

YOUR SUBSCRIPTION  
HAS EXPIRED  
PLEASE REPLY

# ...The Canadian Bee Journal

PUBLISHED MONTHLY.

NEW SERIES  
VOL. XI, No. 5.

BRANTFORD, ONT., DECEMBER, 1903.

WHOLE No  
466.

## How to Make Money Producing Extracted Honey

Continued from page 81

Dr. Miller—Before that question about the queens is entirely passed, I would like to ask a question. Suppose, Mr. McIntyre, that you had a hybrid queen and the colony gave you an exceptional yield, away beyond anything else in your apiary and you never expected to sell a queen in your life, would you breed from that queen?

Mr. McIntyre—That is a pretty good one, Doctor. I can answer that in Dr. Miller's own language—"I don't know". (Laughter.)

Mr. Hyde—We have with us another extracted honey producer, Mr. Dadant, and I am sure we would like to hear from him.

C. P. Dadant—I feel like saying something in regard to the cold knife. I have tried both the cold and hot knife, and have stayed by the cold knife. There are times, however, when it is impossible to uncap honey with a cold knife. In the fall of the year, in our neighborhood, it is pretty cold at night, and after the honey is taken from the hive a little while it gets cold and thick, and the knife instead of cutting breaks the comb. Now, when the honey is fresh from the hive and warm, a cold knife will do splendidly. I think when combs are not off the hive too long, and are warm, the cold

knife is all right; but you let them rest awhile, and the honey gets thicker, you will have to use a warm knife. I would not recommend extracting the honey when the combs are cold. It is much more difficult to uncap it, and much more difficult to extract the honey. We always extract the honey as soon as it is off the hive, for when it gets cold, it is much more difficult to handle, and, of course, a man who extracts a good deal must consider all these things.

Prof. Cook—I would like to hear from Mr. Dadant on the question of the hybrid queen for breeding purposes.

Mr. Dadant—I think we have just as good queens among the Italians as among the hybrids.

Dr. Miller—But the condition is that you have one that is superior to anything else in the apiary.

Mr. Dadant—Well, in an impossible case we could have impossible results. (Laughter)

Dr. Miller—More than once I have had hybrids that were superior to any of the pure ones

Mr. Dadant—I have heard more comparison between Italian and Cyprian. I have had Cyprians, quite a good many. I have noticed one thing which perhaps some of you may not have noticed. There are exceptions to all the rules, however. The mating of a cross Cyprian queen with a drone from the quiet Italian colony will produce a mild and gentle type of bees, the moral qualities coming from the

male, while the other qualities come from the female. These seem just as quiet to handle as pure Italians. But take the Italian queen and cross her with a black Drone, and you have the crossiest bees, unless it is the Italian queen crossed with the Cyprian drone. I think, as a rule, it will prove to be so that the mating of a-quiet race on the drone side will produce quiet bees.

Albert B. Mellen—Will Dr. Miller please tell us what he would do about breeding from a hybrid queen that excels all others in his apiary?

Dr. Miller—To get even with Mr. McIntyre, I would better say, I won't tell. I will tell you what I have done. The colony that produces the largest yield of honey this year will be marked, and most likely be bred from next year without any regard to stripes or color.

Frank Benton—The question is, How to make money producing extracted honey? Now, of course, all of these points, as to the use of the hot or cold knife, the super with shallow combs, or deep combs, and so on, all come into consideration; also the question of bee-escapes. All these are mechanical points, you may say, things that will settle themselves for each man. But I do not think Mr. McIntyre brought forward strong enough some large points—vital points—as compared with these. The question is how to get a large quantity of honey. Now, I believe we are losing tons and tons of honey by prejudice against certain strains or types of bees. A man that produces 20 tons of honey might produce 30 if he had the right kind of bees to gather it; and where he is producing 20 tons of honey he can increase that by half by care in the selection of his bees. The right bees for the locality, and the right queens, might enable him to gather an added 50 percent.

Now, I will come down to the particular point I wish to bring forward. The Cyprian bees possess more energy than any other race of bees I know of. I handled them for years in the Island of Cyprus, extensively there and also in other countries. They have a disagreeable stinging trait. Their tongues have been measured by a great many different people. I have done something in that direction which has been confirmed by others. Their tongues are the longest of any bees—at least, as long as any of the Eastern races, and longer than any other European types. They can fly farther, have greater wing-power in proportion to the size of the bodies. There is large wing-spread that has come through centuries of dwelling in the Island of Cyprus. I think it wrong to reject that type of bees, because they possess more power in transmitting their race or progeny than any other race I know of. With this element we should not ignore a strong wing quality, and the fact that they are among the most prolific of European races, or beyond any type whatever. Of course, we want a bee that we can handle, and that brings the difficulty.

We have in Austria a type extremely gentle. Another type in southeastern Russia is an extremely gentle bee. Both of these bees are prolific; both of them good honey gatherers.

Now, Confining myself more particularly to the Carniolan—the bee of Europe—this is the hardiest bee that I know anything about. If we can eliminate some of its poor qualities and unite it with the Cyprians, we would have the ideal bee. I have conceived that notion some 15 years ago, that we might, by crossing these bees, get the good qualities of each combined. While I was in Munich,

Gerr  
of Cy  
there  
that  
above  
super  
I hav  
exper  
I hav  
later I  
me a  
that  
The  
but no  
follow  
crosse  
then  
times  
a sma  
bees  
country  
and wh  
rapidly  
Where  
be an  
told m  
blood  
and inc  
same ti  
have sai  
I am me  
we are l  
on acco  
McIntyr  
bees; th  
they are  
bees tha  
accout c  
just as m

Now,  
Carniolan  
on them.  
Carniola,  
colony th  
some ye  
conceived  
bee with  
very nice  
departure  
selected a

to the  
ing for-  
posses  
race of  
nem for  
exten-  
other  
greeble  
s have  
many  
some  
as been  
ongues  
at least  
races  
ropean  
have  
tion to  
ere is  
come  
in the  
wrong  
ecause  
smitt  
n any  
h this  
trong-  
they  
ic of  
type  
a bee  
rings  
e ex-  
e in  
mely  
are  
oney  
par-  
e of  
that  
can  
ities  
we  
I  
ars  
ese  
uch  
sh

Germany, I had sent a large number of Cyprian bees, that had been mated there, back to me. I tested them in that raw region, nearly 2000 feet above the sea-level, and I found them superior to any others we had there. I have printed the results of these experiments in some circulars which I have brought with me. Two years later I went to Austria and took with me a pure Cyprian queen, and had that mated to Carniolan drones. The same experience came to me, but not content with that, still I have followed down many and various crosses between these two races since then up to the present time, sometimes a large number and sometimes a small number. I have sent these bees into different regions of this country, where the winds are high, and where it is important to breed up rapidly in the spring, particularly. Where alfalfa, the first crop, would be an important item, people have told me that these bees with this blood increased their honey-yield, and increased their colonies at the same time very materially. Some have said they doubled their colonies. I am merely calling attention to what we are losing by rejecting these bees on account of their color, etc. Mr. McIntyre did not like to cross these bees; they would be rejected because they are hybrids, but would produce bees that would be acceptable on account of their color. Are they not just as much hybrids?

