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"THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER."

Vol. I.

BEETON, ONTARIO, SEPTEMBER 30, 1885.

Nc. 27

THE CANADIAN BEE JOURNAL.

TABLE OF CONTENTS.

PUBLISHED BY

D. A. JONES & CO., BEETON.

WEEKLY - - \$1.00 PER YEAR

POSTAGE—Free in Canada and the U. S. Ten cents per year extra to all countries in the Postal Union.

SPECIAL OFFER.

To any one sending us \$5.00 in cash, with the names of five subscribers, we will send for one year, one copy of the JOURNAL FREE.

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To any one sending us \$2.00 in cash, with the names of two subscribers, we will send for three months, one copy of the JOURNAL FREE, or for one year by sending 60 cents additional.

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THE CANADIAN BEE JOURNAL

AND "Gleanings," semi-monthly.....	\$1.00
" " "American Bee Journal," weekly.....	1.75
" " "American Apiculturist," monthly.....	1.75
" " "Bee-Keepers' Magazine," monthly.....	1.75
" " "Bee-Keeper's Guide," monthly.....	1.75
" " "Texas Bee-Keeper".....	1.80

TO CONTRIBUTORS.

We will always be glad to forward sample copies to those desiring such.

The number on each wrapper or address-label will show the expiring number of your subscription, and by comparing this with the Whole No. on the JOURNAL you can ascertain your exact standing.

"FOUL BROOD"

Its Management and Cure.

BY D. A. JONES. NOW READY.

This little pamphlet is presented to the Bee-Keeping public with the hope that it may be the means of saving infected colonies from death by fire and otherwise. No expense is required to successfully treat the disease, other than the little time required for fasting.

Price, 10 Cents. By Mail, 11 cents.

D. A. JONES & CO., PUBLISHERS,
Beeton, Ont.

NOW IS THE TIME TO INVEST.

One Hundred Colonies of Italian Bees, and 4000 pounds Extracted Clover and Basswood Honey for Sale. Also want to exchange Italian Bees for a 4 or 5 or 6 Horse Power Engine and Boiler, new or second hand or will pay cash for Engine and Boiler. All kinds of hives made to order. Write for prices.

JAMES ARMSTRONG,
Cheapside, Ont.

INCUBATORS TO THE FRONT

No question of success! The NEW MODEL HATCHER is the leading and standard apparatus of the World for hatching poultry. Testimonials from the leading poultry men of Canada. Also a full line of poultry supplies such as Galvanized Wire Poultry Netting, Egg Testers, Brooders, Poultry Journals, etc., etc. Send \$1.25 for the "Poultry World" for one year. The best Journal issued. Chicks for sale after September.

G. T. DOWN, Parkhill, Ont.

NEW! NOVEL!! USEFUL!!!

INVERTIBLE HIVES,
INVERTIBLE FRAMES,
INVERTIBLE SURPLUS CASES.

Top, Bottom, and Entrance Feeders. Descriptive pamphlets by mail. Address,
J. M. SHUCK, Des Moines, Iowa.

150 COLONIES OF BEES FOR SALE. — Mostly Italians, in eight frames L. hives for \$750. Single colonies, \$6; 10 to 20, \$5.50. Strong with twenty to twenty-five lbs. good honey per colony.

IVA ORVIS
Whitby, Ont.

BEES FOR SALE. I have twenty colonies of Bees in good shape—Jones' hive—which I will sell cheap. Write for particulars and price.

S. DIBB,
Duntroon, Ont

FARMERS BUY THE CELEBRATED
LARDING MACHINE OIL,

—AS IT—
EXCELS ALL OTHERS.

Manufactured solely by

MCCOLL BROS.,
Toronto

BEES FOR SALE.

100 colonies Italian Bees for sale cheap! Price \$7 or five for \$30. Originated from Doolittle and Root stock. Are full of bees, in Jones hives, on frames from wired foundation, with twenty-five pounds of stores, and safe arrival guaranteed. References P. M., J. P., Mayor and station agent. Send for Price List of Hives and Supplies.
LEON E. DYER,
Sutton, P. Q.

Beeton Printing & Publishing Co.,

FINE BOOK, JOB, & LABEL PRINTING.

Send for our FREE "Honey Label" circular. Printing furnished promptly, and neatly done. Estimates of "circular" and other work on application.

F. H. MACPHERSON,
3-t.f. Manager, Beeton, Ont.

Bees. Bees.

Thirty or Forty Colonies for sale, in good condition with lots of honey for wintering, at reasonable prices. Enquire of

W. H. SANFORD, Tottenham.

TINNED WIRE.

We have just bought a large lot of Tinned Wire, No. 30 which seems to be the number best suited for wiring frames and we are able to sell it very low:

- Spools holding one pound, each..... 30c
- " " one-half pound, each..... 18c
- " " one ounce, each..... 07c
- Reels, of from three to five pounds, per lb. 25c

The spooled wire is much more convenient than that on reels as there is no danger of tangling. These prices will supersede those in our price list.

D. A. JONES,
Beeton, Ont

FOR SALE!

FIFTY STOCK OF BEES

In Prime Condition for Winter.

In D. A. Jones' Hive. With privilege of wintering in first-class cellar.

ONLY \$8.00 PER COLONY.

WM. BUEGLASS, BRIGHT, ONT.

HONEY PACKAGES.

FOR THE
The Best, the Handiest, and Cheapest.
For storing or shipping write to
WILLIAM CLIMIE, LISTOWEL, ONT.

BEES AND HONEY

TO ALL that are interested in Bees and Honey, send for Free and Illustrated Catalogue of Apiarian Supplies. Address

M. RICHARDSON & SON,
Port Colborne, Ont

The Canadian Bee Journal.

D. A. JONES & Co., Publishers.

OUR OWN APIARY.

HOW TO MAKE USE OF UNFINISHED SECTIONS.

AT the Toronto Exhibition it was very easy for a person passing through the "honey house," to perceive the simple and easy method of disposing of sections which had been but partially filled out. Thousands of sections may be sold at every fair by the method there adopted. We think the credit is due Mr. J. B. Hall, of Woodstock, as the first who commenced selling in this way. It is done by cutting the sections from corner to corner, making four triangular pieces, then parting the pieces laying them down on the wood, showing off the honey to the best possible advantage. The pieces sell very rapidly, at five cents each giving you twenty cents for each section. It would not pay to take sections that contained a full pound or more of honey and cut them in this way. Every year bee-keepers are getting more and more into the habit of using thinner sections, and we are becoming convinced that sections more than an inch-and-a-half, or an inch-and-five-eighths are too thick to be profitable. We do not think many of our customers will use sections thicker than one-and-five-eighths inches, perhaps not that thick. Cutting up the sections and selling the pieces at five cents each at the exhibition has become so popular that there must have been twenty-five or fifty thousand people fed with honey during the two weeks' fair.

BEEES LIVING ON THEIR STORES.

Rev. D. Beattie.—I would like to send you something like a report of the summer's work so far, but sorry I have not time to at present. In a general way it may be said, brooding has done well, but very little honey has been extracted, and now the bees are living on their stores with plenty of bloom around them—very tantalizing indeed.

Campbellford, Ont., Sept. 16, 1885.

From Gleanings.

SECRETION; WHAT IS IT?

HOW AND WHERE DO THE BEES GET WAX?

AJ. COOK:—Please answer this in *Gleanings*: Do bees digest honey, or do they manufacture honey into wax? Please explain it plainly, as there are parties here who do not agree with your theory in your manual. I have one but it is one of the old edition.

