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

VOL. VI, No. 9. BEETON, ONT., AUGUST 1, 1890. WHOLE No. 269

THE CANADIAN BEE JOURNAL

Devoted exclusively to the interests of the Honey Producer.

Seventy-five Cents per annum in Advance.

ADVERTISING RATES.

All advertisements will be inserted at the following rates

STANDING ADVERTISEMENTS.

Time.	1 in.	2 in.	3 in.	4 in.	1 col.	page
1 month	$2.00	$3.00	$3.50	$4.50	$6.50	$10.00
2 months.....	3.00	4.50	5.50	6.50	11.00	17.00
3 months.....	4.00	5.50	7.00	9.00	15.00	25.00
6 months.....	6.00	9.00	12.00	15.00	25.00	40.00
12 months.....	10.00	15.00	20.00	25.00	40.00	75.00

Breeders' Illustrated Directory.

One-fifth column, $8 per year; $5 for 6 mos. All yearly advertisements payable quarterly in advance.

Condensed Directory.

Occupying one-half inch space, THREE DOLLARS per annum.

Transient Advertisements.

10 cents per line for the first insertion, and 5 cents per line for each subsequent insertion.

Space measured by a scale of solid nonpareil of which there are twelve lines to the inch, and about nine words to each line.

Exchange and Mart.

Advertisements for this Department will be inserted at the uniform rate of **25 CENTS** each insertion---not to exceed five lines---and 5 cents each additional line each insertion. If you desire your advt. in this column, be particular to mention the fact, else it will be inserted in our regular advertising columns. This column is **specially** intended for those who have poultry, eggs, bees, or other goods for exchange for something else and for the purpose of advertising bees, honey, poultry, etc., for sale. Cash must accompany advt. Five insertions without change, $1.

STRICTLY CASH IN ADVANCE

Contract advertisements may be changed to suit the seasons. Transient advertisements inserted till forbid and charged accordingly. All advertisements received for THE CANADIAN BEE JOURNAL are inserted, without extra charge, in THE CANADIAN POULTRY JOURNAL.

THE D. A. JONES CO., LD., Beeton, Publishers.

PUBLISHERS' NOTES.

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

THE JOURNAL will be continued to each address until otherwise ordered and all arrears paid.

Subscriptions are always acknowledged on the wrapper label as soon as possible after receipt.

American Currency, stamps, Post Office orders, and New York and Chicago (par) dratts accepted at par in payment of subscription and advertising accounts.

Subscription Price, 75c. per Annum. Postage free for Canada and the United States; to England, Germany, etc, 10 cents per year extra; and to all countries not in the postal Union, 50c. extra per annum.

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 as certain your exact standing.

Communications on any subject of interest to the fraternity are always welcome, and are solicited.

When sending in anything intended for the JOURNAL do not mix it up with a business communication. Use different sheets of paper. Both may, however be enclosed in the same envelope.

Reports from subscribers are always welcome. They assist greatly in making the JOURNAL interesting. If any particular system of management has contributed to your success, and you are willing that your neighbors should know it, tell them through the medium of the JOURNAL.

ERRORS. — We make them: so does every one, and we will cheerfully correct them if you write us. Try to write us good naturedly, but if you cannot, then write to us anyway. Do not complain to any one else or let it pass. We want an early opportunity to make right any injustice we may do.

We do not accept any advertisements of a suspicious or swindling nature, but our readers must not expect us to be responsible should our advertisers not do as they agree. They will find it a good rule to be careful about extraordinary bargains, and in doubtful cases not to pay for goods before delivery.

Clubbing Rates.

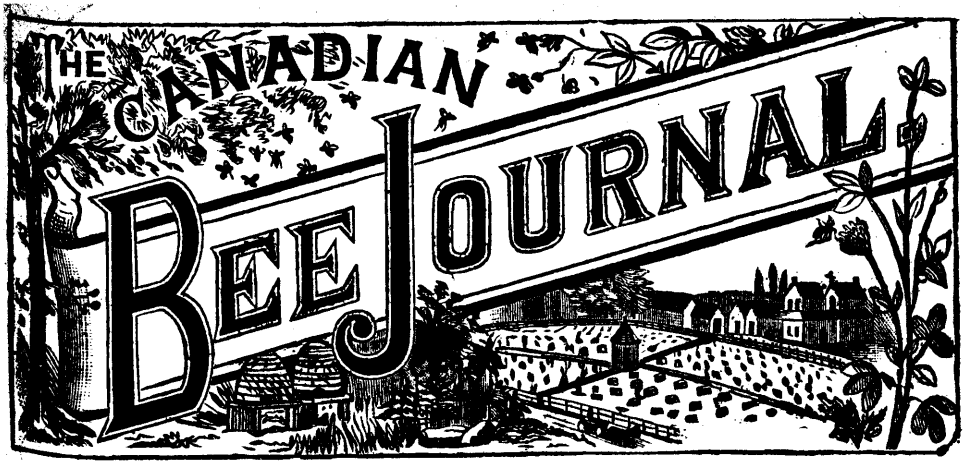
THE CANADIAN BEE JOURNAL and THE CANADIAN POULTRY JOURNAL	$1 00
THE CANADIAN BEE JOURNAL and premium queen	1 00
Both JOURNALS and premium queen.....	1 25

Job Printing.

All we ask is the privilege of an opportunity to estimate. Free use of all our cuts given to those who favor us with orders. Specimen sheets furnished on application.

CONDENSED DIRECTORY.

Advertisements under this heading, occupying one-half inch space, three dollars a year



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

VOL. VI, No. 9. BEETON, ONT., AUGUST 1, 1890. WHOLE No. 269

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

D. A. JONES, - EDITOR-IN-CHIEF.
F. H. MACPHERSON, - ASSOCIATE EDITOR.

EDITORIAL.

ALL the newspapers in the Province have already received copies of the Bulletin just issued by the Department of Agriculture, relating to Foul Brood, and we trust they will follow the good example of the *Globe*, giving it a good notice, and copying as much of it as is convenient. At least tell those who keep bees that they may obtain a copy of the Bulletin by applying to the Department of Agriculture at Toronto.

***

The "latest" in the way of a publication hails from Nebraska, and is called the *Nebraska Beekeeper*. It is a pretty crude affair, and will we fear follow in the footsteps of many of its predecessors, before very long. It is published at York, Neb., by L. D. Stilson, and is a monthly, at fifty cents.

***

In next issue we will give reports from thirty correspondents as to the yield of honey thus far, the prospects for a fall flow, and the extent of swarming. From ordinary reports received we are induced to believe that the entire crop is considerably below the average, as in most districts, linden has yielded little or nothing. Don't rush your crop into the market. On this point Prof. Cook says in A. B. J.:

I think it would be well to caution bee-keepers not to sell their honey too quckly. In this vicinity—and I fear we are not peculiar—the honey produce has been almost nothing. It is as bad as it was two years ago. I believe that the price of honey must be very high, unless California fills the breech.

***

Indeed, so great has been the shortage in the U. S. that the editor of the American Bee Journal, in speaking of great rush for goods says:

It is now all over, and very likely it will take all next season to use the goods ordered this year. On this account it will not be strange if next season's demand for supplies should prove to be *very limited!*

***

Rev. Dr. Dzierzon was presented on the 29th March with the order of St. Michael, by Prince Luitpold of Bavaria.

***

British beekeepers are having a hard time of it. Swarms and stocks were dying in July. One good thing about it all is that over there, but few, if any, depend on beekeeping as a means of livelihood. The editor of the *British Bee Journal* is living in hopes that there may yet be a "turn in the tide."

GENERAL.

For The Canadian Bee Journal.

Foul Brood.

THAT PAMPHLET, AND OTHER MATTERS.