Now, it is just as easy to breed Carniolans that have yellow stripes on them. I have traveled all over Carniola, and have never seen a single colony there where there were not some yellow banded bees. and I conceived the idea that a grey-colored bee with yellow queens would be very nice to have, and before my departure from that province I selected a set of yellow queens that

would produce entirely grey workers, and the tendency was to have the yellow crop out on the workers. I tried to avoid that, but you see it would be to produce yellow Carniolans, and we would not have those hybrid bees, would we because they are all yellow? Now that cross-bred bee is not cross. It is amenable to smoke; it has the energy of the Cyprian, the prolificness of the Cyprian, and the hardiness of the Carniolan. We have, therefore, all the really good qualities and important qualities of the Cyprian, including their great wing-power and their energy, their disposition to fly farther, their long tongues, and the hardiness of the Carniolans. By continuing to mate pure Cyprians to the pure Carniolans, I think a constant type could be established, and I find that it preferable to an unmixed type. I find in the spring, when the wind is cold, and many of the bees that leave the hives will drop down on the ground, these cross-bred bees, these hybrids, will actually get back into the colonies, and will fly strongly when others do not dare venture out, and they will gain something. The bees that do not get back into the hive will make a great difference in the honey produced. Coupled with all these other qualities, I am prepared to say that with all my experience of 11 years in foreign countries, and some 30 years since I began handling bees, I have not found anything to excel these bees. I believe the most important point in the production of honey is care in the selection of strains or types of bees.

Secondly, I requeen in the latter part of the year. I take pains to see that the new queens are bred from the very best queens I can produce. I select only large, prolific queens. I want those that will produce 20 to 25

queens to the brood. With these, I believe, we have gotten the two most important points in the production of extracted honey.

J. K. Williamson—Several years ago I put about 30 Carniolan queens into the apiary for Mr Wheeler. My partner and I afterwards bought that apiary. The Carniolan queens, perhaps, were mostly superseded before we bought it, but the nearest Carniolans in the apiary after we got it were the bees that brought in the biggest amount of honey.

H. H. Moe—I would like to ask Mr. Benton how many queens he rears out of a good, strong colony—how many cells does he start?

Frank Benton—Well, I sometimes start 100 in a colony to get good, well developed queens. I have seen in the hives of some of these Eastern races of bees, where they had prepared sometimes as high as 250 cells, nearly all producing well developed queens. It is a mistaken idea to suppose a large number could not develop. Simply because our Italians and blacks do not produce a large number is no reason why we should not get them. I do not hesitate to rear anywhere from 50 to 100. I would not hesitate to rear 200 if I had powerful colony.

Mr. Hyde—My views are the same. We have at present five or six different strains, and we try to find out which are the best for all purposes. Cyprians are good bees for honey, but we can not stand the temper. Our men do not like to work where they are liable to be stung so often. We have decided to use nothing but Holy Land bees for our purposes.

Frank Benton—I may say I spent a good many days in Apiaries in Palestine, and at the same time I had an apiary of over 200 colonies in Cyprus, and worked most of the

time handling these bees with perfect impunity, while in Palestine I had to use clouds of smoke. Now, Syrian bees and bees of Palestine differ very much, and in the first importations brought to this country, in 1880, these two races were mixed, badly mixed, and the term "Holy Land" now covers them both. They differ considerably, and in temper are far inferior to the Cyprians. An occasional Cyprian colony shows as bad temper as a large number of bees of Palestine, but, all in all, the Cyprians are decidedly better tempered than Holy Land bees. Where that does not hold good, the Cyprians have become hybridized, and likewise the Holy Lands, and this has brought in the gentle element. I have tested that.

Mr. Hyde—I would like to say that Mr Benton must have gotten his from a different source than that from which we got ours. They are very gentle bees. I think they are as gentle as Italians; that is, pure Holy Land bees. I am not talking about something mixed up with Cyprians.

Mr. Benton—I think you got them from Mr. Baldensperger, in Jerusalem. That is where I established an apiary myself—that very apiary. Further, I have had constant experience with these bees for years, and I have been in his apiary and travelled near them, and moved all their colonies, some 600. They were supplied to me all the time I was in the East, afterwards when I was in Munich, Germany. It is just possible that you got a gentle type of that bee. By the side of it you may get fierce ones. The same thing may occur, perhaps, with the Cyprians, though perhaps, in four cases out of five you will get rather easily managed ones, while in the fifth, rather fierce ones.

Mr  
that  
Mr. I  
Mr  
one l  
half a  
were  
could  
else, t  
while  
were  
were  
I thin  
with it  
Frat  
good c  
the sar  
We mo  
a numb  
were se  
there i  
handle  
the sam  
as the c  
has a lo  
A Me  
it not al  
that is n  
generall  
whole se  
Mr. M  
are getti  
soon get  
ally, wh  
have ple  
get over  
Mr. A  
experien  
ges gave  
moved it  
wheat fie  
right awa  
pace wer  
were bett  
ing in the  
miles mo  
getting m  
get what I  
they they  
Mr. Co

perfect had to Syrian er very rtations 1880, badly Land differ are far An oc- ows as of bees ne Cy- npered e that yprians d like is has ent. I o say ten his n that ey are ey are pure alking with them Jerus- lished piary: exper- and ravel their e sup- n the Muns- sible that get may rian, t of man- ther

Mr. Hyde—I would like to say that I got my stock of Cyprians from Mr. Bentin! [Laughter.]

Mr. Delano—I had 200 colonies in one location and decided to move half away. The 100 I moved away were so cross all that season that I could not go near them, nor any one else, unless fully prepared to do so, while the others in another location were not cross. Why was it? These were all reared from the same queens. I think the blood has nothing to do with it.

Frank McNay—I think there is a good deal in location. I have had the same experience as Mr. Delano. We moved a portion of the apiary a number of miles away, and they were so cross all the time they were there it was almost impossible to handle them. On returning them to the same apiary they were as gentle as the others. I think the location has a lot to do with it.

A Member—My question was, Is it not always the case that an apiary that is moved to a new location is generally cross for awhile, or for the whole season?

Mr. McIntyre—Not always, if they are getting plenty of honey they will soon get over their crossness. Generally, when I move it is when they have plenty of honey, and they soon get over their crossness.

Mr. Andrews—That has been my experience, exactly. After the oranges gave out this year my son and I moved 150 right over to the buck-wheat fields. They began working right away, and 82 we had in one place were moved twice, and they were better-natured than when working in the orange flow, only a few miles move. But if they are not getting much honey, and it is hard to get what little they do get it is very likely they will become cross.

Mr. Corey—I don't think Mr.

Mendlesons's bees stay in one place long enough.

Mr. Moe—After listening to Mr. McIntyre's experience in hiving bees, I would like to ask if he has any difficulty with after-swarving, or secondary swarming; and, also, if he has had any experience with young queens reared in the same colony. If they have any disposition to swarm during that season, as well as introducing his queens.

Mr. McIntyre—I have very little difficulty with after swarms. That is why I use the queen excluder. By setting the brood-chamber out with a very few bees in it, and then introduce a cell ready to hatch, there is hardly ever an exception to this rule.

Mrs. D. A. Higgins—I always think the crossness depends a good deal upon who handles them, and how they are handled. We never have any trouble with cross bees. I think the way they are handled has a great deal to do with it.

J. K. Williamson—I wish to ask if there is any Cyprians blood in nearly all of the light-colored strains of bees. It always seems to me they are crosser and more vindictive than any of the dark strains that I get.

A. I. Root—In Cuba, last winter, they complained a great deal that when they had a long continued flow of honey the worker bees would fill all the cells with honey to the exclusion of the brood, and the colonies would get depopulated. I laughed at the idea that that would stop queens from rearing brood. It seemed as though the bees filled up everything with the honey. I said to them, We want some Holy Land bees. I used Holy Land bees years ago, and they would go to work at the approach of winter and fill up the cells with brood. I would like to ask if you have any trouble in

California, when there is a very large flow of honey, with the bees filling the combs with honey to the exclusion of the brood?