J. W. BITTENBENDER.

Knoxville, Iowa, Aug. 13, 1885.

Answer by Prof. Cook.

The question of Mr. Bittenbender's serves admirably as a text for an article which I have long desired to write for *Gleanings*, but for lack of time have deferred till now. I wish to consider the relation of nectar to honey and to the food of larval bees, the relation of honey to wax as secreted by bees, and the relation of the sap of trees to the nectar which is secreted by their flowers or other glandular extra-floral cells.

Secretion, whether of saliva or spittle, in our own salivary glands, whether of milk by any of the mammals, or whether of wax by bees, is always accomplished by cells specially developed for the purpose. These cells may just be blind sacks of proto-plasm, as the nectar-glands of plants, or they may be cells conducting to tubes when, as in case of our salivary glands, or the glands in the head and thorax of bees (see Manual, p. 87), they are called racemose glands, from their resemblance to a bunch of grapes. It is the function of these glandular cells to take elements from some nutritive fluid, like the sap of plants or the blood of animals, and from some other substance—the secretion—not found in the blood, or in the sap, as the case may be. A secretion, then, is not a substance simply eliminated from sap or blood, which, in the economy of the individual, shall be of some service. Thus our spittle or milk is not in the blood. So, too, the nectar of flowers, or plant-glands, is not in the sap of the plants, but is made by the gland-cells from elements in the sap. True it is, that these cells will sometimes eliminate foreign substances—may be toxic substances—which are in the blood. For instance, we may feed a cow poison, and find the poison in the milk. The poison is no part of the milk; but the glands, like good Samaritans, quickly spring to the aid of the purely eliminating organs, the lungs and kidneys, in the removal of the harmful substance of the blood.

In case of the poisonous honey discussed in *Gleanings*, I said I did not think it possessed the properties of the sap. First, the nectar is a secretion, and so is made from the sap, but is

not the sap. True, the glands might remove a poisonous element in the sap, possibly—as the animal glands do upon occasion—but this is not likely, as the poison is not hurtful to the plant, but a normal substance, and there is no occasion for its removal. Again, this poison is always in the sap, yet we have not heard of this honey as poisonous before—not till this year. Plants are in like condition every year, and do not by accident get poison as do animals, which may need elimination. I think it far more likely that the bees got some real poison from other sources; or possibly good honey was a poison to the persons afflicted, as all honey seems to be poison to some people. "What is one person's meat is another person's poison."

Only a few years ago I received honey from New York State which poisoned several persons, yet we have not heard of any similar poisoning since. It is more than likely that what was true in one case was also true in the other.

To answer the question as to wax. Bees take honey as a food. This is digested and absorbed, when it becomes blood, which is the nutritive fluid of the bee, but is not honey, and quite likely contains no honey for the most if not all the time. From this blood the wax-glands secrete the wax scales. Thus the wax of the bee has the same relation to the honey eaten by the bee, as the cow's milk has to the hay which she eats. As stated in all the last editions of my "Bee-Keeper's Guide," from the eighth thousand to the thirteenth thousand inclusive, nectar and honey are not the same. We feed cane sugar to bees, and we get honey sugar, which is quite different, in the comb-cells. So nectar is largely cane sugar, and is neutral, while the honey is a different sugar, and is acid. Thus we may say that honey is digested nectar, which is fitted in such digestion to be absorbed and assimilated. Recent experiments have shown that, when we eat cane sugar it is digested in our stomachs, and in this act converted into a sugar like, if not identical, with honey sugar, whereby it is fitted for absorption and assimilation. Thus we have reason to believe that honey is the best form of sugar, as here the bees have done what otherwise our own digestive energies must have performed.

It is quite likely that honey sugar is most like fruit sugar, and that both are widely removed from corn glucose, though all give the same chemical reaction with the copper salts. This view of the superior excellence of honey as a food, gives new force to the commendation, "A land flowing with milk and honey."

Again, bees feed a creamy substance to the larval bees. This substance contains not only oxygen, carbon, and hydrogen, the only elements

of pure honey or sugar, but also nitrogen. This last the bees get from pollen, which must surely be present to rear brood. True, honey may contain a little pollen; but to rear any considerable amount of brood, pollen must be present in greater quantities—stored in the cells. This honey and pollen is perfectly digested by the bees, and so is fitted for absorption, else it would be useless, as the larval bee is not fitted to digest. It is not known whether the digestive juices that produce this change are all formed in the stomach or not. Quite likely the large glands in the head and thorax may aid. This is a question difficult of solution, but will doubtless one day be solved.

A. J. Cook.

Agricultural College, Lansing, Mich.

For the CANADIAN BEE JOURNAL.

PREPARATION FOR WINTER.

THIS is the all-absorbing topic just now and will continue to be so until cold weather has actually set in and our pets are safely deposited in their winter quarters. Of course many of the readers of the C. B. J. know all about how to winter successfully. They can do it safely every time—do it with as much certainty as any other stock. This is what they say and of course we must believe them. There are, however, many others, and I am among this number, who cannot speak so confidently. It is true I have wintered safely every season but one during the five years I have kept bees, but that one, dysentery nearly cleaned me out. The terrible mortality of last winter shows that very many bee-keepers do not understand the art of wintering. Some of those who suffered severely have been a long time in the business and should have learned from experience the best way to prepare bees for winter. When they so signally failed it becomes those of us who were successful for the time to speak with diffidence. Wintering bees seems to be something like catching a little species of vermin which shall be nameless, when you think you've got it you've missed it. There are, however, certain conditions which are generally regarded as essential to safe wintering.

1. *Strong colonies.*—Have the hives well filled with bees, especially young ones, before cold weather sets in, as the old ones will in the ordinary course of nature drop off during the winter, the vitality and strength of the colony depends upon the number of young bees in it. To secure plenty of these every colony must have a young, vigorous and prolific queen and she must be kept doing her very best until the weather becomes too cool for brood rearing. She must

have sufficient room and when natural stores become scarce a little syrup should be fed every evening. If colonies are too weak to be built up in this way and frames of brood cannot be spared from the others, two or more weak ones should be united. In every case there should be sufficient bees to cover five or six frames.

2. *Plenty of stores*, and these deposited where they will be accessible during the coldest winter weather. The bees should therefore be crowded on as few frames as possible and these be so drawn out and filled with food, especially along the top, that the bees can reach it at any time. The heat arising from the cluster below will always enable the bees to reach the stores thus piled above them. As to the kind of food that is best for wintering on, little difference is experienced between good honey and syrup made from the best granulated sugar. I prefer the latter because it is cheaper and the combs filled with pollen can be removed. Last year I extracted about the first of September and put back nice clean combs void of all pollen and then fed syrup, giving about thirty pounds to each colony and they wintered well.

3. *An even temperature*. This is very difficult to obtain where the thermometer rises and falls so rapidly and to such extremes as it does with us. Bees must be so protected that they will feel as little as possible these changes. This can best be done in a properly constructed bee-house. To those who do not possess this the choice lies between the cellar and a clamp outside. I have wintered outside every season but last one when I put part in the cellar and left part on summer stands packed in chaff. I put cushions on all filled with leaves and left the space behind the division board empty. Those outside were a little the strongest. During a good deal of the Winter the temperature in the cellar was down to freezing point, 30°, and they were confined without a flight for five months and a half, yet there was no sign of dysentery. It would seem from this that other conditions being right a temperature of 45° is not essentially necessary. I am glad to see that recently we have had several articles on this wintering problem and I hope that those who have solved it satisfactorily will now speak out and let us know the secret of success that we may so prepare for the coming winter as to ensure that the discouraging mortality of last winter will not be repeated during the ensuing one.