MOST readers of the Journal are aware that it was decided at the Board meeting in April last, when the foul brood inspectors were appointed, to issue a foul brood pamphlet, including a copy of the recent Act, to be distributed gratuitously among Ontario beekeepers. The Minister of Agriculture, who had already shown the O. B. K. A. much consideration undertook to issue such pamphlet as we might prepare for him as one of the regular official Bulletins, and send it out as a Departmental document, thus relieving the Association of all expense in the premises, save that incurred in preparing the pamphlet ready for the printers, and securing a list of the names and addresses of Ontario beekeepers, which was also to be supplied to the Department by the Association. The latter part of the work was delegated to Messrs. Jones & Macpherson and the former to myself. The pamphlet will doubtless be distributed before this is in type, but some explanation of the delay will be perhaps expected. Two or three reasons of the delay may be given,—The work of getting up, the provincial elections, and the supplementry correspondence with the other members of the Committee re manuscript, and also with the Department in reference to "German edition of the Bulletin." In explanation to this phase of the matter I may say that some weeks since I was advised by the Inspector that in some German neighborhoods in the County of Waterloo the Apiaries were fairly rotten with foul brood. These were owned mostly by German farmers and gardners who could neither speak nor read English, and the Inspector had consequently to take an interpeter with him. He found them mostly good farmers and gardners, thrifty and intelligent, and anxious to learn how to rid themselves of the foul disease infecting their bee-yards. When the Inspector told them of the forthcoming pamphlet they urged him to get some of them printed in their language that they might acquire the information which would enable them to deal with the enemies of their bees and their pockets. From these representations, together with the fact that about 300 copies of the German edition would be required, I deemed it right to place the matter before the Minister of Agriculture asking on behalf of the Association that the Government meet the wishes of the German citizens if possible; but the Department, though desirous of doing so, finds difficulties in the way, and I have not yet received a final decision in the premises. The Minister says, "the contract with the Queen's printer does not include work of this kind, and I am afraid it would be very costly unless we could get it done at some outside office." He psomises, however, to see what can be done. I hope the German edition may be issued, for this is a matter which concerns other apiarists than the Germans themselves, as those infested localities might become the lurking places but not the *resting* places of the contagion to be spread anew after being suppressed elsewhere.

THE INSPECTOR

I am pleased to say, appears to be doing his duty with good judgment and wise discretion. The afflicted ones soon find him to be their friend instead of an enemy as they had foolishly supposed. Instead of destroying he is trying to save every sufferer's property by effectual treatment.

THE SEASON SO FAR

Is what may be called good, that is, the honey season. But the spring having been unfavorable for the rapid building up of colonies, when the honey flow of clover did come only comparitively few colonies were in first class strength and condition for the harvest. Swarming has been brisk in my own yard, but I have heard numerous complaints of the swarms being backward in coming forward.

ALLAN PRINGLE.

Selby Ont., July 18th, 1890.

For The Canadian Bee Journal.

Manitoba.

A REPORT FROM THE MANITOBA EXPERIMENTAL FARM AT BRANDON.

WE are experimenting with bees on the farm here, we bought two hives of Italians from Mr. Bridgman, of Winnipeg, last year. They each gave us a swarm and a little surplus honey.

When placed in cellar, Nov. 1st, each colony had 30 lbs honey. The cellar was rather open and after New Years the thermometer seldom showed above freezing, three colonies came through in good order, the fourth lost its queen and dwindled away in spring.

Bees were placed in summer stands May 1st and since then have been steadily storing honey.

The following trees, shrubs, etc., appear to be the principal source of honey here during the

spring and early summer. Willow, of which we have a large number of varieties, giving a succession of blossom, Poplar, Asp Leaf Maple, Ash, and the following wild fruits, Saskatoon, Cherry, Plum, Raspberry, Currant and Strawberry.

I am not certain that beekeeping will prove a success on the treeless prairie here, but near timber and on the numerous creek and river valleys, I think the prospect is very promising.

I find the honey from our wild flowers very delicious.

S. A. BEDFORD, Supt.

Brandon, Man., July 2, 1890.

We are glad to observe that the Government are testing this matter of whether bees will prove a profitable investment, and we hope that it may prove a success. We shall look forward to a report after the present season is over.

For THE CANADIAN BEE JOURNAL.

A Wisconsin Report.

LAST winter was very favorable for wintering bees out doors in this locality, but the changeable weather in April and fore part of May was very unpropitious and many of the bees seemed to have la-grippe, or something else which caused some colonies to dwindle badly. Those wintered in cellars or clamps suffered most; many colonies succumbed altogether. Two or three neighbors lost all the bees they had. About the 20th of May the weather took a more favorable turn, and since that date, what bees were yet alive have been doing well. White clover is abundant and commenced to yield nectar about the middle of June, but we have had so much rain that the nectar is very thin. From June the 24th to June the 28th, inclusive, we had five days of the warmest weather that we have had for several years, at least I think so. The thermometer ranging from 98 to 102 in the shade on north side of building, through the heat of the day and scarcely falling below 70° during the night. Although we had several thunder storms mean-while yet that did not seem to cool the atmosphere very much. During these hot days the clover blossoms do not appear to yield very much nectar, and the bees find but little to do except to cluster on the outside of the hive, or amuse themselves by swarming, perhaps hoping to find a cooler place.

A LARGE SWARM OF BEES.

On the 18th inst. a neighbor living about one mile from here came into my yard in a great hurry and requested me to supply him with a hive and then go and help him hive a stray swarm of bees which had clustered near his house. I complied with his request, and finding the swarm to be an unusually large one, I bought it of him for three dollars ($3.00) and brought it home, and it weighed 9¾ lbs., exclusive of hive and frames. Where they came from no one knows. They are pure bred brown bees; and if they are all the progeny of one queen she must be enormously prolific, and must have had a large hive or a large tree to breed up in. But I rather suspect that two swarms had by some means united together. Did any one ever have a swarm of bees that would weigh nine and three quarter pounds? Who can beat this? On the 21st (of June) I set the hive containing this colony on scales, and they stored 9 lbs of honey that day, on the 22nd 8 lbs, on the 23rd 9 lbs, 24th 9 lbs. On this day commenced the hot weather mentioned above, on the 25th the thermometer went up to 102° in the northern shade, and they only stored three pounds, on the 26th only one pound, and only one pound any day since. I mention this to show the effect of excessive heat upon the secretion of nectar in the flowers. To-day (the 30th) it is not quite so warm, the thermometer only up to 88°, and bees are more active again this afternoon.

JOSHUA BULL.

Seymour, Wis., June 30th, 1890.

For THE CANADIAN BEE JOURNAL.

Western Ontario

AS A LOCALITY FOR BEEKEEPERS.

WHEN speaking of this section of Ontario as a locality for bees it will be remembered the information is given by one who has been here but little over a year, although much has been related to him by others. After keeping bees further east and then here it no longer surprises me that beekeepers find it difficult to reconcile the idea that locality make so great a difference in results. Let me at the outset say that a portion of at least Essex and Kent is as yet uncleared, in fact, I believe there could be travelled from where I am writing in one direction, a distance of ten miles without an acre of cultivated land being crossed. The soil is good. The reason it has not been cleared and cultivated, is because it needed draining. Again, being on a penninsula with Lake Erie to the South and Lake Michigan and St. Clair to the North, we not only have more showers but the air has more moisture in it. Again, being in the most

Southerly part of Ontario and tempted by the lakes the winters are milder and the bees can have frequent flies when in other parts the temperature is too low for the bees to fly. From the standpoint of a beekeeper what are the advantages and disadvantages of the locality. As so many prefer to look upon the advantages let us look into them first. Spring is earlier, and we can have our bees strong earlier, and rear a good queen earlier. From soft maple, balm or button wood (the latter I never saw to my recollection in other parts of the province) and willow an abundance of early honey and pollen may may be secured. Then follows a wild flower in the forest and from this time ample fruit bloom we have the only season when no honey may be expected. After fruit bloom comes clover which runs into basswood and thistle, before the close of which we have milkweed and astors which are quickly followed by boneset and golden rod, the latter only ceasing to bloom when cut off by the frost. From the above we may judge we can expect swarming any time from fruit bloom until frost. Last year I had swarms before the close of the Toronto Exhibition, and last year, which I believe was an exceptional one, I received over 100 lbs. from one colony from golden rod and boneset. This year gave me a surplus from fruit bloom, owing to the fact that along the lake shore fruit bloom was later than inland, and just as it closed inland and opened on the lake shore the weather, which had been very unsettled previously, turned fine and gave the bees every advantage. Clover did not do well, and although I extracted all dark honey when the bees commenced to work I could not secure a really prime article. Before the basswood I again extracted, and to-day, July 17th, have secured a very good honey from this source, about 30 lbs. to the colony all round. Astors are opening, also milkweed and other flowers following. So had I not extracted promptly, or taken the fruit bloom out early, I should have had no first class honey, and I am afraid many neighboring beekeepers are in just that position. I wintered my bees last year with almost perfect success on fall honey and shall attempt it again this year, but for safety I would remind beekeepers in other localities that my bees can have frequent flights, hence, perhaps, my success. That this locality will produce a comb honey which will take a prize at an exhibition for many years, I doubt. The amount of propolis the bees gather whenver they fly is something astonishing. In midsummer the quantity is greater than any quantity I have ever seen in the hive in the fall, and of course the comb becomes tainted as to color. The bees have a worthy object in view when using the propolis, and I can assign no other reason than that it is because the atmosphere is so moist. A great deal of dark honey is secured which can be used to the best advantage for winter feed and realizing for this honey by selling bees in the spring ar the season is early we can here secure strong colonies earlier and therefore we are favorably situated to please customers in that direction. As to the honey flow an old beekeeper remarked to me he had only one good flow for seven years and that year "basswood being on and on," and from some colonies he secured 20 lbs. surplus per day. Of course this he could not put down as an average, and to put all below it is as a failure. There are a great many small beekeepers in Essex, Kent and Lambton, and I have no doubt if parties could be reached information could be imparted which would enhance the value of the honey crop. The difficulty, however, is to reach them and get them to subscribe for a bee journal.