Frank Benton—I have shown this condition with any of these Eastern bees, and I ought, perhaps, to supply from the Cyprians and Holy Lands to a certain extent. I merely intend that, I think, as crossing material and breeding material, the Cyprians are to be preferred to the Holy Lands, and that rather gentle Cyprians can be found on the average. Now, when it comes down to the the question, any of these Eastern races will introduce that element of prolificness, swift flight, strong wing power, energy in collecting, and if we can only avoid that sharpness of disposition by the introduction of gentle qualities from the male element, then we could meet all these conditions and get bees where there was an early flow, and we want them to go through the winter in powerful colonies; where the flow comes especially during the winter they would be especially valuable in keeping up the brood-rearing, storing their surplus in supers, and keeping the body of the hive well filled, whether the honey is coming in in that manner.

Another point, their continuous industry causes them, when other bees slack up and do nothing, to keep up enough to keep up the honey. That is not the case with the Italians. Then their lack of hardiness causes them to dwindle easily, and we prevent this by combining with one of the Eastern races, whichever one of them be preferred.

Now, just one word more. I mentioned the Caucasian race of bees. I have had very little experience with them, but I am very favorably impressed with them, and it is quite possible that we will have there a

moral element that will be preferable even to the Carniolans.

T. O. Andrews—It seems to me that we are devoting a sight of time to questions that have been gone over time and time again. There are a thousand and one important questions relative to foul brood, treatment of foul brood, and things that are vitally important. As to this question of Cyprian bees—"Holy Terrors," I call them—I was very glad when they decided they would not live in my climate. Every one to his notion in this, just as in the matter of the hot knife or cold knife. I move that we proceed to election of officers, and then to the question-box.

The following officers were then chosen to serve for the year 1904:

President—J. U. Harris, of Grand Junction, Colo.

Vice-President—C. P. Dadant, of Hamilton, Ill.

Secretary—George W. Broadbeck of Los Angeles, Calif.--A.B.J.

### Instincts Acquired by the Worker Transmitted by the Queen.

BY DR. A. W. SMYTH.

The instincts of animals, however acquired, are always transmitted through parents to their offspring; but in the case of bees and a few other insects this natural law would seem to be reversed.

If we introduce into a colony of native bees a queen bee from Minorca, the whole colony will soon be composed of Minorcan bees. Towards the end of summer the worker bees will barricade the entrance to the hive by building a series of columns of wax and propolis across the entrance, leaving openings between the columns for the bees to

pass  
worl  
a pre  
wint  
actua  
these  
whol  
How  
work  
to the  
by th  
for tl  
acqui  
they a  
her b  
one wa  
Wor  
drones  
the in  
through  
worker  
rule, a  
variatic  
surroun  
tion. 7  
time pi  
rule. 7  
bees wo  
were n  
from 01  
this n  
acquired  
the drom  
means of  
ary ins  
mother.  
essional  
what he i  
the mater  
plans of  
perhaps, i  
may not  
imagine.  
sometimes  
order to b  
understood  
We as y  
and the ev  
still a m  
the worke

pass through. This is a device of the worker bees in Minorca to keep out a predatory beetle that preys on their winter stores. The queen takes no actual part in the construction of these barricades, and they seem to be wholly a device of the worker bees. How is it that the instinct of the worker bees to barricade the entrance to their hive comes to be transmitted by the queen? How is it possible for the queen to transmit instincts acquired by the worker bees, unless they are in some way transmitted to her by the workers? There is but one way in which this can be done.

Worker bees occasionally beget drones, and these drones transmit the instincts of the worker bees through the queen. The laying worker is an exception to the general rule, and the survival of exceptional variations from adaptability to the surroundings is what we call evolution. The exceptional variations in time predominate and become the rule. The intelligence of the worker bees would be of limited use if there were no means of transmitting it from one generation to another. This means of transmission is acquired by laying workers, whereby the drones, so produced, become the means of communicating an hereditary instinct through the queen mother. The product of the professional queen-raiser is not always what he imagines. He has not all the material requisite to carry on the plans of the worker bees, failing, perhaps, in the laying worker, which may not be as accidental as we imagine. Doubtless queens are sometimes killed by the workers in order to bring about a harmony not understood by us.

We as yet know little about bees; and the evolution of the worker bee is still a mystery. It is doubtful if the worker bee is wholly a work of

nature; she may be a work of art. Darwin states that the mule is more intelligent than its parents, and is an instance of art improving on nature. Worker bees, in every respect, are analogous to mules, although they are not apparently hybrids. The several developmental stages in the growth of these insects may have given the original queen bees an opportunity of experimenting on their progeny. They found that by starving their offspring while in the larval stage, the nature of these developing insects was greatly altered. The sexual instinct became suppressed, and the social instinct more highly developed, accompanied by an increased industry, an aptitude for adapting means to an end, and an insatiable desire for gathering and laying up stores. May not millionaires be the artificial fruits and flowers of starvation in the human hive?

That the present relation of the worker bees to the colony was not the original one is highly probable. The limited harvest time, and the necessity for having large numbers to enable the colony to survive the winter and defend the home from enemies, kept increasing the workers until the magnitude of their number changed them from drudges into rulers, and converted the queen into an egg-laying slave, allowed to live, and protected by the workers only in furtherance of her own existence.

That the arguments briefly stated in this article are suggestive and not conclusive, the writer is well aware. However rigid and fixed Nature's laws may appear in the ignorant world, in organized beings they are wonderfully elastic, and if fixed at all, fixed only for a time. We turn over a leaf in the book of Nature only to find that there is still another page to read.—The Irish Bee Journal.

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.

DECEMBER, 1903.

**EDITORIAL NOTES.**

We are indebted to Editor P. J. O'Rourke, of the Trenton Advocate, for his kindness in lending the two electros illustrating the town of Trenton, which we use in this issue.

We are looking for a large attendance of Ontario Bee-Keepers at Trenton on December 1st, 2nd and 3rd. The C.B.J. will be glad to meet old friends and to become acquainted with many new ones. We have put on our very best dress for the occasion.

By what we learn from reports of some local societies, as well as from private sources, some very important matters in connection with the Association and the Foul Brood Act are to be brought before the meeting. We trust that such will be dealt with carefully and wisely, and for the highest advancement of the industry, and that all bitter personalities that would tend to destroy the harmony of the meeting be kept properly in check.

Mr. Wm. McEvoy is proposed by Mr. N. E. France, Plattsville, Wis., as a candidate for election to succeed Mr. E. R. Root (resigned) on the board of directors of the National Bee-Keepers' Association, U. S. Mr. France says that Canada has sixty members and many more ready to join at their next annual meeting, and should have a member on the board.

Editor Root says:—I shall be very glad to see Mr. McEvoy elected in my place, as I can not serve, even if elected. He is a very hard worker, and is greatly interested in every thing that pertains to the best interests of beedom. He will be a most excellent man on the Board, and I shall be sincerely gratified if he is elected.

Prof. Harrison, Bacteriologist of the Ontario Agricultural College, has kindly favored us with the following letter in response to our request for his opinion regarding certain failures that have occurred in the treatment of foul brood by formalin:—

Guelph, Nov. 12th, 1903

Mr. W. J. Craig,  
"Canadian Bee Journal"  
Brantford, Ont.