J. CARSWELL.

Bond Head, Sept. 7th, 1885.

The Wabash County Bee-keepers' Convention will meet in G. A. R. Hall, No. 6, East Main st., North Manchester Ind., Oct. 10, 1885. All bee-keepers are earnestly requested to be present.

J. J. Martin, Sec.

FOR THE CANADIAN BEE JOURNAL.

NUCLEI—CLIPPED QUEENS—SWARMING.

LAST Spring I purchased 20 three-frame nuclei of a gentleman in southern Indiana. I let my neighbors have twelve of them and kept eight myself. They were in the "L" frames. They arrived here June 5th, and July 5th one that I had sold sent out a good sized swarm. Since then six of nine have swarmed or attempted to. They have completely filled their hives and are giving me quite a surplus of comb honey. I lost the first two swarms that came out. They clustered together and I hived them all right and gave them a frame of unsealed brood. This was about 9 a. m. and they seemed contented in their new home. After dinner I went to my office and was gone perhaps an hour. When I returned they were gone and I have heard nothing of them since.

After that I clipped all of my queens' wings, and since then they have had no alternative when they swarmed but to go back to the hive. I favor clipping the queens, and *why* should we not? It is no more than the ants do, for when their mother ants are fertilized they pull off their wings. I lost one queen by following Prof. Cook's advice. I caught the queen and caged her as she was leaving the hive. I kept her in the cage until nightfall and then released her at the entrance. I noticed a strange commotion among the bees and fearing mischief I gave them some smoke, but although scarcely two minutes had elapsed it was too late and I found the poor little queen was dead.

Our honey season has been very good. The clover did well and the basswood has yielded abundantly. The general complaint has been that instead of storing surplus the bees have inclined to swarm excessively. And right here I want to advance a theory that may be old, but I have never seen it. It is this, that after an unusually severe winter, nature makes up for the losses among bees by liberal swarming during the following season. Will the facts bear me out in this?

Now, in closing, I would like to ask a question for Prof. Cook or some other good scientific authority to answer. Why does the queen in laying her eggs always turn her head downwards? I have watched the queen in my observatory hive and when she finds a cell to suit she steps over it in the same direction she was going and after inserting her abdomen she slowly turns around until her head is downward when she deposits the egg.

W. H. OSBORNE.

Chardon, O., July 25, 1885.

When the bees were guarding the entrance we presume they looked upon the queen as an intruder. If she had been let out inside the hive, it is not likely that she would have been disturbed, unless she was handled in a way to cause her to become excited and rush over the combs. The scent of the queen might be changed by taking hold of her with your fingers. There is scarcely any rule that will work the same under all circumstances. We only wish we had more Professor Cooks to advise us on many points in apiculture. We have frequently noticed the queen bending her head forward when she deposited an egg and think her peculiar position enables her to place the egg in the right spot in the cell, so that when it is hatched it will occupy its true position. Like you, Friend Osborne, we have noticed after a very severe winter that usually there are plenty of swarms. We think it is owing in a measure to the fact that there is not a large yield of honey, but a fair yield of thin honey. We have noticed when the honey is thick and very plentiful the bees do less breeding and more honey gathering, and when thin it seems to incite breeding and swarming to a greater extent.

FOR THE CANADIAN BEE JOURNAL.

DR. TINKER'S ARTICLE.

Ⓘ WAS very much edified by Dr. Tinker's communication to the JOURNAL of the 19th of August. A great portion of it I have marked for future reference, including this: "A large well packed, double-walled hive is perfectly safe if its brood chamber is contracted to five or six combs." It is safe in this locality on ten or twelve combs. "It gives the best result, but it is more expensive than cellar wintering." "If we so prepare the bees for winter that they can maintain a heat of fifty degrees just over the cluster, the bees and combs and hives will keep dry, and no diarrhoea will result."

The sentences quoted I would ask the Dr. to supplement in this:—The fifty degrees just over the cluster bears a relation to external temperature, or rather *vice versa*, so that if the Dr.

would tell us the degree of temperature required in the bee house to secure 50 degrees just over the cluster, he would much facilitate the use of the rule propounded. A definition, or rather a description, of a "large, well packed, double-walled hive," in the exact sense that he understands it; and in what particular localities (as to latitude and altitude) he considers such a hive safe "on ten or twelve frames." I beg to be excused for being thus particular, as showing my ignorance to the extent involved in the questions, but, I take it when exact knowledge is needed to insure a given result, it is vicious to assume too much, either in the adviser, or him that is to profit by the advice given.

Upper Montcalm, N. J.

J. LUX.

We have no doubt the Dr. will be able to explain the matter to your entire satisfaction, but what the degree of temperature in the bee-house should be to have it 50° over the bees would be pretty difficult to determine, because a strong colony would have a much higher temperature than a weak one; perhaps by placing the strong ones at the bottom of the repository and the weaker ones above, those on top would be benefitted by the heat from those below.

FOR THE CANADIAN BEE JOURNAL.

CAN BEES HEAR?

ⒾN reply to Friend G. M. Doolittle, page 340, C. B. J., I did not try the experiment you indicated. Bees in a bottle would not utter the call note to lure others to their place of imprisonment. And even if they were so inhuman as to do so, the call would be so muffled and unnatural that other bees would not understand it.

Then again bees pay no attention to the call note except on occasions of necessity, such as on the return of young bees from their first flight, or on seeking an entrance when their hive has been closed for some time, or when they are swarming, etc.

Certainly bees enclosed in a wire cage would attract bees by their scent, and other bees seeing these snuffing around, would be attracted also, but all this does not prove that bees are deaf.

On pages 309 and 340 of C. B. J., friend Jones occupies considerable space to prove what I presume nobody doubts or disputes, viz: that bees can smell and that they are governed largely in their actions by that power.

To my mind that is another proof that they can hear, for I cannot believe that God, in His manifold wisdom and goodness, would create so sensitive, beautiful, industrious and useful a creature as the honey bee and deny it the gift of hearing, a power that adds so much to their comfort and convenience.

Why do they often call so earnestly with all their little might if they never heard or enjoyed a sound?

Next thing in order, will not some one express a doubt that bees can see and demand a proof? Why they will fly bang right against a pane of glass, a wire cloth door, or a telephone wire.

You see they cannot smell these things and so fly against them.

Take another case. When there is no honey in the fields, spread a little around on the grass. The bees will soon smell it and be on hand. Now when a few bees get nicely at work, try your hand at scaring them away with all the threatening performances at your command and you will see that they are stone blind as well as deaf. We all have seen how young bees and successful robbers when leaving the hive will turn their noses towards the hive and swing about quite a while before leaving, and go backwards as it were. Perhaps you will say they are locating things. Just so, but are they not just smelling things generally and that one hive in particular so they can scent their way back again and make no dangerous mistake about it.

We know cross bees will sometimes chase us all around the yard, especially if we run. We have also seen bees chasing and flying at king-birds and swallows much the same as king-birds will chase hawks, pitching and diving at their heads furiously. Now who will prove positively that bees do not do all these things by scent, without seeing a bit? True, they can find clover and other flowers even deep down in the grass, but do they not just smell them? Did you ever notice how they strike their wings against the grass? If they could see, would they not pick a clear place?

But maybe you will ask how a bee can find the way home when several miles away. I will answer in this way. When I was a boy there were thousands of acres of forests all around our home and some seasons there would be a great many hickory nuts, beechnuts and acorns. Then most everybody would turn their hogs to shack.