R. F. HOLTERMANN.

Rouney, Ont.

For THE CANADIAN BEE JOURNAL.

Foul Brood And Its Origin.

THE editor of the C. B. J. in his comments on my article on "the origin of foul brood" on page 151 accuses me of knowing nothing of foul brood practically. Please allow me to correct him a little by saying I do know something of foul brood practically. I don't see very well how he managed to find that I knew nothing of foul brood, unless he already possesses the secret of its origin, and if so he should at once make it known to his readers. He says he has tested the matter and is satisfied the disease has its seat in the honey, or in the honey sac of the bee. I wish he would determine which is to blame, the honey, or the honey sac, then we could talk it over. Perhaps he may find the disease has got a seat in the bees middle legs on which he said the bees carried their pollen. He tells me I don't know where its "seat" is, and he admits he don't know, and he has talked with some of the best microscopists in Europe, and they don't know, and now he wants Prof. Cook to find where the thing roosts. My bees would make it pretty warm for any disease that took its "seat" in their honey sac, and it don't look reasonable that it took its "seat" in honey, for then we'd be eating honey and "seat," and a purty poor "seat" at that, and I'd rather eat honey and biscuit. Prof. Wiley said that bee-keepers sold honey and glucose, and the C. B. J. has

been going for him for a long while, and that's proper, but I'd rather eat honey and glucose regular, than to think of eating honey and "seat" at all. I'm afraid if he keeps on talking in that way, it will hurt the sale of our honey; if folks don't know better for themselues. An English writer to the C. B. J. says that some articles he has written has caused some stir in America, and he has received hundreds of letters with reference to his American stir. Course I haint had no such honor as that, and couldn't use it if I had it, still ever since I rit that piece on foul brood, I keep gettin now and then a letter telling me that I am right and D. A. Jones is wrong. Some of the letters come from Canada, and I'll give you part of one of them now, for there is business in every word of it. I wont give you the man's name, for I hain't asked him if I could, he says:

"FRIEND GATES.—A thousand thanks to you and more, and a long life to you, for that letter of yours in the C. B. JOURNAL on "the origin of foul brood," it is the best I ever read. You are in the right, and D. A. Jones is very far from the mark, foul brood is caused by starved chilled or *uncared* for brood that is left in the cells to rot. It is usually the brood that dies before it is *nine days old that causes* foul brood, because if it dies at that age from either being chilled or starved, the bees wont remove all such if the spring keeps raw and backward, and then the next brood that is fed in those cells where the brood lately rotted down in, will have to consume their food mixed with the rotten brood that died in the cells before, and that is the real and only cause of foul brood. From a discovery of the cause, and fifteen years of experience in curing foul brood apiaries, I positiveiy declare that the rotting of *uncared for brood is the real and only cause of foul brood.*"

The above letter speaks my experience almost to a dot. You can see by his talk that he has studied the question from bottom to top; while others have been wasting their time on the many little nothings that are of no account practically. He has been reaching for things practical while others have been running headlong to ruin. He has been fixing a break to slack their speed before the crash comes. He is a man that knows as much about bees I believe, as most any one, not because he agrees with me, but because his work shows it.

JOHN F. GATES.

Ovid, Erie Co., Pa., July 19, 1890.

I am very glad Friend Gates that you pointed out the omission that the printers made. I did not read the proof personally, being so busy, and did not not notice the fact that the types made me say that it was in the bees sack instead of *in the honey in the bee's sac.* The omission changed the sense entirely. I think that almost everybody is aware that I have taken the ground that it is not in the sack of the bee or in any other part of the bee's body and as a proof of this, when the bees are fed on foul brood honey and are fasted until the honey is consumed no danger from the disease may be apprehended as it is a positive cure. So, if the disease remained on or in the bees in any way or any where about them, the fasting would not cure it and we believe that those who used to take the ground that the disease was in the bees and not in the honey are gradually becoming convinced of their error. We know perfectly well that the thing "roosts" in the honey; of course where foul brood is allowed to dry up in the combs or where it occupied cells, those cells are certainly diseased and larvae hatched in those cells will most likely become infected with the disease, but I think friend Gates if you get many letters from those who have had experience and understand it thoroughly you will find that they know that it "roosts" in the honey, and very largely or almost entirely through this agency is the disease spread. We think it a wise precaution for every one to get rid of all the diseased brood about their apiaries, but if any person can manufacture foul brood from live or dead brood without having the germs of the disease to start from, I would like them to describe the process. I would be much pleased if our friends can give us any new light on the subject. I have perhaps spent as much time and money as any other person and have treated as many colonies for this disease and studied it so thoroughly in the various stages, that I believe my knowledge of the business should at least be equal to that of one who never had a case of foul brood. Because one or two, or even a dozen people believe that foul brood is caused "by the rotting of uncared for brood" doesn't make it so. I have placed myself on record as believing to the contrary, and if the developments of the future prove that I am right I shall not think any the less of you for believing what your knowledge of the case tells you. In the meantime we shall agree to disagree. Please remember that I *deprecate all such carelessness as leaving rotten or dead brood in the hive as much as any one else possibly can.*

Extracted Honey.

AN INTERESTING AND INSTRUCTIVE PAPER ON THE WHOLE SUBJECT, BY THE BARNUM OF HONEY EXHIBITORS.

WE have not lately copied many articles of any length from other journals, but when so good a one as the following comes to us, we cannot refrain. This paper was sent to the *American Bee Journal* last winter in connection with the competition re "Extracted Honey;" but was ruled out because of its "extreme length," other articles, which in our opinion possessed less merit, and in which the text could scarcely be recognized, were awarded the prize:

"Extracted Honey" is a modern phrase employed only since the introduction of the honey extractor. It is generally used by the bee-keepers of America, when referring to honey separated from the comb. In Britain the same article is known as "run honey;" by the uninitiated it is freqently denominated "strained honey."

Extracted is the purest form in which honey can be procured; but not the form in which it commands the highest price in the market. There are two or three reasons why comb honey should be more highly esteemed: The first of these is founded on the belief, on the part of many, that only in this condition can it be obtained in absolute purity; another reason with some people is because a sense of the beautiful, combined with a relish for what is delicious, predominates.

We can admire the man if we cannot commend his extravagence, who, knowing the relative good value of both, prefers to pay a higher price for comb than for extracted honey, for certainly nothing that be can put upon the breakfast table equals a piece of snow-white comb honey in its combination of the beautiful and the good.

Still another reason is found in the greatly different flavor and aroma of comb, as compared with extracted honey. In extracted honey we have the pure nectar flavored with the essential oils of the flowers from which it is gathered, while in comb honey we have added to these, the flavor and aroma ot the beeswax that constiutes the honey comb. It was in this combined form, mainly, that honey was eaten, from when history began until the extractor was introduced. David —the sweet singer of Israel—associated this delicious combination with gold, when extolling t e righteous judgments of the Lord. He says: "More to be desired are they than gold; sweeter, also, than honey *and* the honey comb."

It is not to be wondered at that people are to be found even in this enlightened age, who are willing to pay a premium for the privilege of eating beeswax with their honey. The combination inspires a confidence in its purity and preserves a flavor peculiar to itself. Notwithstanding a difference in taste, and the existence of predjudices, the fact remains that extracted honey is honey in its purest and most nutritive form.