Dear Mr. Craig,—

I have received your letter of November 10th with your editorial notes on "Formalin and Foul Brood."

I am sorry to say that I have not been keeping track of the use of the Formalin treatment in the Bee Keeping Journals. I occasionally glance through the American Bee Journal and now and again I see "Gleanings," but I must say that I have not noticed very many opinions



posed by for or against the use of the For-  
 Wis., as malin treatment. From your letter  
 succeed I understand that formalin disin-  
 on the fection, has not been effectual in cas-  
 National es of foul brood where the cells had  
 S. Mr. been filled with honey, but I must  
 as sixty say that in a number of experiments  
 ready to I have actually noted a destruction  
 ting, and of the spores of *B. alvei* in cells fill-  
 e board. ed with honey. This may seem to  
 be very you rather an extravagant claim to  
 ed in my make for Formalin disinfection, but it  
 even if is no more striking than many of the  
 worker, ex- periments performed by Dr. M. P.  
 n every logists to the State Live Stock Sani-  
 est inter- tary Board of Pennsylvania, and of  
 a most the Veterinary Department in the  
 l, and l University of Philadelphia. These  
 f he is gentlemen in a long series of experi-  
 ments on the working of Formrlin  
 and using only one ounce of the  
 drug to every one hundred cubic  
 feet of space killed the cultures of  
 various diease-producing germs (a-  
 mong them the spores of the Anthrax  
 germ) which were placed between  
 muslin, put into sealed paper envel-  
 pes and placed between layers of  
 woollen blankets. This is certainly  
 a severe test and speaks well for the  
 efficiency of the Formalin vapor.

In cases where the diseased  
 matter has become dried up and ad-  
 hering to the side of the cells, I am  
 confident that Formalin gas, if prop-  
 erly applied, will kill the spores,  
 even when situated in these dried-up  
 masses. However, it might be ad-  
 visable in such cases to sprinkle the  
 combs with water as the disin-  
 fecting power of the gas seems to be  
 greater when there is moisture and  
 some warmth, (not over 100°F.),  
 present.

I do not think that temperature  
 has anything to do with the germin-  
 ation of the spores in the dried-up  
 foul brood matter unless moisture  
 and suitable food are present.

Mr. Weber states "The trials that  
 the trials I made last year in the end  
 of August, during September and  
 October, did not show up any signs  
 of foul brood in the early part of  
 spring until the the extremely hot  
 weather set in, which seemed to melt  
 this dried-up matter, exposing the  
 germs, and, consequently bringing  
 on a re-action of the disease." I do  
 not think that this could take place  
 unless moisture was present, as these  
 dried-down masses, which are largely  
 composed of the chitinous portions of  
 the larvae, further, one finds, as a rule,  
 comparatively few living spores in  
 this matter. If foul brood was in  
 the neighborhood, or in the apiary,  
 there is a possibility of re-infection of  
 a treated hive from such a source.

I think that a large number of  
 failures have been due to lack of  
 proper precautions in obtaining For-  
 maldehyde of proper strength, or in  
 not disinfecting in tight boxes, or in  
 not leaving the gas long enough in  
 the disinfecting chamber.

I noticed sometime ago that there  
 was some discustion as to the name  
 of the drug, The name "Formalin"  
 was given by the Chemische Fabrik  
 auf Actien Vormals E. Schering, of  
 Berlin, Germany, to "A Forty per  
 cent. Solution of Formaldehyde in  
 water," On account of the brevity  
 and convenience of the name "For-  
 malan has been used more generally  
 than "A Forty per cent. solution of  
 Formaldehyde gas." Formaldehyde  
 is a gaseous body which is prepared  
 by subjecting Methyl alcohol to oxi-  
 dation, It is readily absorbed by  
 water and for this reason is put on  
 the market in form of an aqueous  
 solution. I am giving this explana-  
 tion because the firm of Schering  
 claim the name "Formalin" as a trade-  
 mark.

Very truly yours,

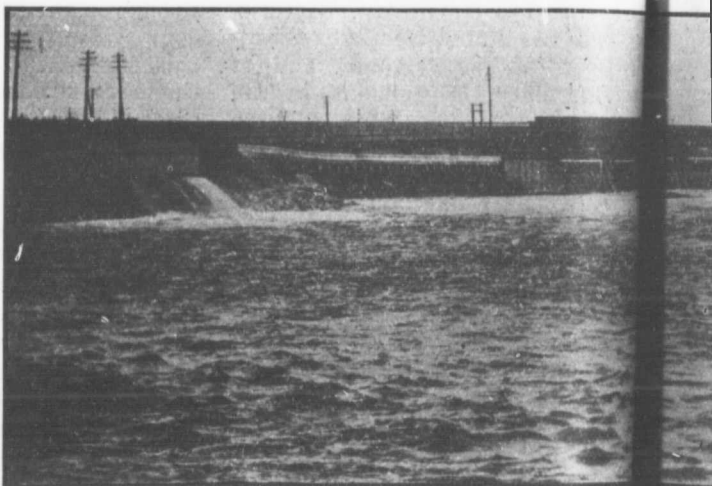
F. C. Harrison.

# Trenton, Canada

Convention Town of the O. B. K. A.

The town of Trenton in Hastings county has been selected by the members of the Ontario Bee Keepers' Association as their meeting place for 1903. Trenton is on the main

waters forming splendid harbor. The head offices of the Central Ontario Railway Company are at Trenton and that railway operates lines south-eastward through the fertile county of



Water Power, Showing Dam

line of the Grand Trunk Railway 101 miles east of Toronto and 12 miles west of the city of Belleville. Nature has been very lavish in her gifts to this ambitious little town and those gifts have been supplemented by the enterprise of her citizens. She possesses one of the finest geographical positions in the Dominion of Canada, and offers inducements to the manufacturer or general business man such as can be obtained in but few places in Ontario. The town is built on the banks of the river Trent and the shores of the far-famed Bay of Quinte, the confluence of the two

Prince Edward as far as Picton and northward to Coe Hill and Bancroft tapping the rich mineral land and vast timber belts. The Murray Canal which connects the Bay of Quinte with Lake Ontario via Presque Isle Bay brings a large amount of shipping to the very harbor or Trenton and the entrance of the canal is within two and one-half miles of the town. The Central Railway crosses not only the main line of the Grand Trunk but also the Canadian Pacific and the Midland Division of the former road. It will thus be seen that Trenton possesses unrivalled shipping advan-

age  
that  
tow  
B  
pora  
town  
of n  
valu  
the y  
In  
ment  
front  
Sepa

first-clas  
House.  
The to  
The Tre  
Company  
plant wh  
to every  
Trenton  
the west  
his summ  
he had of  
ny Cana  
bubbling  
burst from  
the town h  
ary purp

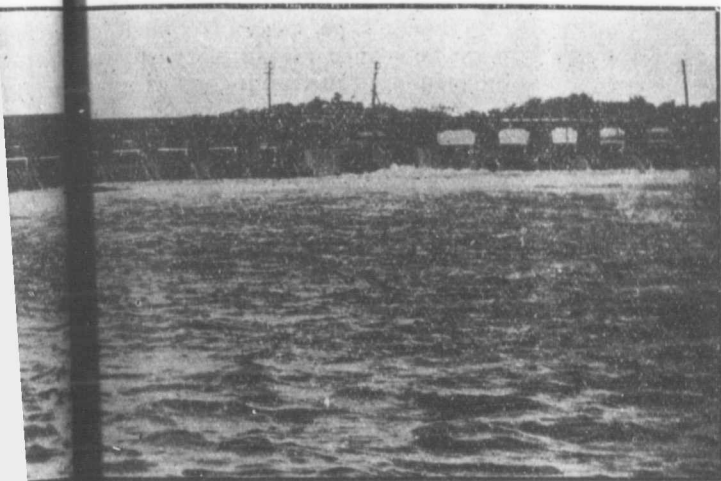
ages both by rail and water and in that respect is second to no other town in Ontario.