Well at the approach of winter or later when the pigs had grown very fat, we would go "hog hunting," and when they were found miles from home in the deep sombre forests, do you think

we would take the trouble to drive them home? No, not a bit of it. We would just put the dog on them and make them squeal and sometimes he would have quite a tussle before the pigs would give up and run, then we would call the dog back and the pigs would strike a bee-line for home and that too, after spending many weeks in the woods without once seeing out and after turning round and round hundreds of times with their noses up to their eyes in forest leaves. Now a hog can do this unerringly every time by a certain endowment that I cannot understand. No doubt in my mind but that when bees are a long way from home that they are guided by the same wonderful faculty and when they are in the yard all they have to do is simply to smell their way to their own hive.

If you place some bees in a dark room with an opening through which the light streams they will fly to it and go out, but does that prove that they can see?

Prof. A. J. Cook says, on page 169, C. B. J., "There is no good evidence that bees hear. That they are exceedingly sensitive to vibrations is patent. This may serve for hearing." In this connection allow me to say that bees are exceedingly sensitive to rays of light. This may serve for seeing.

I will close by stating that I believe bees are quite as blind as they are deaf and close observers will find as good proof for the one as for the other.

S. T. PETTIT.

Belmont, Ont., Sept. 3, 1885.

FOR THE CANADIAN BEE JOURNAL.

A FLORIDA LETTER.

AND SOME INFORMATION ABOUT CARNIOLANS.

IN regard to Carniolans I wish to know if they are suited to Florida's climate, or other places where for twelve months in the year the noon temperature is from 60 to 95°.

Do they defend themselves against robbers? and are they as proof against moths as the Italians?

It is only three months since I first knew that this race existed and I am anxious to learn all I can about them.

Perhaps a report from Florida will be of interest, and, in the same connection, a brief statement of some of the difficulties with which we have to contend. My bees wintered well on summer stands, flying every day, and hardly a week passed but they gathered some honey or pollen. I have no personal acquaintance with "spring dwindling" and prefer to live where "freezing," "dysentery," and kindred troubles

are seen only on paper in the reports from less favored regions.

Do not think, however, that we have no enemies to contend with, else you will labor under a mistake. There are in this "land of summer," many species of insects, and our special enemies among them are moths—at least two species—dragon flies (called here mosquito hawks) and ants. These last are large red fellows, and sometimes they move their army against a hive of bees and "clean them out." Generally there is about an equal bulk of dead bees and ants. It is well to keep the ground clean for some distance around to give them no place to rest.

Mosquito hawks are death on young queens as well as on bees in general. Moths are to be found at all times of the year and are most abundant at the time we have the most empty combs.

Strong swarms of pure Italians will occasionally permit moths to breed in their empty combs. I have had more than one such. This has been a poor season for honey in my immediate locality, but some of my neighbors a few miles distant claim to have done well. Swarms which gathered in June last year from 120 to 140 lbs have this season thus far gathered only 20 to 40 lbs.

FRANK A. WHITE.

Rockledge, Fla., July 26th, 1885.

We would advise for use in Florida Holy Lands crossed with Italians, as we think that you will find in that climate that the Holy Lands or Syrians will be an improvement. The Syrians have given great satisfaction in Cuba. We are now breeding from some of our crosses and they seem to give better results than any of the purer breeds. They defend themselves as well as the Syrians and are as nearly moth proof as the Italians. We do not think they are quite so good as some Italians about guarding their interests, especially when the Italians have a little touch of Syrian. We are pleased to receive your report, the more so on account of your willingness to mix up the bitter with the sweet. If you would set your hives on posts and paint the posts with coal tar, or coal oil about once a week during the warm season, possibly you might not then have much trouble with ants running up the posts and going into the hives. We were told the other day of a very

easy way to keep ants out of sugar barrels or similar places; probably the same thing would do on hive stands. It was simply to take a piece of white chalk and draw it around the barrel below the bulge. The ants will run up as far as the chalk and then return. It is said they never cross the line. Try good broad chalk marks around the legs of the hive stands and see if that prevents them. We do not know whether it is their dislike to the chalk that prevents them from crossing, or whether the chalk fills the pores of the wood so that when they go to take hold with their feet to climb over they slip and fall back. If you have a little Syrian mixed with your Italians you will never be troubled with moths as long as you keep your colonies strong.

FOR THE CANADIAN BEE JOURNAL.

STRANGE FREAKS—ABSCONDING SWARMS.

Q HAVE some bee news to tell you; my bees have had some queer freaks. On July 17th a large swarm issued about 10 a. m. and alighted on a tree about a rod from the hive. I hived on foundation and thought all was right, but about 4 p. m. I saw them rushing out of the hive, rising about 50 feet. As soon as they came out they started for the woods. I followed them about two miles and lost sight of them in a big swamp. When I got home I opened the hive they had left, expecting to find it empty, but instead I found about two quarts of bees and a young queen. This was the first swarm. Why did they not all leave? Now another freak on July 20th: a swarm came out and clustered on a tree, and as it did not act just right, I was afraid it might leave, so I took two frames of brood from an old hive and placed them along with frames of foundation and hived the swarm in it. They appeared all right; it being a very hot day I shaded the sun off it and went to work extracting again. Precisely at 4:30 p. m. my brother called to me "a swarm." I rushed out, and there it was. They had left the hive, brood and all, arose very high and set sail for the woods. My brother followed them up and treed them on a dry thorn tree about two and a half miles from home. I brought them home and they have behaved quite decently since. What caused them to leave the hive? It was a new one and everything clean. And yet another on July

19th: the swarm came out, hived it on foundation and placed it on stand and next day took a peep into it to see if combs were in shape. Bees all right. Next day I opened the hive, and lo! behold, my hive was empty. I examined the combs and found about fifty cells with eggs in. Don't know when the swarm left, but suppose it was on the afternoon of 21st. Now I think these are strange freaks for bees under the circumstances.

R. H. JOHNSTON.

Lyn, July 27th, 1885.

P. S.—These were all first swarms.

The supposition is that the old queen was superseded in the parent colony just before swarming, then as the young queens hatched, the old colony swarmed taking out several young queens with it. They usually kill off all the queens except one, but on rare occasions they divide, part of the swarm protecting one queen, and part the other. This seems to cause a commotion in the hive, and one of the queens will perhaps leave with a portion of the bees, making a small swarm. We think they left the hive in the second case on account of the unusual heat. If you had shaded it entirely, pouring a couple of pails of water on and about the hive, the rays of the sun would have had less effect, and they might have remained. A few pails of cold water poured on the ground, hive, bushes, or shading board about the hive cools the atmosphere. When the hive becomes heated it gives the bees a disposition to stray, and an application of cold water will keep many colonies that would otherwise leave for the woods. If you had had your queen's wings clipped or at least all the old queens, it would have prevented them from leaving. We are fully convinced that it was on account of the warm weather and heat in the hive that the third swarm left. It certainly seems rather strange that you should have three leave. We believe we have not had three leave the hives in as many years. Swarms when first hived can be

made to leave the hive or swarm out by giving them too little room, or if there is too great an amount of heat. This may be prevented by any process which keeps them sufficiently cool.

FOR THE CANADIAN BEE JOURNAL.

OBSERVATIONS UPON DRONES.

REV. L. L. LANGSTROTH.

BEVAN says that the drone hatches on the 24th or 25th day after the egg is laid. I know of nothing more definite on this point.