When fully ripened it is a translucent, saccharine fluid somewhat greater than that of good syrup, with a specific gravity ranging from 1.415 to 1.440. It is a vegetable product, collected by bees from the blossoms of plants. The fluid when first gathered differs from honey, however in more respects than one, and is denominated "nectar."

Nectar has not as great a specific gravity as cured honey, but the main difference between nectar and honey is, that the sugar in the nectar is identical with that derived from the cane, or beet root; while the sugar of honey is similar to that of grape. How this chemical change is brought about is now pretty well understood. It is an accepted theory that the change is effected by a salivary secretion of the bee, incorporated with and acting upon the nectar, while in the mouth and the honey-sac. Prof. Cook, I believe holds this theory to be correct. So do most eminent authorities.

Cheshire in his "Bees and Bee-Keeping," Vol. 1, page 236, says: "From what has already been said of the glandular and tongue structure of bees, it is clear that salivary secretion is added to the gathered nectar, and that this, like the saliva in our own case, converts the cane into grape sugar." The change thus effected in the sugar of nectar is of the greatest importance, because cane sugar, when unchanged, is indigestible, and, in a measure, poisonous; while grape sugar or glucose is easily digested and rapidly assimilated.

But few complete analyses of honey have been made, so that its exact chemical compounds are not generally known. Perhaps the best is that of Dr. Brown, which I give here, as copied from page 129 of Blythe's "Foods, their Analysis and Composition."

"From the following table it will be seen that the proportion of sugar—levulose and dextrouse—varies in the honeys of different countries to the extent of 11 per cent., Normandy being the richest and Jamaica the poorest. (Parantheticaly, I may be permitted to say, that Canadian honey was not among the samples tested.)

COMPOSITION OF HONEY OF VARIOUS COUNTRIES.

	English.	Welsh.	Normandy.	Germany.	Greek.	Lisbon.	Jamaica	California.	Mexican.
Water expelled at 100°	19.10	16.40	15.50	19.11	19.80	18.80	19.46	17.90	18.47
Water expelled at a much higher temperature and loss	7.60	6.56	4.95	11.00	7.80	6.66	7.58	8.13	10.03
Levulose	36.60	37.20	36.88	33.14	40.00	37.26	33.19	37.85	35.96
Dextrose	37.50	39.70	42.50	36.58	32.20	34.96	35.21	36.01	38.47
Cane Sugar?	doubt full					1.20	2.20		doubt ful
Wax. Pollen and insoluble matter	trace.	trace.	trace.	trace.	.05	1.90	2.10	trace.	trace.
Ash	.15	.14	.17	.17	.15	.14	.26	.11	.07

"The one given is not an exhaustive analysis, however; for in addition to what is given, honey contains minute organic acids, alkaloidal and bitter principles, possibly derived from the pollen; small quantities of mineral matter, and invariably minute quantities of alcohol (Blythe), all of which are included in the two last horizontal columns of the table; but suffices to show that 75 to 80 per cent. of extracted honey is saccharine matter or sugar.

"West India molasses contains but 67 per cent. of cane and fruit sugar combined; treacle, 69 per cent.; golden syrup, 72 per cent.; and beet-sugar molasses, 47 per cent. Thus we see good honey contains 8 per cent. more sugar than the best syrup in the market, and nearly twice as much as some of the molasses sold in our grocery stores.

MANAGEMENT FOR EXTRACTED HONEY.

"Having glanced at the source and composition of extracted honey, it will now be in order to say something on the management, passing over the *modus operandi*, by which it is produced, as I take it there are few of my readers unacquainted with this.

If honey be left in the hive until the combs are sealed over before extracting, its subsequent treatment is quite simple. All that will be required to preserve it in good form, will be to keep it in a dry warm room. If stored in a damp place and left unsealed, it will deteriorate in quality, from the absorption of moisture for which it has a great affinity, and will lose much of that ropy consistency which is a characteristic of good honey.

If extracted while yet uncapped or only partially sealed over, it will probably be in what is known as an "unripe" state, and must be cured, or else it will be liable to ferment, which greatly impairs its quality, and almost destroys its food value.

RIPENING EXTRACTED HONEY,

The unripeness of honey consists mainly in its holding in suspension an undue proportion of water. The removal or expulsion of this excess of water, constitutes the process of ripening. The simplest and readiest way to effect this is to heat the honey in a water bath, until the excess of water be driven off in the form of vapor. This treatment is beleived by some to impair its aroma and injure its flavor. My own experience has taught me that there is more importance attached to this notion than it deserves.

It is by means of evaporation—in virtue of which vapor passes imperceptibly from a liqiud when exposed to the air—that the process of curing is generally carried on. The rate at which evaporation takes place, depends upon the temperature. In a low temperature the air soon reaches the point of saturation, beyond which it is incapable of taking up moisture or holding it in suspension; hence, the higher the temperature, and the greater the surface exposed, the more rapid will the evaporation of water from the honey be.

Many bee-keepers have devised shallow troughs over which they slowly run their honey to facilitate the work of curing. Whatever the means employed it should be borne in mind that high temperature is necessary to rapid ripening.

There is still another method of ripening honey, that I have myself practiced with success. This may be denominated the "gravitation" method. It consist in storing honey in deep tanks (mine hold from five to seven hundred pounds each, and are about equal in diameter to that of a large sized extractor can). If these be placed in a warm room in summer (better still, a

glass house), and filled with unripe honey, then covered and left to stand for two or three weeks, it will be found that the water incorporated with the honey will have risen to the surface—the honey and the water forming two strattums as distinct and as well defined as that of oil and water in the same vessel.

"The honey may then be drawn off through the faucet below, and the water left remaining in the tank, when it will be found to be no sweeter and no denser than the liquid usually employed in making honey-vinegar, and this is the use to which I put it. It may be dipped out or poured off the top of the honey.

"On several occasions I have found a body of water on top of the honey as much as three inches deep, and on passing one's finger down through it, the surface of the honey will be palpable and well defined.

"When honey is first extracted, it is in a liquid state, but under ordinary conditions it will in time change to a semi-solid form. It is then known as 'candied honey.' The length of time that elapses before canding takes place, differs materially in different seasons, and under different circumstances. The slowness with which honey changes from the liquid to the candied form, and the rapidity with which this takes place at other times, may be attributed to the presence or absence of water in quantities favorable or unfavorable to the transformation. So also will the grain be coarse or fine. The less water present the slower the crystalization, while its entire absence prevents it altogether.

"Grape sugar," of which honey is mainly composed, combines chemically with water in two proportions—mono-hydrate glucose (C^{12} H^{24} O^{24} H_2 O) and bi-hydrated glucose (C_{12} H_{24} O_{12} $2H_2$ O); both of these hydrates lose their crystal water at 212° (Johnston). It follows that if honey be heated to the boiling point until its water of crystalization be expelled, the air then exclued and kept excluded by sealing it down, no crystalization *can* take place. This should be borne in mind and acted upon when desirable; by doing so the bee-keeper will be enabled to supply his customers with honey at any season of the year—spring, summer, autumn or winter.

KEEPING HONEY IN ITS LIQUID FORM.

"To preserve honey in its liquid form, then, it is only necessary to expel the water it contains by the application of heat (this is best done in a wather-bath), bottling while hot, and hermetically sealing the bottles. The common preserve jars, with their rubber rings and screw tops are admirably adapted for this purpose.

"This is no vague theory, but one founded on sound chemical principles. and verified in my own practice and experience. At the Internationl Convention held at Brantford, Ont., I produced a sample of liquid honey of the season of 1888, that had not been candied, and those who tasted it pronounced it excellent.

"A neighbor of mine never permits his honey to candy, by treating as above described, and I have known him to receive orders from people a hundred miles from his home, because they get honey from him in its liquid state, while at home they cannot procure it in other than a candied condition.

RETARDING HONEY GRANULATION.

"The careful observer will have noticed that granulation may be retarted by keeping in a uniform high temperature. I believe if honey be kept at say 90°, it will not crystalize so long as this temperature be maintained. The melting point of glucose-sugar crystal is 86°; cold weather accelerates candying of honey—this is well known, but little understood. It is not the cold that does it, but the condition of the atmosphere incident to the cold. In other words, the point of atmospheric saturation is then low, in which state the air is in a condition favorable to its giving back its moisture to the honey, which has for water a strong affinity.