Briefly, then Trenton was incorporated as a village in 1852, and as a town 1881, and now has a population of nearly 5000 souls. The assessed value of the property in the town for the year 1901 was \$1,250,000.

In the matter of public improvements Trenton stands well to the front. There are High, Public and Separate schools, six churches, and a

The summer months bring a large number of tourists who delight to row over the placid waters of the Bay or fish for bass, pickerel, or maskinonge. Steamers ply regularly on the waters of the bay, and over a dozen passenger trains stop daily at Trenton this affording easy and quick communication with all points east, west, north and south.

Trenton is in the very heart of one of the finest farming districts in Ontario. Trade is drawn from the



View of Trenton, Just Below G. T. R. Bridge

on and first-class Post Office and Customs House.

The town is lighted with electricity. The Trenton Electric and Water Company having a very complete plant which renders effective service to every part of the town.

Trenton has a charming park and to the west of the town a mountain: from its summit an enchanting view can be had of the Bay of Quinte, the Murray Canal and surrounding country. Bubbling springs of purest water burst from this mountain and supply the town both for drinking and culinary purposes.

counties of Hastings, Northumberland, and Prince Edward while the Central Ontario Railway brings down very large numbers from the back townships and villages not only to sell their commodities but to purchase largely from the enterprising merchants of the busy town. The district is one of the best fruit districts in Eastern Ontario, and not only are many thousands of barrels of apples shipped annually there from but two large canning and fruit drying establishments are kept busy handling the products of the district.

Trenton is represented by two weekly

newspapers—The "Courier" (Liberal) and The "Advocate" (Conservative). Both are published on Thursday morning of each week, and will compare favorably with other publications of their class in Canada.

As a bee keeping district Trenton and the vicinity ranks among the best in the Province. Here is the home of our good friend, Mr. C. W. Post who has made bee keeping his occupation for years and has made



Mr. C. W. Post, Trenton, Ont.

more than a living. Mr. Post became interested in bees in 1878 and gradually increased until he has now between 300 and 400 colonies. Some miles north we find Mr. Warrington Scott of Wooler, Mr. B. O. Lott of Anson, Mr. Chisholm of Walbridge, and Mr. P. G. Lott of Springbrook; and across the bay in Prince Edward County, Mr. Wm. Peck of Aubrey, all extensive bee keepers and members of the O. B. K. A. We are looking for a very profitable time at Trenton on Dec. 1, 2 and 3.

## Notes by the Way

By G. A. DEADMAN.

### MARKETING HONEY CONTINUED.

As promised in my last article I will now endeavor to give fuller particulars regarding the system of selling honey by samples. The illustration will give a fair idea of the sample dishes and the cases for holding them. The cases are made of basswood and measure twenty-six inches long, fourteen inches wide and fifteen inches high. Each contains eight trays or shelves and these hold fourteen dishes each. The case on the left has one of these empty trays leaning against it. It has holes in it in which to place the sample dishes. A tray with dishes placed in position can be seen on the top and some others partly withdrawn from the case. The case next to this shows an end view with the trays and dishes in their places. The door which hangs at the bottom is let down. Two shawl straps are used in carrying the package; when two persons carry it the handles are pushed apart otherwise the two are close together and used as one. The whole outfit weighs forty-four pounds. Each tray has cleats underneath not only to strengthen them but when nailed so as to project over the edge of a row of dishes, serve to keep them from getting out of place so that no matter which way the cases turn they may move a little but not sufficient to do harm. These cleats allow the necessary room when serving comb honey.

The little dishes in quantities can be purchased at about 70 cents a dozen. They not only do not hold too much but show a little to the very

best advantage. They are a German china nicely decorated which has caused more than one recipient to remark "Oh what a pretty little dish." It is much better to have it thus; much better than something common or to be large as the ordinary sauce or fruit dish which would hold enough for a whole family. I was a little afraid they would get broken in transit so had some printed labels pasted on the package as "Glass"—"Handle with care", "Keep Level" etc., Although very light yet these cases are very strong and as the dishes cannot get out of their places to touch one another, no breakage has ever occurred, although they have been handled considerable and have travelled over three thousand miles.

There are two ways of selling honey from sample. One is to deliver it yourself and the other is to hand the order to the grocer whose name appears on the order card. When one has a horse and rig and lives not too far away and has time for it then it may pay better to sell independent of anyone and make delivery yourself. In this case you have all the profits and may possibly hold the trade better. In this event you could either have a supply with you which you could deliver when you call for the dish or make a separate trip with it.

In speaking of the profits I refer to the advance over what we would sell wholesale to the grocer. This should be say, 25 per cent. Honey that we would sell wholesale at 7½ cents per pound delivered, we retail at ten cents. Some would call this 33 per cent. Those who have no idea of the expenses may think that this is too much. We will not discuss that point just now. This 25 per cent profit should cover the cost of printing and stationery, sampling, calling and delivering, which of course includes your own salary. The delivering and collecting pay

might be considered about one-half of the whole, although costing much less: however, when the orders are handed over to the grocer we divide the profits with him. This should be satisfactory to him as all he has to do is to deliver and get the pay. It is understood however that this division of profits is only on the first order. The repeat orders he of course gets all the profits as your part of the selling is done. If you decide to do your own delivering I would recommend keeping all your order cards and each following season mail your customers a post card or a circular stating you are about to make another delivery and that you would be pleased to have their order again. It would be well to state about the time you expect to do this. In this way supposing you did not quite pay expenses of selling the first year you would make up for it in after years. There in no better way of introducing and securing a home market for honey. It is especially applicable when you want to get the grocers interested. They will handle without persuasion what you have sold and will require more, not only for repeat orders but for others who may have changed their mind and decided to try some. I only had occasion to sample once and that was in Winnipeg. If I had the time I could make big money buying honey and selling it in this way, and not only would the sales and consumption of honey be largely increased but one could work up a large business and do well by adopting this system. If a sufficient number of the readers of the C. B. J. are interested enough to want more light on this subject and you desire it I will give a chapter from my own experience in this work. Some things to guard against together with fuller particulars. In another issue I hope to give other uses for these sample dishes.—Brussels, Ont.

## Thoughts and ....Comments ON CURRENT TOPICS

By a York County Bee Keeper.

### SWEET CLOVER AS A HONEY PLANT.

A correspondent in "Gleanings" estimates that three acres of sweet clover that was with in reach of his bees, was worth \$30.00, i.e., \$10.00 per acre; and contemplates renting land and sowing more of the "stuff" for bee-pasturage. Of course Mr. A. I. Root, who is an enthusiastic champion of the plant; appends a commendatory foot note expressing appreciation of a report stating that sweet clover was worth at least \$10.00 per acre as a honey plant alone.

Much as I admire friend Root's ideas and work, when it comes to the question of sweet clover, there I most decidedly disagree with him. While not in a position to express an opinion as to its exact value as a honey plant, owing to the limited quantities grown in our vicinity, feels quite competent however from experience, to venture an opinion as to its undesirability on good arable land.