To get more precisely the facts, on the 16th day of last July, a drone comb was put, at 7 a. m., centrally in a strong colony, which had been fed for several days, as the drones were being expelled from many hives. At 9 a. m. the queen was found on that comb, having laid three eggs. She had just begun laying. At nine a. m., on July the 17th, it was removed to a strong colony, without queen, eggs or larva. On July 27, many cells were capped, and on July 28, at 2 p. m., some 200 were capped, many eggs having, for some cause, disappeared. On Aug. 9 none had hatched. On Aug. 10 examinations were made every hour. At 5.30 p. m. none had crawled out; at 6.30 two had hatched, and a third was hatching. If these drones came from the first eggs laid, they took about 25 days and 8½ hours to develop.

At 6 a. m. on Aug. 11, many more had hatched, and at 6 a. m., on Aug. 12, all but 17 had hatched. At 6.30 p. m. all but 2 had hatched, and at 6.30 a. m. of Aug. 13, the last one was found with the cap off, trying to crawl out; it was strong and perfect. Now if the egg producing this drone was laid just before the comb was removed, then it took nearly 27 days to mature.

During the whole time of these observations, the weather was of the most favorable kind—the thermometer ranging nearly every day above 80° Fahr., and being only once as low as 62°. The colony was kept in good heart by daily feeding, and I can think of nothing which could have retarded in the least the development of these drones unless possibly the fact that from so many eggs having disappeared, they were not as compact in the comb as they otherwise would have been. In this observation, although there could not possibly have been more than 24 hours difference between the laying of the first and the last egg, there was about two days and a half between the hatching of the first and the last drone.

It is quite interesting to watch the different actions of just hatched workers and drones. The worker, true to her name and office, begins to crawl over the combs as if to feel her legs, stops occasionally to clean herself up, and before long helps herself to honey from an open cell. The drone, on the contrary, is a born dependent. The first act is to touch the nearest worker he can reach with his flexible antennæ, and, begging to be fed, he is at once supplied with honey disgorged from the proboscis of his attentive nurse. And so he goes on all his life, seeming to prefer to be fed, although perfectly able, if needs be, to help himself.

A very bad name has always been given the drone. Virgil has his fling at him, stigmatizing him as having no proper office in the economy of the hive—seeking only to devour the stores which he had no share in collecting. I wonder what the poet was made for! or as he says that the bees collected their young from the flowers, being too chaste to breed them, what motive he could have thought they had to gather in such useless consumers! And yet without any special pleadings how much can be said in his defense. It is only too evident that his proboscis is too short to suck honey from the flowers; that his legs have no pollen baskets; and that he can secrete no wax. Great as his bulk is, he has no sting, and can do nothing for the defense of the commonwealth; but then, without him that commonwealth could have no existence. The sole object of his life seems to be, at the proper time, to fertilize the young queen—and this he is always ready to do. Now why should we blame any creature which fulfils the special object of its creation? And yet I fear me in spite of all that can so justly be said in his favor, our poor drone will always be cited as an incorrigibly idle reprobate, who meets with only his just deserts when after a life of pleasure he is killed without mercy by the industrious workers. He will always be known as Shakespeare's "lazy, yawning drone."

Oxford, Ohio.

From American Agriculturist.

BEE NOTES FOR OCTOBER.

DURING the present month, colonies should be well protected from the cold. All openings for ventilation should be closed, and the entrance to each hive contracted. If care be used in this respect, breeding may be continued much later, which is extremely desirable. Surplus combs, which have been used for extracting, should be removed, and general preparations made for winter. If bees are to be

wintered in doors, it is all important that the room be clean and sweet, and well prepared for the bees. Many who propose to build, or arrange a new room for this purpose, neglect doing so until too late in the season. If a wall is to be laid, or plastering done, or even green lumber is to be used, the work should be done early, so that all may become thoroughly dry. Facilities for thoroughly ventilating a wintering room should be supplied. The manner of storing the bees in winter quarters will be described later. Some do not have facilities for wintering bees in-doors, and other persons advocate wintering out-of-doors, in preference to in-doors. While I strongly advocate wintering in the house, I am aware that it is better to winter out-of-doors under favorable conditions. As to the needs for out-of-door wintering: It is well known that bees do not winter so well upon their summer stands, as they formerly did. The cause of this, I believe to be, that the country being so thoroughly cleared of its forests, the winter winds are more cold and searching. This being so, we must resort to some means of giving our hives protection. First, then, it is important to select as sheltered a place as possible to set the hives. Next, it is generally agreed that some kind of packing is necessary. Last winter I made some experiments in out-of-door wintering, the results of which were of value to me. The outer cases of my hives were large enough to allow about four inches of packing on all sides of the brood combs, and six inches on top. I used both chaff and dry sawdust for packing, and both proved successful. The hives were tipped slightly to the front, so that the dead bees were easily removed. The brood combs were raised about an inch from the bottom board, so that room was afforded for the dead bees to drop below the frames. A large entrance stick, to fill an entrance one inch deep and as long as the entire front of the hive, was supplied, with a small opening in the centre of it. This entrance stick could be taken out, to remove the dead bees when necessary, and replaced to protect the bees from cold. Next, and most important of all, the hives were surrounded with a perfectly tight enclosure. This I consider of extreme importance. Experience has proven that bees can stand extreme cold weather, if not subject to drafts of cold air. Some of my experiments, which have brought me to those conclusions, which have been dearly bought and I urge those who have not had experience, to consider them well.

L. C. ROOT,

Mohawk, N. Y.

FOR THE CANADIAN BEE JOURNAL.

LONDON'S BEE AND HONEY SHOW.

THE Provincial Exhibition, which was held at London this year, was very well attended considering the kind of weather which was anything but pleasant.

The show of bees, honey and apiarian supplies was very good and reflected great credit on the exhibitors, considering the limited space at their disposal. The show of queens was very small, but that could be very easily accounted for. A short account of how the exhibits looked will, perhaps, not be out of place here. The honey hall is very pleasantly situated near the agricultural hall, and is nice and dry even in wet weather. On entering the building the immense show of comb and extracted honey of Mr. Joseph Aches, Amiens, Ont., attracted the attention of visitors, who are greeted with a pleasant smile by that gentleman as he proceeds to point out to them the beautiful Italian queen which he has caged and on exhibition. We next come to the extracted honey of Mr. McEvoy, the beauty of which cannot be forgotten by all lovers of pure unadulterated honey; he also showed beeswax and white beeswax, for which he received an extra prize. Mr. J. W. Wheally, of Lakeside, next takes up our attention with his very fine exhibit of comb honey, which is very well arranged and his show of extracted honey which is put up in marketable shape. He very kindly presented us with D. A. Jones' price list of apiarian supplies and offered to give a sample copy of the CANADIAN BEE JOURNAL, but as your humble servant was already a subscriber it was hardly necessary to trespass on good nature too much so the offer was declined. I was pleased to see Mr. R. H. Smith, of Ealing, there with his show of honey and supplies, which included a queen nursery for the Jones' frame. Mr. Smith says that the supply of comb honey is very short, and, although he took first prize on comb honey, still that was about all the comb he got, as he worked his bees for extracted. He showed the D. A. Jones' hive for comb honey which we think is better adapted for securing comb honey than the usual deep one.

D. P. Campbell, of Parkhill, next takes up the attention of the merchant and others with his very extensive exhibit of comb honey it being the largest in the hall. While we were admiring the very tasty display, we noticed that Mr. Campbell was completing arrangements for supplying a merchant in Manitoba with his very choice honey. May his trade in that direction increase greatly.

