question which is sometimes given in response to this one, viz: Of what use is a knowledge of how much a colony uses in a year? They must have it anyway. Let us study something practical. At first glance, this sort of argument seems in a way conclusive, but when we consider that the large consumption referred to must have been largely for the rearing of brood and the production of wax, and that it is the instinct of the bee to rear nearly twice as much brood during the last half of June, and the first half of July when the most valuable honey is gathered, as during August and September, and that during that time, June and July, if the honey is good, twice as much wax in some shape is required, and the feeding of the brood requires not only the time of the nurse bees, to prepare the food, but also the time of the field bees to gather the necessary pollen, of which large quantities are used, and when we further remember that the rearing of the brood can be curtailed at pleasure, and that wax can be to a considerable extent supplied the bees in an acceptable shape it becomes an intensely practical matter to know, not only how much the bees consume, but also for what purposes they consume it. Then what an advantage it would be to have the consumption so itemized that it might be seen how much went for each purpose, so as to make a solid foundation for a calculation to determine whether it is more profitable to produce honey or brood and wax. It may be that those who advocate extreme contraction of the brood chamber during white clover and linden time, or the caging of the queen, and the

supplying of wax in the shape of comb foundation to the greatest possible extent in the absence of comb, are right.

E. L. TAYLOR,  
Lapeer, Mich., Jan. 13th, 1896.

TABLE.

No. 3.	No. 2.	No. 1.	
55.	57. 8.	51. 8.	Weight of brood chamber August 10th.
84.	83. 4.	73. 12.	Weight of brood chamber September.
74.	67. 12.	67. 12.	Weight of brood chamber November 26th.
127. 8.	137. 8.	122. 4.	Weight of sugar fed.
73.	78. 12.	122. 4.	Weight of sugar in syrup fed.
24. 5.	41. 6.	46. 7.	Weight of sections at end of experiment.
29.	25. 12.	22.	Gain in weight of brood chamber.
19. 11.	11. 10.	53. 13.	Amount consumed if syrup from 1 lb. sugar were evaporated to 1 lb.
33.	31.	33.	Amount consumed if syrup from 1 lb. sugar were evaporated to 1½ lbs.

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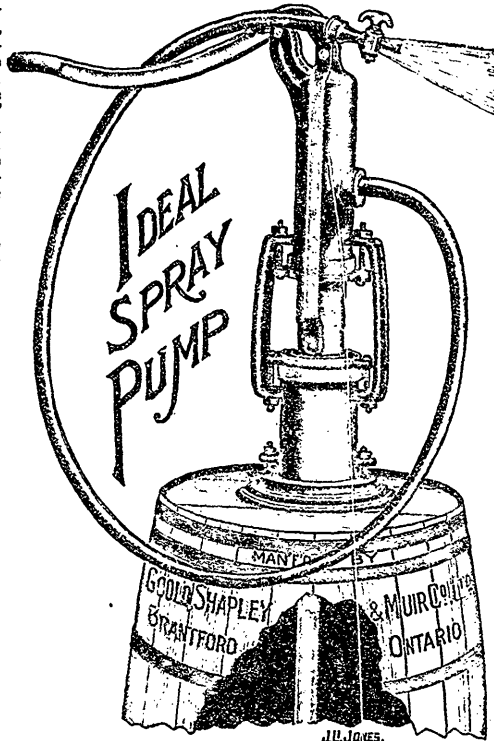
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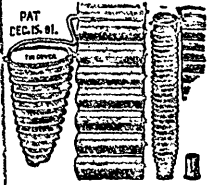
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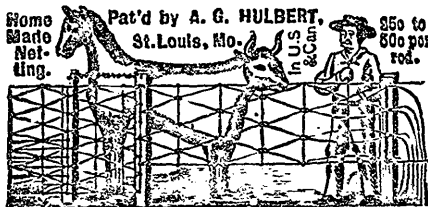
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