Some 25 or 30 years ago, my grandfather, an enthusiastic bee keeper, was induced to sow a few acres for the bees. The crop was allowed to seed and even since that time the stuff has been a nuisance in the field where it was sown, in fact this past harvests' some two or three acres sown in spring wheat were so infested with the rank growing clover that it was almost impossible to cut it with the binder. About one quarter was cut with the mower and burned. Mr. Root would probably say the land has not been well tilled. For answer would say that this section will probably compare favor-

ably with any other part of the continent as far as good farming is concerned. Ardent as I am in all matters pertaining to apiculture; when it come to the question of scattering sweet clover seed in a good farming community would draw the line. Would consider I was doing a grave injustice to my neighbors, with the chance of obtaining little, if any remuneration for my trouble.

### BEST RACES OF BEES FOR HONEY.

During the recent convention at Los Angeles quite a discussion took place as to the merits of the different races of bees. Dr. Miller I believe as well as some others, stated that a hybrid colony proved to be exceptionally good honey gatherers, they would not hesitate to breed from queen of said colony.

This brings to my mind my experience with a colony of genuine "blacks" this past two seasons. A year ago they stored something over 350 lbs and this past season over 250 lbs or choice clover honey, never swarming either year. Although they are quite irritable to work with, yet, this fall I took extra care to put them in good condition for wintering, for notwithstanding the fact that there are some choice queens of both the Italian and Carniolian races in that yard, would not care if the whole apiary were of the strain mentioned even if I did have a little extra stinging while working with them.

### SHALL WE KEEP MORE BEES?

Editor Hutchison in November "Review" again brings up this topic before the readers of that journal.

There is no doubt that friend Hutchison has been the means of persuading many bee-keepers to increase their stock, and as clover honey is now hovering somewhere around 6c a pound, perhaps it would

he in order for him now to tell us how  
 is to get a better price for our product.  
 all NOT ALWAYS WISE TO BE CAUTIOUS.  
 e; when "A man sometimes waits until he  
 attering "dead sure", before venturing,  
 farming only to find that some other fellow  
 he line who has taken a few chances has got  
 a grave there ahead, of him.

(Review Editorial.)

CRANKS NOT ALL DEAD YET.

Nov. 1st "Gleanings" informs us  
 that some of the large alfalfa growers  
 of Nevada are about to petition the  
 Legislature to enact a law prohibi-  
 ting bee keepers from locating apiaries  
 within flight of the alfalfa fields.  
 They argue "that a ton of honey re-  
 presents the essence of 200 tons of  
 alfalfa and that the hay is just that  
 much poorer in saccharine matter."  
 It stands to reason that you cannot  
 take all of this honey out of the hay  
 and still have it as rich in  
 saccharine matter", etc., etc. Ed-  
 wort says that the animus of the  
 whole thing evidently is jealousy.  
 No doubt the National Association  
 will take steps to see that no such  
 absurd legislation as proposed will  
 be allowed to be placed on the statute  
 books of the state.

THE TRENTON MEETING.

Ontario Beekeepers' Annual Con-  
 vention, Dec. 1, 2 and 3. Truly "we  
 spend our years as that a tale is told,"  
 We can hardly realize now that it  
 is now nearly a year since we last  
 met at Barrie. May our coming  
 meeting be a pleasant and profitable  
 one, free from the "stinging" that  
 has been characteristic of some  
 meetings in the past. From  
 private source have received in-  
 formations that there is likely to be  
 a breeze" over certain matters,  
 breezes of the right kind are exhil-  
 arating and helpful.

Not so, however, in the case of  
 waves of sarcasm and bitter feeling  
 that sometimes sweep over an as-

sembly leaving a blighting influence  
 worse in effect than that of the hot  
 winds that sometimes pass over our  
 Western praries. Too bad that bus-  
 iness matters cannot be discussed in a  
 businesslike manner without bring-  
 ing in little personalities and spite,  
 which are not commendable, and to  
 say the least not edifying to those  
 forced to listen, yet not perchance  
 vitally interested in questions under  
 debate.

Brant Co. Bee-Keepers Meet.

The annual meeting of the Brant  
 County Bee-Keepers' Association was  
 held in the Court House, Brantford,  
 on Saturday afternoon, Nov. 14. Mr.  
 Alex. Taylor, of Paris, presided.  
 Among the members present were  
 Mr. Jas. H. Shaver, Cainsville; Mr.  
 Chris. Edmondson, Brantford; Mr. J.  
 J. Hurley, Brantford; Mr. David H.  
 Tattersall, Grand View; Mr. W. Phelps,  
 Mohawk; Mr. W. Charlton, Brantford  
 Township; Mr. W. Grieves, Brantford;  
 Mr. R. F. Holtermann, Brantford; Mr.  
 W. J. Craig, Brantford, and others.

At the election of officers for the  
 ensuing year Mr. Chris. Edmondson  
 was appointed president, Mr. J. H.  
 Shaver, vice-president, W. J. Craig,  
 secretary-treasurer. Mr. Shaver and  
 Mr. Edmondson were appointed dele-  
 gates to the Ontario Bee-Keepers'  
 Convention to be held at Trenton,  
 December 1, 2 and 3.

The prevalence of the disease  
 known as "Foul Brood", in the county,  
 was discussed at some length, also  
 the appearance of Black Brood  
 in at least one apiary. It was resolved  
 by the members present that, in view  
 of this, the Foul Brood Act for On-  
 tario be so amended as to admit of  
 the appointment of assistant inspect-  
 ors in county and district associations  
 and that a copy of the resolution be  
 forwarded to the Minister of Agricul-  
 ture and to the Ontario Bee-Keepers'  
 Association.





did our nest as nice honey comes from a colony having frames filled with foundation as does from frames having many starters, so this fancy section of honey has no claim against frames filled with foundation."

"I thank you for this explanation. Now I should like your experience regarding the wintering qualities of the Italian bee as compared with the German. Can the former stand the cold winters we have in 43° north latitude as well as the latter?"

"It is said by some that they do not; and I used to believe that the black German bee was the hardier; but that was before I made any careful test in that matter. Some 25 years ago I began to look carefully into the matter of wintering; and during the experience of all these years since, I have become convinced that there is little if any difference in favor of either along this line. Some winters the blacks seem to do better; in others, the Italians come out ahead."

Now I wish to thank you again, and will come to the main item which brought me over to see you. A neighbor has given me some bees in box hives, because he thinks they are not stores enough to winter on. How can I feed these bees?"

"This could have been very easily done a month ago, and perhaps now, should there come a warm spell, or the usual 'Indian summer,' by boring a hole in the top of the hive, if there is none already there, and placing a feeder on top, covering all with wood, box, half-bushel, or something of that kind."

"What shall I use for this feeder? Have none."

"If you do not have a feeder, a suitable sized tin basin or pan will answer every purpose for such feeding."

After having the feed in the pan, pull up some rather short grass and scatter it over the top of the feed

for a float, to keep the bees from drowning, and set up a piece of section material in such a way that the bees can climb on it over to the feed. Above all, be sure that all cracks under and about your cover are bee-tight, otherwise you may have a bad time with robber bees, especially should it come off quite warm."

"Can I not put off feeding till winter just as well?"

"No! thousand times no! It has been put off already too long. Allow me to impress on your mind, so it will always stay there, that from September 20th to October 5th is quite late enough to feed bees."

"But suppose there come no warm days—what then?"