We now come to the exhibit of Mr. John Rudd, of London. He shows the largest assortment of

apiarian supplies in the hall and Mrs. Rudd is doing quite a thriving trade selling honey to persons who wish to sample the delicious looking comb honey. She says that she has about sold out her stock of honey. Mr. Rudd shows a Jones' hive which he has arranged so that he can use it for the Langstroth frames and also for comb honey. Mr. Rudd also shows an extractor. There is a number of other exhibits, but none of any great account except some very fine honey the property of Mrs. F. Lingard, of Mitchell.

W. M. H. WESTON.

London, Ont.

WHAT A WOMAN'S HANDS MAY DO.

MRS. HENRY HILLS, Sheboygan Falls, Wis., at her genteel and cozy home on the hill, overlooking a considerable portion of the village, although much given to botanical and kindred studies, combines with her æsthetic occupations and housekeeping, a utilitarian pursuit which deserves more than passing notice. Just how she became on friendly terms with the "little busy bee" we are not advised, but she has evidently formed a pleasant and profitable compact with the little workers, both parties seeming to relish the agreement. Mrs. Hills, with but slight aid from her husband (whose business demands his time) has established and perfected an apiary that is a credit to her genius, taste, and patience. She now has a steady demand for both extracted and comb honey, and the genteel packages used, as well as the quality of the contents has much to do with the popularity of the goods from her little colony. The extracted honey is placed for sale in neat, covered tin pails, small and large as needed, and the comb honey is first placed by the bees in one pound square frames, and these frames are placed by Mrs. H. in packages of heavy paper with tape bail, same as used by first-class confectioners for their candies. These latter packages are simply "too sweet for anything." We advise our readers with a sweet tooth to give Mrs. Hill's apiary a trial.—*Exchange*.

There is another illustration of what a woman may do in the way of bee-keeping. The number of ladies who are now engaged in bee-keeping is astonishing. At the last meeting of the O. B. K. A. we had the pleasure of electing a lady—Mrs. R. McKechnie, Angus,—to the position of 2nd Vice President, than whom no one could have been better chosen.

SUNDRY SELECTIONS.

IOWA STATE HAS A SHORT CROP.

O. O. POPPLETON, Williamstown, Iowa, September 29th, 1885.—My honey crop this year is about 70 pounds per colony; the smallest I have had for several years, and only a trifle over a half-average yield for the past dozen years. From reports at the State Convention, I judge the loss of bees in the State last winter was about two-thirds, and this year's crop of honey about one half the average from the bees that were left, making a small aggregate yield.

THE SEASON AT THE NORTH.

There has been a partial failure of honey in the North and West, this season. In some parts of Michigan and Wisconsin large quantities of honey were obtained from basswood, but in other parts no honey was made. White clover honey, which is second to none, has been an almost entire failure, owing to cool weather, during its blooming. In this locality (Peoria Co., Ill.) during the month of August, there have been abundant showers, and vegetation is green and flourishing, but the weather has resembled October in coolness. Bees, in all localities heard from, have been able to make a living, and a little more, and are strong in numbers—hives are universally running over with bees. There has been honey enough to keep up brood-rearing all the time. Had there been a great flow of honey, the brood nest would have been filled with honey to its exclusion.—Mrs. Harrison in *Prairie Farmer*.

REPORT OF THE SEASON.

F. Mehlenbacher, Fisherville, Ont.—I started in the Spring with nine colonies; increased them to twenty, and have taken 1230 lbs. of honey. All my colonies have good sealed stores from clover and basswood, and are strong in bees. I could have taken quite a few hundred pounds more honey if I had crowded my bees, but my aim is to always have a good article, let the amount be what it will. My honey is about all sold and most of it right at home.

A GOOD WORD FOR OUR TORONTO EXHIBITION.

Beginners or strangers need not be afraid that because such injustice will be done to them as some imagine, for I am convinced that the Exhibition is properly and honestly conducted. As I wished to exhibit some clover honey at Toronto, but could not very well be present, I sent it per express to the superintendent of the honey Department, asking him to kindly see that it was properly exhibited, and the result is, it has taken first prize. Many thanks to the

superintendent for the care and attention he has given it. If you could give me his name and address I would feel like sending him a can of it as a present.

H. J. Hill, Toronto, is Secretary and Manager of the Toronto Industrial Exhibition Association; he has filled that position with great credit to himself and profit to the Association ever since its inception. Every exhibit entrusted to the care of the officers of the association will receive prompt and careful attention.

KIND WORDS FROM A SUBSCRIBER.

WILLIAM FLAGSTAFF, AMIGARI.—Dear Sir and Apiarian Brother.—I am more than delighted at the appearance of the CANADIAN BEE JOURNAL and much pleased also with your Canadian pluck in adhering to the title *Bee journal*. I began bee-keeping in 1866, and continued so to do until 1872, when changing my occupation, I was compelled to be from home for weeks, and therefore I disposed of my stock. However, I still retained my love for apiculture, and kept myself posted as well as the migratory nature of my business permitted. I intend, before many moons, again to devote my leisure time to my favorite amusement, and if you can occasionally spare a corner in our "Canadian Bee," I shall be delighted to assist as far as my feeble efforts and scant knowledge will permit in making the "CANADIAN BEE" the bee journal not only of America, but of the world. I do not see why predominance should be claimed for the *American Bee Journal*, because, unless my memory is at fault, the *French Bee Journal* was in existence before the lamented Wagner printed the first volume of the *A. B. J.* in Washington, A.D. 1861.

We thank you for your kind and flattering wishes in connection with the JOURNAL and we assure you we shall be pleased to have articles on current topics from you at any time.

MORE ABOUT BASSWOOD.

A. GILCHRIST, GUELPH.—Find enclosed the flowers of a late flowering basswood, also seed pods of another variety showing the difference in their time of blooming; they are both growing in an isolated position, a light piece of land. I will give fuller description of them as soon as I can find time.

Thanks, Friend Gilchrist, for the the flowers and buds you sent. The one appears to have bloomed fully two

weeks ago, the seed pods being nearly full size, the other is just coming into bloom; not more than half the buds being open. From appearances we should say it would be about one week before some of the buds would be in bloom. Could not you get some sprouts of these two varieties. Would also suggest that you gather some of the seed after they have become fully ripe, as we should like to try the experiment of growing some of them *from* the seed, if sprouts or young trees cannot be secured. It appears from present indications that a little careful selection of the earliest and latest blooming basswoods would give us at least one month's flow of basswood honey; perhaps more than that by selecting some of the varieties from Europe, especially the southern parts.

SUGAR SYRUP—HONEY FROM OLD COMBS AS FOOD.

R. McLEAN.—Would you kindly advise me best syrup to feed bees for winter use. I have quite a quantity of honey in combs two years old. By boiling it could I feed it for winter use? Please let me know through your journal. I have been keeping bees the last twelve years but got more useful information from your BEE JOURNAL than I did in all my life before.

Hopewell, Picton Co., Aug. 15th, 1885.

The best syrup for winter food is best granulated sugar. The honey from the comb might be boiled and fed; better mix a little best granulated sugar with it.

ABSCONDING SWARMS.

A. G. WATSON.—My bees have done very well this year so far. As I have another position I cannot attend to them as I could wish, but have got quite a lot of honey from six colonies. I only lost one colony last winter and the rest came out very strong. My best swarm flew away to the woods this year. I followed them as far as I could for the river. I put them in a hive all right and they stayed there about two hours and then flew. I do not know the cause as the hive appeared to be clean and the combs smelled sweet. I would like to know the cause of their

leaving.

Ayr, Aug. 4th, 1885.