"Let the skeptic who cures his honey by causing it to flow over shallow troughs, or by storing it in shallow tanks, and who refuses to accept this theory, transfer his operations to a cold room, or to the cellar, and he will discover that instead of obtaining cured honey, he will soon have candied honey.

"A colorless syrup is sometimes found floating on top of a body of granulated honey. This liquid is almost pure levulose, and its presence is not an evidence of unripeness, but a proof that levuose is present in an undue proportion.

In reference to the analytical table given before(will show that it varies in quantities in various samples of honey. It is in itself uncrystalizable glucose, or from its co-constituent dextrouse. When it is present in honey in abnormal quantities, a portion of it refuses to combine with the dextrose, and finds it way to the surface, where it floats in the form of the liquid well known to most bee-keepers. At least most of them have had an opportunity of seeing it.

R. McKNIGHT.

Owen Sound, Ont.

*** Please send us the names of your neighbors who keep bees, that we may forward copies of the BEE JOURNAL to them. A postal card and five minutes time will do it.

CAPPINGS.

FROM A VARIETY OF COMBS.

Spread the Information.

THE following we clip from the Daily *Globe* of Thursday, July 24, as a sample of article, of what we would like to see in every paper of the province. Let all who receive Bulletins take them to the local newspaper men, and have them make extracts therefrom:—

"Beekeeping in Ontario has become an industryof such importance that last session the Legislature passed an act for the suppression of the disease known as "foul brood," and this has been followed by the issue of a pamplet on the same subject by the Ontario Bureau of Industries. The pamplet contains, besides the act referred to, a paper by D. A Jones, of Beeton; a paper by Mr. William McEvoy, of Woodburn, and some introductory remarks by Mr. Allen C. Pringle, president of the Ontario Beekeepers' Association. Between Mr. McEvoy and Mr. Jones there are some differences of opinion, which, however, do not leave the beekeeper in doubt either as to the nature of the disease or the means to get rid of it. One of these differences of opinion is as to the cause of the disease. Mr. McEvoy says that the rotting of uncared-for brood is the real and only cause of foul brood. Mr. Jones thinks that chilled, neglected, over-heated and drowned brood are evils distinct from foul brood, though he expresses the belief that one case of foul brood was caused by the drowning of the brood. In the face of these conflicting opinions Mr. Pringle's advice is very simple and practical. He says in effect: —"Be on the safe side, avoid all possible causes, and as far as may be avoid using brood which from any cause is dead or decaying," Both authorities agree that the honey is the medium through which the spores or microbes which cause the disease are transmitted, and that any successful plan of treatment must involve the complete removal of all infected honey, whether in the honey sac of the bees or elsewhere, before healthy, untainted brood can be produced. Both agree also that the combs containing the foul brood cannot be used again, but must be destroyed. The Ontario act requires that where the disease is of the virulent or malignant type all colonies so affected, together with the hives occupied by them and the contents of such hives, and all tainted appurtenance that cannot be disinfected," shall be destroyed by fire, but that in ordinary cases and in the incipient stages of the disease milder measures may be used. In such cases Mr. Jones recommends fasting, that is to say, the starving of the bee until all the honey in the sac is exhausted. "If the bees are shaken out of a foul-broody colony into a clean hive, and allowed to remain there until the honey is consumed in their bodies, the disease will never return; in other words, placing the bees in a new home without honey in their abdomens may be looked upon as a sure cure." There is a difference of opinion as to the necessity for disinfecting the hive. Here again Mr. Pringle recommends the safe course. Disinfection can at least do no harm, it may do good. We do not pretend to give in this article the details of the various measures of prevention and cure described by Mr. Jones and Mr. McEvoy, but any beekeeper may obtain the bulletin by applying to the Bureau of Industry."

BEES KILLED BY SALT WATER.

A wasp or bee swallowed may be killed before it can do harm by taking a spoonful of common salt dissolved in water. It kills the insect and cures the sting. Salt at all times is the best cure for external stings; sweet oil, pounded mallows or onions, or powdered chalk made in to a paste with water, are also efficacious.—Cor. in B. B. J.

DOES THE SHAKING OF BEES OFF FRAMES *OF BROOD ON WHICH QUEEN-CELLS ARE* BUILT INJURE THE QUEENS IN ANY WAY.

G. M. Doolittle answers a correspondent through *Gleanings* on this subject as follows:—

A correspondent wishes to know "if it will answer to shake the bees off the frame of brood having queen-cells upon it, if it is wished to save the cells for use." No, not by any means. Very many have been the number of queens killed or injured for all time by this plan of getting the bees off the cells. If the cells are only just capped over, such shaking dislodges the royal larva from the royal jelly, throwing the larva to the bottom with such force that it is either killed outright, or, in failing to get back, dies where it is. If further advanced, such shaking *deforms the queen by her having* crippled wings or legs, or, what is more often the case, the queen has a dent in her abdomen, certain segments of which are dented inward or the whole flattened or curved. While this last is not as bad as to have the wings deformed, yet it is a very rare case where a queen with a deformed abdomen proves to be a really good queen. Such queens generally become fertile and lay quite well for a time, so are of some value; but those whose wings are crippled are worse than no queen at all, for they never become fertile, while they stand in the way of our successfully introducing a laying queen. In case such crippled-wing queens are of the German or hybrid race, they are very hard to find, and the parties who have ordered queens for supposed queenless colonies having such crippled queens, and lost them in trying to introduce them, can be numbered by the score, if not by the hundreds. No one should attempt to introduce a queen to any colony unless he takes away the reigning queen at the time he puts in the new one, without first trying the colony with unsealed brood to see if they are really queenless. If they build queen-cells on this brood he can know that they have no queen; if not, then he may know that, if he tried to introduce a queen to that hive without first finding and taking out that which the bees are reverencing as a queen, he will be certain of losing

the one he would have preside over the hive. But, to return: How shall we get the bees off the queen cells if we can not shake them? The way I manage is as follows: Upon removing the frame of cells from the hive it is carefully set down at the entrance of the hive, the same side up that it occupied while in the hive, and the bees on it thoroughly smoked so as to cause them to fill themselves with honey while the hive is being closed, when smoke is again poured upon them to such an extent that the most of the bees will run into the hive, when the remainder are brushed off with one of the bee-brushes which can be had of A. I. Root. If they are loath to run off the comb into the hive, the whole can be brushed of; but be sure that they have filled themselves with honey before you undertake to brush off so many bees, unless you are willing to stand so many stings, for the bees around queen-cells will fight with a vengeance for them, unless the precaution is taken to coax them to fill themselves with honey. If the weather is cool and the cells to be placed at once in the hives. it is a good plan to take the bees along with the cells so as to keep the cells warm, when, with a little smoke, drive the bees off the cell you wish, so that they will be out of the way while you take it off the comb. After the cells are all off, then the bees can be shaken off the comb at the entrance of the hive, the same as from any other frame. This latter way of not trying to get the bees off till after the cells are, is good at any time where the cells are to be placed in different hives about the apiary.

MELCHER S HONEY EXTRACTOR.

On page 85 issue of May 15, Dr. Leurieux, of Etchemin, Que., wrote asking information regarding Melcher's Honey Extractor. We have since received the specifications of the patent, which was issued in February, 1886. The description of the inventor is as follows:

'My invention relates to an improvement in honey extractors; and it consists in, first, the combination of a honey extractor, of the pail, a suitable support for the revolving frame, a revolving frame which is made wider at the top, a perforated cross-piece which entends across the pail, and a spool or drum which is attached to the vertical shaft, as will be more fully described hereinafter; second, the support which extends across the top of the pail or can, and which is provided with a series of holes, so that it can be adapted to cans of different sizes.

The object of my invention is to produce a honey extractor which can be used in cans or pails of different sizes, and which is provided with inclined walls or sides, so that the comb will rest in an inclined position, and thus be in no danger of tilting inward when the frame is made to revolve.

The price of the arrangement asked by the inventor is $2.50. While the contrivance may answer in a crude way, still in this present age it is not practical, and it will pay any one with four or five colonies much better to purchase one of the regular makes of extractors, even though the cost be three times greater.

HOW TO CARE FOR COMB HONEY.