"If this should happen, and you find the bees are nearly or quite destitute of food when winter sets in, take the box hives to the cellar, turn them bottom side up, and, every three or four days sprinkle a few tablespoonsfuls of honey over the bees and combs, having the honey a little more than blood warm."

"Will the size of the colony make any difference?"

"Yes. If any are large colonies, or any seem to require more, use as much as half a teacupful each time, but do not use so much that they will not take it all, as that which runs down in the hive and stays there will sour, and cause the bees not to winter so well."

"What will be the chances if I can not feed them this fall?"

"Bees have been successfully wintered by feeding them while in the cellar in the way I have told you; but the chances are that a loss of feed and bees will be the result. Still, if I were in your place I would try it if no warm spell occurs, as you will gain in experience, even if you lose the bees."

"Would it do to leave them till winter, and then set them in a warm room under netting, to feed?"

"I should prefer not to try it, though you might one or two, if you wished to. From my experience in the past, such a procedure would cause them to become uneasy and to go to breeding, thus consuming large quantities of food, which would in all probability cause diarrhoea, resulting in death. There is a chance for such occurring where fed in the cellar, but not as much as in a warm room."

"Well, I must go now. Good day."

—Conversations with Doolittle in Gleanings.

### Annual Meeting of the Ontario Bee-Keepers' Association.

The annual meeting of the Ontario Bee-Keepers' Association will be held in the Town Hall, Trenton, on Tuesday, Wednesday and Thursday, Dec. 1st, 2nd and 3rd, 1903. All persons interested in the bee-keeping industry are cordially invited to attend.

The following program has been arranged for by the Executive:

#### TUESDAY

2 p. m. — Meeting called to order and minutes.

2.30 p. m.—Paper by B. O. Lott, Anson, Ont., on "The Advantages of Out-Apiaries." M. B. Holmes, Athens, Ont., will open the discussion.

4.30 p. m.—Question Drawer, Morley Pettit, Belmont, Ont., in charge.

Evening Session, 7.30 p. m. — Report by Honey Exchange committee and a debate on same by committee named by the President.

9 p. m.—Question Drawer, C. W. Post, Trenton, in charge.

#### WEDNESDAY

9 a. m.—Paper by Morley Pettit on

"Shook Swarms" H. G. Sibbar will open the discussion.

10 a. m.—Report of Bee-Keepers' Experiments at the Experimental Farm Apiary, by John Fixter. L. Byer will open the discussion.

11 a. m.—Address by F. W. Henson, Agricultural Department, Ottawa, on "The Benefits of Organization and the Extension of the Ontario Markets."

2 p. m.—Address by F. T. Shurtliff, M. A., F. I. C., Chemist Dominion Experimental Farms, Ottawa, on "The Storing of Comb Honey and Experimental Preparation of Vinegar from Honey."

3 p. m.—Election of officers.

4.30 p. m.—Open Parliament.

Evening Session, 7.30 p. m.—Address by C. C. James, Deputy Minister of Agriculture.

8.30 p. m.—Addresses by invited guests.

9.30 p. m.—Banquet.

#### THURSDAY

9 a. m.—General business.

10 a. m.—Unfinished business.

Any one having any new inventions or practical fixtures in beekeepers' supplies are invited to show or bring them to the Convention exhibition.

There will be a \$1.00 per day for those attending the Convention at the leading hotels, The Bleby House, St. Lawrence Hall and Hotel Aberdeen.

All delegates should purchase full single fare ticket from their railway agents and obtain a standard certificate for return rates.

WM. COUSE, Secretary,  
Streets

There is no use in turning a leaf unless we improve our writing at the same time, and out for blots.

ANNUAL MEETING

Of the Ontario Agricultural and Experimental Union

The Twenty-fifth Annual Meeting of the Ontario Agricultural and Experimental Union will be held at the Ontario Agricultural College on Monday and Tuesday, December 7th and 8th, starting at 1.30 p. m. on

Experiments in agricultural and horticulture have this year been conducted on nearly 4,000 farms throughout Ontario. The results of the carefully conducted work will be summarized and presented at the annual meeting, to which all interested in agriculture are invited.

The program shows that addresses will be delivered by Prof. C. C. Jones, Toronto; W. J. Spillman, Washington, D. C., U. S. A.; Dr. James Mills, Agricultural College, Guelph; Miss Martha Van Rensselaer, Cornell University, Ithaca, N. Y.; G. E. Day, Agricultural College, Guelph; Dr. W. H. Muldrew, Dean, MacDonald Institute, Guelph; G. H. Cook, Department of Agriculture, Ottawa and others,

Ladies' Sessions, under the auspices of the Women's Institute, will be held at the MacDonal Institute on Monday and Wednesday. On Monday evening, a public meeting of interest to all will be held in the College Convocation Hall.

Arrangements have been made for excursion rates to Guelph for the Experimental Union Meeting and the Provincial Winter fair. The excursion rates start on Saturday, Dec. 5th. Full particulars in reference to the program and the excursion rates, apply to C. B. Zavitz, Secretary, Ontario Agricultural College, Guelph, Ontario.

Simcoe County Bee-Keepers' Association.

The fourth annual meeting of the Simcoe County Bee-Keepers Association was held in Barrie on Saturday, October 17th, 1903. The meeting was largely attended and the papers and addresses were of a most interesting nature and brought forth lively discussions.

The morning session opened with the President's address, after which Mr. A. A. Bell, of Oro Station, Representative to Farmers' Institutes, addressed the meeting. He spoke of the good work that could be done by local bee-keepers' addressing meetings of Farmers' Institutes on the importance of the honey bee to the farmers and fruit growers, and the folly and injury of spraying fruit trees when in full bloom.

A committee to draft resolutions regarding the amendment of the Foul Brood Act was nominated and the president, vice-president and secretary with power to add to their number were appointed, who were to report at the afternoon meeting.

At the afternoon session the subject of Foul Brood and the best way to eradicate it was dealt with. This seemed to be the vital question of the day, and after a lengthy discussion the following resolutions were adopted:

"That this Association petition the Ontario Bee-Keepers' Association to rescind the resolution re-secrecy of Foul Brood inspection and that a full report of inspection of apiaries be published in the annual report giving name of owner, township and number of colonies in all diseased apiaries.

"That this Association petition the Honorable Minister of Agriculture to amend the Foul Brood Act so that wherever there is a county or dis-

trict Association of bee-keepers they will have the privilege of appointing a local inspector of apiaries, subject to the approval of the Minister of Agriculture, the terms of remuneration to be fixed by the Minister, said sub inspector to be paid out of the Provincial grant for the inspection of bees. Also to amend the Act to prohibit all inspection of apiaries after the 15th. day of July in each year."

The address by Mr. James Martin, Hillsdale on "How to Prepare for and Winter Outdoors" contained some valuable information on one of the most important points in bee-keeping and was discussed at length.

The question drawer was in charge of Mr. J. E. Holt of Newton Robinson who very ably and satisfactorily answered the many questions.

Some motions regarding minor matters were adopted after which the following officers were elected for 1904. President, J. R. Morrison, Guthrie; Vice President, James Martin, Hillsdale; Secretary Treasurer, Denis Nolan, Newton Robinson; Directors, North. Henry Johnson, Craighurst; East, C. H. Wilson, Hawkestone; South J. L. Warnica, Painswick; Representatives to Farmers' Institutes, South, J. E. Holt, Newton Robinson; East and West, A. A. Bell, Oro Station; Central, James Martin. Hillsdale: Delegates to Ontario Bee Keepers' Association Convention; J. C. Morrison, Guthrie and Denis Nolan, Newton Robinson.