There are various causes for bees leaving; sometimes they leave without any *apparent* cause; probably the hive was too warm. By keeping them well shaded and cool and giving them a comb with eggs, larvæ, brood, honey, etc., they may generally be kept alright.

BEE SPACES—EXTRACTING FROM BROOD CHAMBER

G. G. MCKENZIE.—Do you leave bee space between the frames and perforated zinc or honey board, or do you put it flat on top of frames? Do you divide the brood chamber by the use of metal division board to extract from behind it, or do you extract from all the frames? What is the best way to entice the bees in the sections or upper story.

North Nation Mills, Que.

Yes, to the first question and to the second, we never use any perforated metal division boards in the body of the hive for extracting purposes, unless it be to shut off drone comb from worker comb. The sections must be placed as near the board as possible; the brood chamber must be contracted, so that there is only room for brooding. Any means may be adopted to secure the two points above mentioned.

C. BOYD.—My report for season is as follows: Four colonies Spring count increased to nine. Have taken 1000 pounds extracted honey and 50 pounds comb honey. Honey is coming in rapidly at present from boneset and golden rod, the latter seems to be the first beginning to bloom here. We had a heavy frost on the night of the 1st, but it did not do much damage to the flowers. Am preparing for winter by giving my bees six combs in eight comb space, replacing other two combs with one inch boards, crowded up against side of hive.

Petrolea, Ont.

We can supply all the back numbers of the CANADIAN BEE JOURNAL at the present time, and we shall be pleased to send new subscribers all the back numbers if so desired.

THE CANADIAN BEE JOURNAL.

D. A. JONES.

F. H. MACPHERSON

D. A. JONES & CO.,

EDITORS AND PUBLISHERS,

BEETON, ONTARIO.

WEEKLY, \$1.00 per Year, Postpaid

BEETON, ONTARIO, SEPTEMBER 30TH 1885

OCTOBER.

The sweet, calm sunshine of October, now
 Warms the low spot : upon its grassy mould
 The purple oak-leaf falls ; the birchen bough
 Drops its bright spoil like arrow-heads of gold.
 —Bryant.

CORRECTION.

In Mr. S. J. Chubb's article, page 409 of present volume, the word "Filia" should read *Tilia*, and "parrifolia" *parvifolia*. In the hurry of proof reading the correction of these errors was overlooked.

The October number of the *American Agriculturist* is especially interesting and valuable to the farmer and gardener. The many useful hints in this number if acted on would be of greater money value than the entire subscription for a year. Every new and useful invention is explained thoroughly by engravings. \$1.50 sent to the publishers, 751 Broadway, New York, will secure it from now till January, 1887.

GRIEVANCES AT LONDON.

At London, because the directors could not or would not give sufficient space to bee-keepers, several loads of comb and extracted honey were driven right home again. If the Directorate of the Western Fair expect to retain the interests of the bee-keeping fraternity they will find it necessary to use them a little differently, and to endeavor to meet their views in the matter of accommodation. For a certainty we know that their demands on the directors were extremely modest, and *should have been* acceded to.

INJURING THE MARKET.

We have heard many complaints from honey producers of the way in which the honey-market in the cities is cut up—notably that of Toronto. During the exhibition a friend informed us that he had found it almost impossible to secure an order from a dealer at all, and on enquiry he found that some body was canvassing the city for orders, and where orders could not be placed a few cans or glasses would be left, *to be paid for when sold*. No wonder the grocery men won't buy when they can get such advantageous terms

as these. It is certainly a mode of procedure which should be frowned down by all intelligent producers throughout the country. Those who would do business in that way are decidedly not working with the best interests of the bee-keeping fraternity at heart.

KIND WORDS.

G. J. Hall, Runmey, N. H., writes: I have taken several bee magazines and can say that I like yours better than all.

Rev. D. Beattie, Campbellford, writes: I may say that I am well pleased with the JOURNAL and read it with much pleasure.

PRICE LISTS RECEIVED.

E. H. Cook, Andover, Con., sends us the *Bee Keepers' Club List*. Mr. Cook is Mr. Doolittle's successor.

Chas. D. Duvalls, Spencerville, Md.,—Italian Bees and Queens. See advertisement.

EAST ELGIN BEE-KEEPERS Association, in St. Thomas, at the Hutchinson House, on the second Saturday in October—18th—at 1 o'clock. John Yoder, Secretary, Springfield P. O.

HONEY MARKET.

BOSTON.

We have received quite a large stock of honey mostly from Vermont, and the quality is very fine. We are doing the best we can to keep the prices up, where the bee-keepers can get something for their honey. One of the largest producers sold his entire crop at a *very low price*, and it is being sold here at a price that would give the bee-keeper nothing. We still hold our prices 16c. to 18c. for one pound, 14c. to 16c. for two pounds. Extracted 6 to 8c. Wax 30c.

BLAKE & RIPLEY.

Sept. 21, 1885.

No change has taken place in the general feature of the market. Demand is slow for extracted honey with an abundance on the market. Depression in other branches of business and low prices have their bearing upon honey. Better prices will, in my estimation, not be obtained until a general revival of business takes place; our most ardent desires to the contrary notwithstanding. Custom has to be made, even at the short crop of this season. Small lots only of new comb honey make their appearance and are sold readily. Yet, demand is slow in proportion. Extracted honey brings 4 to 8 cents on arrival, and choice comb honey 15 to 16 cents in jobbing way. Beeswax is in fair demand and arrivals are good. We pay 20 to 24 cents for good yellow.

C. F. MUTH.

Cincinnati, Sept. 12, 1885.

In purchasing articles advertised in the "Canadian Bee Journal" please mention in what paper you saw the advertisement. Advertisers always wish to know which advertisements are most effective.

Red Clover Queens by Return Mail.

I am now up with my orders, and can send queens by return mail. My queens are almost without an exception purely mated, and my bees worked just thick on red clover from the time it bloomed until the present.

J. T. WILSON,
Nicholasville, Ky.

THE NEW ONE-PIECE SECTION.

Though these sections cost more to make than the old style, still we are supplying them at the same price. We keep in stock 3 1/2 x 4 1/2 (ours), and 4 1/2 x 4 1/2 (Langstroth), and can make any other sizes to order on short notice. Prices:

Per 1,000.....	\$ 6 00
" 5,000.....	27 50
" 10,000.....	50 00

Sample sections sent on application.

D. A. JONES,
Beeton, Ont

GLASS JARS!

We have several gross of these jars ready for shipment by return freight or express, at the following prices:

		Gross.	Half gross
"Crown" brand"	1 Pint	\$14.75	\$7.50
" "	1 Quart	15.75	8.00
" "	1/2 Gallon	19.00	9.75

They are put up in half-gross cases—no charge for packing or cases.

D. A. JONES.

BIG OFFER.

WE HAVE MORE COLONIES THAN WE CAN POSSIBLY CARE FOR, WITH THE EXTRA WORK ENTAILED BY OUR INCREASING SUPPLY BUSINESS. TO REDUCE OUR PRESENT STOCK WE WILL SELL

500 COLONIES

—AT FROM—

—\$6.00 TO \$8.00 EACH.—

STRONG AND IN GOOD CONDITION.

- Colonies containing 6 frames (all that we use to winter on) with good laying queen \$6.00
- Colonies containing 8 frames..... \$7.00
- Eight frames with extra fine queen \$8.00

These prices are for delivery at once. We will make special arrangements with those who may want fifty or one hundred colonies.

D. A. JONES,
BEETON, ONT.

Five Per Cent. Discount.