As the season for caring for honey is here and as I am convinced by coversations with some bee-keepers, as well as people generally, that a great many do not know how to care for honey, a few words may not come amiss at this time on the subject.

If taken off during warm weather it will some times be spoiled by the larvæ of the bee-moth. The worms can be fumegated with sulphur in a tight box or room, but this is seldom necessary, and is not practiced to any extent by the best honey producers. If comb honey is produced by the best methods there will scarcely be any cells in it, and in the absence of these the moths do little harm. A worm is seldom seen in surplus honey unless there is pollen in some of the cells. When honey is taken off the hive, if in small sections containing only one comb each, it can be held to the light and every cell of pollen detected. If these are kept by themselves and used or sold first, the rest will be comparatively free from the moth.

Honey should never be kept in a cellar—neither comb nor extracted. That is the worst possible place for it. It will gather moisture, or "sweat," and soon become "off flavor," if not positively sour. Store it in a dry, warm room and its flavor will not undergo any rapid change.—E. T. ABBOTT, in *Lewiston Journal.*

GRANULATED HONEY.

That honey will granulate and turn to sugar under certain condition is a well known fact. But so far as we know thec hemical process of change has not been demonstrated or been made known by chemists. We once before suggested that the State University take the matter in hand and if possible give a process for cheaply granulating or converting extracted honey into sugar fit for market. Then the price of honey would be as fixed as that of sugar, and the business of honey producing made sure and permanent, adding thousands of apiaries to those we already have.

Queries and Replies

UNDER THIS HEAD will appear Questions which have been asked, and replied to, by prominent and practical bee-keepers—also by the Editor. Only questions of importance should be asked in this Department, and such questions are requested from everyone. As these questions have to be put into type, sent out for answers, and the replies all awaited for, it will take some time in each case to have the answers appear.

Are Drones Profitable.

QUERY No. 273.—Will a colony give as great profit without drones as with them? The above question has to do with colonies run for honey and *not* for increase.—H. M. F.

EUGENE SECOR, FOREST CITY, Iowa.—Yes, without *many* drones. Drones like swarming are hard to "control" entirely.

A. B. MASON, AUBURNDALE, O.—Yes, greater profit.

G. A. DEADMAN, BRUSSELS, ONT.—Yes, greater.

J. K. DARLING, ALMONTE, ONT.—You will not have to feed drones if there are none and that is quite an item. All colonies will raise more or less drones, generally more and you are the gainer by geting rid of them as soon as possible.

PROF. A. J. COOK, LANSING, MICH.—I have not a doubt of it. I prefer no drones, unless I wish them for breeding.

JAMES HEDDON, DOWAGIAC, MICH.—Yes certainly. It is not necessary to have a drone in the hive in order to have the best of results in honey or increase either. A majority of our best colonies and those who give us the best results have not a drone in the hives at any time of the year so far as we notice. We keep our drone rearing going on in such colonies as we desire to breed from.

DR. MILLER, MARENGO, ILL.—Aside from the few drones needed for the young queens, I doubt if there is any profit in having any drones.

S. CORNEIL, LINDSAY, O.—I guess so, but I never knew of a hive in the ordinary course of management which had not some drones.

ALLEN PRINGLE, SELBY, ONT.—It depends a little on the number of drones you mean, and also on the temperament of the bees. If you give them lots of room and can keep them in good humour and make them believe a dozen drones are enough they will give a great deal more profit. As a rule a colony will work better with a few drones in the hive than without any, but no amount of extra work will begin to offset the effects of a host of drones in the hive with this world "one eternal holiday," so far as they are concerned till the fatal fall failure comes.

J. E. POND, NORTH ATTLEBORO, MASS.—I do not think a colony will do its best, save when in a *normal* condition. Some drones are necessary for this. If in asking the question, the querist had said "as with many drones," I should have said it will do the best without.

M. EMIGH, HOLBROOK, ONT.—I never tried it but I guess they would.

R. MCKNIGHT, OWEN SOUND, ONT.- I guess so—but like to see the big sonsey looking fellows sporting themselves in front of the hive on a fine afternoon.

J. ALPAUGH, ST. THOMAS.—I think not.

G. W. DEMAREE, CHRISTIANBURG, KY.—Yes, just the same, I have tried it many, many times. Yes, and they will swarm too, without drones, if the season is favorable to swarming. There is no mistake about it, it is all bosh to claim as some people do that the presence of drones is necessary to swarming. If this was in a mile of the fact there would be more hope of a plan to restrain the swarm craze in large apiaries.

G. M. DOOLITTLE, BORODINO, N. Y.—2 inches square of drone comb is about right for every colony to secure the most profit from them.

H. D. CUTTING, CLINTON, MICH.—Colonies will do their best when in a normal condition. A very few drones are as good as many.

WM. MCEVOY, WOODBURN, ONT.—Yes. Greater profit without any drone comb. I have but very little in my whole apiary. The most of my colonies have none.

Are different varieties of Honey mixed as gathered.

QUERY No. 274.—(1) Are the different kinds of honey gathered from different flowers put into different cells or are they mixed? (2) Does the bee mix all kinds of honey in its sac before returning to the hive, or does it gather from more than one variety on each individual trip?

JAS. HEDDON, DOWAGIAC, MICH.—This question is hardly relevant to apicultural success I would prefer not to take up space in answering it.

DR. MILLER, MARENGO, ILL.—1, I think they mix when it is convenient. 2, I think there is very rarely any mixing when gathering, and that only in a time of scarcity.

S. CORNEIL, LINDSAY, ONT.—1, I believe it has been observed that buckwheat honey is not mixed in the cells with white honey but the cells of dark and white honey may be found mixed promiscuously through the comb. 2, I have never taken the trouble to follow up the movements of a bee while loading up and therefore cannot say from personal observation.

ALLEN PRINGLE, SELBY, ONT.—1, Sometimes mixed. 2, This is a disputed question. My own opinion is that any reasonable right-mind-

ed bee, out on business for a load, and returning with only half a load, discovering in her "home stretch" a choice flower of another kind filled with the choicest nectar, would stop and sip and make up a load. I would not own a bee that would not do that.

J. E. POND, NORTH ATTLEBORO, MASS.—1, In gathering nectar when pollen is found also, the bees visit only the same variety of flowers on each trip, and never mix them up. This is in accordance with natural laws, as this cross-fertilization is carried on without crossing varieties and no chance remains for hybridizing or crossing one variety with another. 2, The above answer is an answer to this part of the question. I presume however that different kinds of honey are deposited in the same cell, especially if several kinds of honey are being gathered at the same time.

R. MCKNIGHT, OWEN SOUND, ONT.—In spring and fall they are mixed. During the honey flow in summer it goes by "itself" for reasons that are obvious.

J. ALPAUGH, ST. THOMAS, ONT.—1, I think it is put into different cells. 2, I never saw a bee go to two different flowers while I was watching them.

G. W. DEMAREE, CHRISTIANBURG, KY.—1, If the bees are at work on two or more honey plants at the same time the nectar all goes together when storing it in the combs. 2, No, not as a rule. A bee generally sticks to the same variety of bloom till she is loaded. I have spent considerable time watching bees with a view to the points brought out in this question and only a few times have I seen bees work on more than one variety of blossoms when in search of a load.

G. M. DOOLITTLE, BORODINO, N. Y.—1st, Mixed or otherwise according to length of field &c. 2nd. Generally visit only one kind of blossoms on one trip, yet there are exceptions to this rule.

H.D. CUTTING, CLINTON, MICH.—The books tell us "no."

WM. MCEVOY, WOODBURN, ONT.—1st. Yes sometimes. I have examined the combs before they were sealed and saw patches of different kinds of honey in them. I have at the time wrote on the frame where each patch was, then waited until all was sealed, then I would take out the comb. read what I wrote on the frames uncapped one kind at a time, extracted it and put it into glass jars, then uncapped another kind and extract it and put it into glass jars. Sometimes I have got as many as 4 and 5 kinds of honey out of that same hive and it all gathered at the same time, but that many kinds are seldom found when all is gathered at the same time. I did this in the years when I used to exhibit at a good many fairs. For show honey I was always very particular about the color of the honey as well as the body. 2nd. No.