Denis Nolan, Secretary.

### Mating in Confinement.

Broad-Gauge Plans for Experimenting Projected by the University of Pennsylvania—  
M. F. Reeve.

The Botanical session of the University of Pennsylvania in its investigation of the flora of the United States is about to begin a movement which will be far-reaching and of

particular interest to the American bee keeper.

Two of the professors have become interested in the subject of bee keeping through a series of experiments in which the noted expert queen breeder, Mr. Pratt, of Swathmore took an active part, relative to the mating of queens in confinement.

These experiments have been carried along quietly for several months in a building which had been put up for temporary biological experiments on the University grounds.

The professors who aided in the breeding tests propose to follow the honey flow from one State to another throughout the country, beginning with the earliest, and obtaining through correspondence or personal visits, samples of all the plants, grasses trees, and shrubs from which nectar is gathered by the honey-bee, together with the time when the flower or blossoms expand. In this way a vast amount of important data is expected to be accumulated for investigation and publication. The work, it is said will not take in Cuba, Porto Rico or the new possessions of the Sandwich Islands and the Philippines.

The men who will undertake the work are expert scientists.

The experiments in the fertilization of queens in confinement were partly the outcome of the investigations of one of the professors who taken up the question of parthenogenesis in connection with the history of plant lice. From this became interested in the life of the honey bee and with the able assistance of Mr. Pratt, who has been a student of entomology from boyhood, the experiments in fertilization were begun.

Mr. Pratt is convinced that within a short time he will have conquered the problem on which he has been

America  
 e become  
 bee keep  
 eriment  
 : queen  
 athmore  
 e to the  
 ent.  
 een cas  
 l month  
 n put  
 eriment

ork for many months of securing  
 the fertilization of queens under re-  
 straint, and that he has succeeded in  
 discovering that the true fabric for  
 making the tents or shelters is close  
 cotton cloth and not wire cloth. He  
 says he finds his queens used in his  
 experiments take kindly and natur-  
 ally to such quarters and that it is  
 only a question of erecting one of a  
 suitable height to secure perfect re-  
 sults and in that way attain the de-  
 sired point of breeding from choice  
 selected drones.

d in the  
 ollow  
 te to a  
 try, he  
 d obtain  
 e or  
 all the  
 ubs from  
 the hon  
 ne wh  
 ind.  
 mporta  
 elated  
 on. The  
 in Can  
 ssions  
 the Ph  
 take  
 fertili  
 ent we  
 uestig  
 who  
 arther  
 the  
 this  
 : of  
 e ass  
 as a  
 zy fr  
 fertili

Vice President Flower, of the Phila-  
 delphia Bee Keepers' Association, has  
 also been experimenting for two-years  
 so along somewhat similar lines.  
 and claims success in a few instances.  
 Mr. Pratt goes in for a different con-  
 struction altogether, believing he is  
 going closer to nature.

( American Bee Keeper.)

**A Great Offer.**

A radical change from old methods  
 and prices was announced by the  
 Toronto News this week. The eyes  
 of the newspaper world have been  
 upon the News for the past few  
 months during which time several  
 departures have been made which  
 have given that paper a wide-spread  
 reputation for enterprise and origin-  
 ality. This latest move is to place  
 the News at the price of \$1.00 a year  
 by mail. Only a deep-founded belief  
 in the future success of the News  
 could lead the publishers to make

such a reduction in price. But just  
 as the dollar magazine has taken hold  
 of the people, so, we venture to pre-  
 dict, the News will secure a vast and  
 ever-increasing circulation, based not  
 only on the popular price at which it is  
 sold, but mainly upon the intrinsic  
 merits of the paper itself.

We have made arrangements  
 which will enable us to club the  
 News with our own paper at \$1.50 a  
 year in advance. Such a combina-  
 tion presents many unique features,  
 —our weekly giving you all the home  
 and district news, and the big twelve-  
 page daily keeping you in touch  
 with events all over the world.  
 Send us your subscription to the  
 News, or if you would like to see  
 the paper first, write us and we will  
 secure a sample copy.

**BEEES FOR SALE**

45 colonies of bees, part Italian, in  
 first-class condition, all in Langs-  
 troth hives, with 25 extracting supers  
 and 20 comb honey supers. \$2.50  
 per colony here including supers and  
 combs. Write at once.

**THOS. RAMSAY,**

Thorndale, Ont.



This is the Page Standard II Bar Fence, made of "Page" wire which is twice as strong as  
 common wire. The continuous coil, note wavy appearance, allows for expansion and con-  
 traction which is important owing to Canadian climate. Our upright wires are in one piece  
 and have strength of about 800 pounds. If made of pieces spliced at each horizontal, they  
 would have a strength of only about 300 pounds. We also make gates, ornamental fences,  
 poultry netting, nails and staples. The Page Wire Fence Co., Limited, Walkerville, Ont. 6

# BEESWAX WANTED HONEY QUEENS

We are open to buy any quantity of pure wax, either for cash or in exchange for goods. Write at once.

GOOLD, SHAPLEY & MUIR CO.,  
Brantford, Ont.

## CANADIAN POULTRY ... REVIEW

Best all poultry paper published. :: :: :: ::

1 year.....50 c.  
3 years.....\$1.00  
3 subscriptions, 1 year, 1.00

SAMPLE—FREE

ADDRESS :  
TORONTO. ONT.

## For Sale or Exchange

For Extracted Honey  
or Comb Foundation.

- One Section Foundation Mill.
- One Brood Foundation Mill (never in use by me.)
- One new Belgium double-barrel gun with one shot barrel No. 12, and one Rifle, barrel 38.55.
- One Tent, white, 20x30x7ft. (new).
- One Phonograph, 15 records (new).

—Address quick

R. L. TODD, Milltown,  
Charlotte Co.

## POULTRY NEWS

25 CENTS A YEAR

Has Special Bee Department  
conducted by

W. W. FOWLER of Ardsley, N. Y.  
Williams and Medlar, Publishers New  
Brunswick, New Jersey, U. S. A.

Laws' Leather-colored Queens.  
Laws' Improved Golden Queens.  
Laws' Holy Land Queens.

Laws' queens are doing business in every State in the Union and in many foreign countries. The demand for Laws' queens has doubled the previous season's sales. Laws' queens and bees are putting up a large share of the honey now sold. Laws' stock is being sold for breeders all over the world. Why? Because it is the best to be had. Remember! That I have a larger stock than ever that I can send you a queen any month in the year and guarantee safe delivery; that I have many fine breeders on hand. Price \$3.00 each. Tested, each \$1.25; five for \$6.00. Prices reduced after March 15. Send for circular.

W. H. LAWS, BEEVILLE, TEXAS  
Please mention Journal when writing to advertise

The Best Poultry Paper in Canada

## THE POULTRY ADVOCATE

262 1-2 Dundas St., London, Ont.

Established 1898. 40 cents per annum. Three subscriptions for \$1.00 or three years to one address for \$1.00, invariably in advance.

Published monthly. Profusely illustrated and contains from 36 to 40 pages each issue.

J. W. KEDWELL,  
Manager and Editor

50 YEARS' EXPERIENCE

# PATENTS

TRADE MARKS  
DESIGNS  
COPYRIGHTS & C.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the

**Scientific American.**  
A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 per year; four months, \$1. Sold by all newsdealers.  
**MUNN & Co.** 361 Broadway, New York  
Branch Office, 625 F St., Washington, D. C.