Off all goods which may be ordered now for use next season we will give the above discount. This is to induce early orders and in case you need anything for this season, you could save freight charges and the discount by ordering ALL TOGETHER. Will be given till further notice.

D. A. JONES, Beeton, Ont.

THE INVERTIBLE HIVE

INVERTIBLE FRAMES,

Invertible Surplus Honey Cases, Entrance Feeders, Top & Bottom Feeders, Hive-Lifting Device, Honey Extractors, Wax Extractors, Comb Foundation, etc.

My new Illustrated Catalogue is now ready, and will be mailed to all who apply for it. Address

J. M. SHUCK,

DES MOINES, IOWA.

150 COLONIES —OF— BEES FOR SALE

These bees are mostly of the Heddon strain, only about half a dozen Italians colonies remaining that I considered worth keeping. I killed a few weeks ago the only Ho y Land Queen that I ever possessed as her progeny did not come up to the standard. Nearly one-half of the above are reared from one Heddon queen whose offspring gave such good returns, season of 1884. I have found them vastly superior to the Italians being much less inclined to swarm, as a rule only doing so when crowded for space. As I must dispose of the above before another season I will sell as follows for present delivery.

One Colony of Bees, queen and brood, on eight Jones' frames (specially selected so that the queen can lay to the top bar on nearly all) and 25 lbs. of winter stores for \$6.50.

Two frame nuclei containing bees, honey and brood, \$2.00.

Four frames of nuclei, as above \$3.50.

One Jones' frame of comb and one pound of bees, \$1.50.

Empty combs 25 cents each, or 20 cents each by the 100. The above are net prices, packing or hives will be extra, excepting for empty combs. The cost of packing or hives as follows: Box for nuclei 25 cents each; for colonies, 50c; a 10 or 12 frame hive from \$1.20 to \$1.80 or \$3.75 for my special 20 frame story and a half hive, which is double sided below, with one-inch chaff space, two chaff division boards, one chaff cushion (full length of hive), twelve empty frames (20 in all), and which has a special feeder whereby you can feed 50 colonies in 20 minutes without any work of lifting off covers and disturbing cushion. This hive has the entrance at the side which makes it much cooler in summer. For a partial description see "Gleanings" for 1884, page 691. It is well painted, comparatively light, as my son when not five years old could carry them. This hive is excellent for either comb or extracted honey as I frequently have it full of frames below for extracted honey and a case of forty-five one-pound sections on top, removing all at once at the close of the honey season unless they should swarm, which they seldom do. I will winter full colonies in my cellar and deliver in good condition next Spring at the express office, for 75 cents extra if ordered and paid for in August. Cash to accompany all orders unless otherwise agreed upon.

G. A. DEADMAN,
Druggist &c., Brussels, Ont

— TRY THE —
BELLINZONA ITALIANS,

And see for yourself that they are the best. Warranted Queens, bred from mothers imported direct from the mountains of Italy, \$1.00 each; six for \$5.00. Satisfaction guaranteed. Orders filled promptly.

CHAS. D. D'U'VALL,
Spencerville, Mont. Co., Md.

HONEY KNIVES.

We have just to hand a large shipment of honey knives from the makers, Lockwood Bros. Sheffield, England. These are undoubtedly the finest we have had made yet, being the most perfect in shape and neatness of manufacture.



These Knives are made of the Finest Razor Steel.

- Ebony Polished Handle, mirror polish.....\$1 50
- Ebony Polished Handle, glazed polish..... 1 25
- Wood Polished Handle, glazed polish..... 1 00

If by mail, add 15c extra for each knife.
D. A. JONES, Beeton, Ont.

J. P. CONNELL, Hillsboro, Hill Co., Texas, can fill orders for **Pure Italian Queens** by return mail. Untested Queens, \$1.00. Tested Queens, \$2.00. Send me your order and send for my circular of Queens, Nuclei and bees by the pound.

FLAT-BOTTOM COMB FOUNDATION, High side-walls, 4 to 14 square feet to the pound. Wholesale and retail. Circular and samples free.

J. VAN DEUSEN & SONS,

SOLE MANUFACTURERS.

SPROUT BROOK, MONT. CO., N. Y.

DADANTS FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness, of any that is made. It is kept for sale by Messrs.

- A. H. NEWMAN, Chicago, Ill.
- C. F. MUTH, Cincinnati, O.
- JAMES HEDDON, Dowagiac, Mich.
- DOUGHERTY & McKEE, Indianapolis, Ind.
- CHAS. H. GREEN, Berlin, Wis.
- CHAS. HERTEL, Jr., Freeburg, Ill.
- E. L. ARMSTRONG, Jerseyville, Ill.
- ARTHUR TODD, Germantown, Philadelphia Pa.
- E. KRETCHMER, Coburg, Iowa.
- E. F. SMITH, Smyrna, N. Y.
- C. F. DALE, Mortonsville, Ky.
- EZRA BAER, Dixon, Lee Co., Ill.
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and numbers of other dealers. Write for SAMPLES FREE and Price List of Supplies, accompanied with

150 COMPLIMENTARY

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 2883. We guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON,
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**APIARIAN
SUPPLIES**

MANUFACTURED BY

W. T. Falconer - Jamestown, N. Y.

Are unsurpassed for **Quality and fine Workmanship**. A specialty made of all styles of the **Simplicity Hive** including the **Van Deusen-Nellis**. The "**FALCON**, **Chaff** **Hive**, with movable upper story, continues to receive the highest recommendations as regards its superior advantages for **wintering** and handling bees at all seasons.

DOVE-TAILED SECTIONS.

Same price as one-piece. Also manufacturer of **VAN-DEUSSEN FOUNDATION**. Dealer in a full line of **Bee-Keepers' Supplies**. Send for Illustrated Catalogue for **1885**. Free. **Prices always reasonable**. Mention this paper.

**\$400 WORTH OF
BEES & BEE FIXTURES.**

For sale or exchange for other property. The reason for selling out is because of lameness and inability to attend to the work. Apply to

R. SHANNON, Colborne, Ont.

July 22nd, 1885.

**BEE HIVES,
FOUNDATION,**

Cheaper than ever. Honey Extractors, Wax Extractors. Our superior Honey Pails now ready to ship at any time Send for Price List

S. P. HODGSON,
Hornings Mills, Ont

MUTH'S HONEY EXTRACTOR

Is second to none in the market. **Square Gears, Honey Jars, Tin Buckets, Langstroth Bee Hives, one-piece Sections, etc., etc.**

Circulars mailed on application. Send ten cents for "Practical Hints to Bee-Keepers." Address

CHARLES F. MUTH,

976 and 978 Central Avenue, Cincinnati, O.

BEE-KEEPER'S GUIDE,

OR
MANUAL OF THE APIARY.

11,000 SOLD SINCE 1876,

The twelfth thousand just out. 10th thousand sold in just four months. 2,000 sold the past year. More than 50 pages and more than 50 costly illustrations were added in the 8th edition. It has been thoroughly revised and contains the very latest in respect to Bee-keeping.

Price by mail, \$1.25. Liberal discount made to Dealers and to Clubs.

A. J. Cook, Author and Publisher,
State Agricultural College Lansing, Mich

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BEES AND HONEY.

We will with pleasure send you a sample copy of our **SEMI-MONTHLY GLEANINGS IN BEE CULTURE**, with descriptive price-list of the latest improvements in **HIVES, HONEY EXTRACTORS, COMB FOUNDATION, SECTION HONEY BOXES**, all books and journals, and everything pertaining to Bee Culture. Nothing Patented. Simply send your address on a postal card, written plainly
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