EUGENE SECOR, FOREST CITY, IOWA.—1st, A colony seldoms gathers more than one kind of honey at a time, hence—No. 2, no. A bee seldom visits more than one variety of flower, for nectar, each trip—and if it finds nectar I believe never. Not only that but as I said above the whole colony prefer to work on the same variety. Hence it is one colony may be bringing in honey dew and another white clover at the same time. I have often noticed this fact.

A. B. MASON, AUBURNDALE, OHIO.—1st. Mixed. 2nd. I have watched bees when gathering honey, and never saw them visit more than one variety of flowers before going to the hive.

G. A. DRADMAN, BRUSSELS, ONT.—I cannot speak from observation.

J. K. DARLING, ALMONTE, ONT.—1. Mixed. 2, Some of the writers would say "no" to this but I am not sure. I believe I have seen bees visit both currant and gooseberry bushes on the same trip. Could you not observe for yourself?

PROF. A. J. COOK, LANSING, MICH.—1st. Like the babies in Pinafore they are mixed. 2nd. Usually only one kind is gathered in a single trip. This is likely due to the circumstances.

This Season's Crop Moving.

THE San Diego Union of June 19 says that "a carload of this season's honey crop pulled out for Boston taking the superior extracted honey for which San Diego county is famous. A honey dealer who has carefully watched the industry in which he has been actively engaged for 20 years previous asserts that the crop last year was about 1,000,000 lbs., although a honey buying firm at San Francisco has stated it to be but 200,000 lbs. In contradiction of this he names one producer alone who supplied the market with 300,000 lbs., and with what he knows of the other apiaries is satisfied that 1,000,000 lbs. is not an over estimate. Experts agree that the county has no industry which yields as large a profit upon the capital invested. To start with a stand of bees that can be purchased for $1 up to $3, which in winter would mean about 20,000 bees, and in summer from 50,000 to 80,000. In this climate apiarists must bear in mind the bees work every day in the year."—Rural Californian.

A Peculiar Season.

G. E. Hilton, writes in Michigan Farmer:—We have always experienced a good honey season when farm crops were good, but this season thus far has been an exception. And while at times everything has looked promising for the beekeeper, very little has materialized. While clover has been abundant, we have had recent rains, and the earth is moist to-day, but the white clover is prematurely dried up, and looks as though it had not seen rain in a month.

SELECTIONS.

WHITE HEADED DRONES.

W. J. SMITH.—There is a queen in the yard that I have charge of for Mr. J. Alpaugh, whose eggs produce white-headed drones, and they remain white for about two weeks, when they change to a yellow color, and after sometime turn brown, and so far remaining the latter color. I have just mailed you a sample of them in the three colors which I hope will reach you in good shape. The circumstances are as follows:—The colony was wintered out-doors on summer stand in a two story hive and a 6 inch rim on top filled with forest leaves, no packing around the hive at all. The queen is a young one being only one year old. As soon as the opportunity presented itself I examined the hive and found white-headed drones emerging from the cells and also from the adjoining cells black headed ones were gnawing their way to light. Thinking that the circumstances under which they were nursed, etc., were not favorable for them in two days I again opened the hive and found that during my absence eggs had been deposited in the cells from which these curious specimens had previously emerged. I immediately formed a neuclus with two frames of brood and bees, taking one of these frames of newly laid drone eggs and after waiting the required length of time for them to hatch to my astonishment and surprise both white and black headed drones came forth from the cells. They enjoy their midday flight with the other drones, and seem just as lively. Can you give me any information regarding why their heads are white? I have made another neuclus with two frames of brood and bees, and about 200 white-headed drones and a virgin queen, and have taken them about two miles away from any other bees and await the result which I will make known to you at some future date.

TALBOTVILLE, Ont., July 11th, '90.

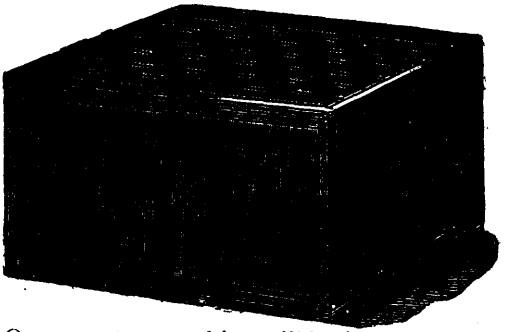
Many thanks friend Smith for the sample of bees which you so kindly sent us, but unfortunately they were all dead, and dark-colored, and so smeared up with the food in the cage that it was impossible, even with the microscope, to see the colors you mention. We should be pleased to have another sample and hope they will arrive safely. We do not remember of a similar circumstance to yours. We have occasionally found drones with white eyes. You will notice that the eye of the drone is so large that without close examination a person might imagine that their whole head was white, when in fact it is only their eyes. We once exhibited at Toronto a white-eyed drone. If our memory serves us right, Professor Cook called it a sport, and nothing out of the ordinary course of things. I hope that you may be able to give us more information about this apparent freak.

R. ROBERTSON.— I duly received my premium queen, and I am well pleased with her, your cage is the best for shipping queens, that I have seen yet, and also for introducing.

NORTHWOOD, July 19th, '90.

The Basket Box.

THE above box we referred to on page 169 of the JOURNAL, but we have since received an engraving of the box, which we now present. This will give a better idea of the box, which is so neat and light.



Our weaving machine will be in position and running by the time this issue of the JOURNAL reaches its readers, and we shall probably get a good many of the boxes made for use for this season's trade. A number of wholesale houses to whom we have shown this box, are greatly pleased with it, and have placed trial orders. We rather expect to do a big trade in these cases; they can be shipped as readily "in the flat" or "knocked down" state, and with special rates to large shipping centers, we will be able to place these boxes right in the wholesale house, at the same prices as are now paid for the ordinary packing cases. The saving will not be so much to the shipper as to the receiver who pays the freight; but no manufacturer or dealer, who pandes to the best interests of his customers will lose the opportunity of saving them money.

OUR OWN APIARY.

Swarms Dividing under Three Young Queens.

THE other day in our bee-yard we had a second swarm out with three young queens. The reason why we knew there were three young queens in the swarm before they clustered on the limbs, was by an examination of the combs when we found that the three queens had hatched out, and as there was a large number of fine cells remaining we felt satisfied those had gone out with the swarm. They flew about a great deal before they commenced to light, then the three queens each settled on a limb about three or four feet apart on the same tree. As the bees clustered the queens they were pretty equally divided making three small swarms, and as they hung in clusters on the limbs I noticed one of the young queens on the outside of one of the clusters. We caught her by the wings and caged her. We had scarcely finished the operation before the bees commenced di viding up between the other two clusters We caught the second queen, and then took the bees from the third limb with the queen, and shook them down in front of a hive, but the queen flew around and lit on the second cluster. We then put that one down to the hive, when she rose again and flew to the last cluster. She kept doing this a number of times, in fact she refused to be hived, or to stay in the hive until she was caged. Now we knew no reason to assign for her peculiar acting unless it be that in the hive she left the bees refused to allow her to destroy the other queens, and she became disgusted with the hive that she left where she could not do as shle iked, however,they are now working splendidly. They have stored honey very rapidly for the last few days. The splendid shower that we have just had will tend to improve the yield from Canadian thistles very much, and those who live in localities having such, may expect, if favorable weather continues, a monster flow from that source. Basswood will yield for a week or ten days yet.

CHASING A RUNAWAY SWARM.

A friend came in a day or two ago, and told us a good story of a neighbor who was pursuing a runaway swarm. They were crossing a pasture field, and the pursuer was following them keeping close to them. Keeping his eyes turned upward he did not think of there being any obstacles for his feet, and on he ran. Suddenly, however, the ground seemed to rise up before him, and over he went on his head, to the amusement of the boys who were watching the race and to the disgust of the animal that caused it. He had run against a cow which was lying quietly on the grass chewing her cud, and who, when she felt a toe strike her, rose up to inquire into the situation, with the results mentioned. But he got the swarm.

Bogus Foudation.

IT is not often that THE CANADIAN BEE JOURNAL is called upon to expose frauds,for which its editors are truly thankful. But it is the bounden duty of newspaper publishers at all times to expose fraudulent transactions, even at their own loss when made public through the medium of their papers. This will be our position in the present instance. The party to whom we must refer has been a good customer in the past, having bought hundreds of dollars worth of goods from us every year, and it will be only reasonble to suppose that this trade will be cut off after we have done with the present article. But we have our duty to perform, and we shall not shrink from it.

Probably six weeks ago we received a sample of foundation from Mr. John Cross, of Chesley, which we at once decided was not pure, and so informed him. A day or two after a letter came from Mr. Wesley Montgomery, of Hilton, containing similar material worked up into foundation. These we numbered 1 and 2, and sent them to Prof, F. T. Shutt, M. A., the chemist at the Dominion Experimental Farm at Ottawa for analysis. He asked for larger quantities of each lot to enable him to get a proper analysis.

In the meantime, we asked through THE BEE JOURAL, for samples of foundation received by any of our customers, which they believed to be adulterated, and we have received over a score of

parcels, all more or less adulterated, and on enquiring every one of them came from the same party. Some of them were almost wholly adulterated—worse even than the samples sent for analysis. We append the analysis received from Prof. Shutt:

MESSRS. THE D. A. JONES CO., (LTD.),
Beeton, Ont.

GENTLEMEN,—I have submitted the two samples of foundation comb (marked No. 1 and 2) forwarded by you, to a chemical analysis, and found as follows:

No. 1 contains 68.76 per cent. Paraffin.
No. 2 contains 56.40 per cent. Paraffin.

I have the honor to be, etc.,
FRANK T. SHUTT,
Chemist Experimental Farm, Ottawa.

The above is a terrible state of affairs, is it not? No wonder the party who made it could sell foundation at 40 cents per pound, and still make more money than us individuals who were asking and receiving 55 cents. The party whose name has been sent us in every instance is that of R. E. Smith, Tilbury Centre, and it will be remembered that Mr. Smith advertises *Dadant's* foundation at 40 cents per pound. When the Messrs. Dadant advertised him for this, we at once wrote, instructing that unless a satisfactory explanation was forthcoming, we should refuse him the use of the columns of THE BEE JOURNAL. The following is his ingenuous reply:

Tilbury Centre, May 13, '90.

THE D. A. JONES CO.,
Beeton, Ont.

Yours to hand, and I would say that I am selling the same comb, made on the same kind of a mill as the Dadants, and refine the wax the same as they, and *I don't see what difference it makee who turns the crank*, Dadants or any one else. I send you a sample of the comb that I am furnishing to Bee-keepers, and I leave them to judge if I am swindling them. I am giving them more than the worth of their money, and every inch is as good as the sample I send. I want the advertisment to run and the only change that I will make, if that suits them any better, is that the comb is made on the same kind of a mill, and the wax refined the same as they, and every one that gets comb from us this year, if the comb is not as sample, then call us what you may.

R. E. SMITH.

We are still waiting for the sample of comb. A few days ago we thought it best to write to Smith for a statement of the case, so that we might not take any unfair advantage of him. Indeed our sole desire is to protect the interests of the readers of THE JOURNAL. We wrote to the following effect:

R. E. SMITH,
Tilbury Centre.

DEAR SIR—You have been shipping hundreds of lbs. of adulterated wax to customers throughout the province. As this matter will be made public in our issue of August 1st, we should be glad to have a statement from you, together with what we shall have to say on the matter. Will you kindly advise us by return mail from whom you got the wax, so that we may expose the proper parties.

Yours truly,
THE D. A. JONES CO.

And his reply was:

Tilbury Centre, July 25, '90.

THE D. A. JONES CO,

In regard to wax, the first 1,500 pounds of comb that we sent out the wax came from Ekerman & Will, Syracuse, N. Y., about half; the other half we got from box hives, and we had not a word of complaint from that; but we bought about 250 or 300 pounds from a commission house, what was called refined wax. It looked fine, and as we had bought from commission men before we thought it all right. We melted it and a lot of wax we know was all right, and thought all was all right, until we had shipped it, and found that it was not all right. So we stopped at once, and told every one that got it to return it, and we would give them wax that we knew was all right, as we melted up the comb from 200 hives, and we knew that was pure wax. We lost a lot of fine wax that we melted with this wax. It is $500 damage to us, but we are to be blamed in this matter, as we have sold tons of comb before and never had wax like this. If it was any one but a commission house we could make them pay for it, but now we got it all to stand ourselves. We got ten cakes of the wax we have not touched; we stop as soon as we found out how it was. We send you a sample of the wax. If we had bought all of the wax from Ekerman & Will, Syracuse, N. Y., then we could come on them for damage, but getting wax from a dozen commission houses; we got it to lose ourselves, as they will only laugh at you. They say they got it to sell, and that's all they know about it. We stand ready to give good wax that we know is good, or give their money. We are not to be blamed as we bought the wax in good faith, and have bought refined wax before from commission houses, and never had any trouble with it till now. I was to A. I. Root's Medina, and they got some wax that is not just what it ought to be. I was going to take a sample, but forgot to until I was on the boat. Now I offer to do what is right with every one, and that is more than I can get done with me. I find comb foundation bought from other parties is not all right as they said that the comb from me broke down. So did the other, and it came from the States, the same as the wax I got came from the States. I got all the States wax I want, and when I buy more wax it will not be refined. I can do that and know that it is all right. Hoping that you will do in this case the same as if you had bought wax and got bad wax yourself.

R. E. SMITH.

Whether Smith has done as he says or not, we are not exactly in a position

to say, but we fancy to the contrary. At anyrate, our readers can judge of the letter for themselves. Let us just say here that foundation makers who wish to do right can always or nearly always, detect adulterated wax before it is melted, and every *honest* maker would see to it that none was mixed with the good wax. Here at Beeton we examine every cake of wax that comes in, and we reject hundreds of pounds every year. What we should like to know from Mr. Smith, and what he will be willing to furnish, if he desires to exonerate himself from blame is the name of the commission house or houses from whom he got the alleged wax, *and the price paid.* It is not a graceful act on his part to throw dirt at the other supply dealers because he is himself in the mud. Suffice it to say his is the only name received here so far. But our space is exhaused. Next issue we hope to be able to give the information asked for above. We shall be glad if Mr. Smith can clear himself better than his present letter does it.

The sample wax said to have been forwarded to us has not yet been received.

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

D. A. JONES, - EDITOR-IN-CHIEF.

F. H. MACPHERSON, - ASSOCIATE EDITOR.

BEETON, ONTARIO, AUGUST 1, 1890.

We have had two or three correspondents clamoring for that article which G. B. Jones promised us "in a few days" last February. Come, Friend J.

After Mr. Pringle's letter was made up in the form, we received a postal card from him with the following, which will be good news to our German friends. The next thing will be to get the names of our German Beekeeper's. Perhaps our friend, McEvoy, has already collected a batch of names. We have on the list sent into the Department, the names of many Germans who keep bees, but all these will receive copies of the English edition. Some of them might however send in lists of names of those in their vicinity who should have copies. Any such lists forwarded to us, will receive prompt attention, Mr. Pringle writes; I have been advised by Mr. Blue, the Deputy Minister of Agriculture, that 500 copies of the pamphlet will be printed in German, and that the Bulletin will be out next week."

TABLE OF CONTENTS.

EXCHANGE AND MART

BEES

25 CENTS pays for a five line advertisement in this column. Five weeks for one dollar. Try it.

200 Combs in combination frames for sale, $15.00 per 100. F. O. B., Aultsville, BURTON BROS., Osnabruck Centre.

TO BEE-KEEPERS.—I manufacture and keep on hand all kinds of Beekeepers supplies, such as Extractors, Storing cans and Honey cans, all sizes; at prices that will surprise you. Send for price list to G. R. HANNAH, Shelburne, Ont.

GET THE pleasantest bees in the world, the unstinging Carniolans. A few more queens to part with. Tested $1.50, untested 75c. Orders filled in rotation, only a limited number to dispose of. A. H. BENNETT Barrie, Ont.

3 SHOW CASES for comb and Extracted honey. The centre is protected by glass for sections and then shelves in three sides for extracted honey. Just right to loan to your grocerman to show and sell your honey from. Will pack and ship for $2 each. G. A. DEADMAN, Brussels, Ont.

EASTERN Customers.—We have 900 sections 3⅞x4⅛x1⅞ at Aultsville, C. P. R. station, which were shipped a customer by mistake. $3.00 will take them. THE D. A. JONES CO. Ld., Beeton.

BEESWAX wanted. Will pay 30 cents in cash or 33 cts in trade for any quantity of pure beeswax. Comb foundation for sale to suit any size frame or section. Wax worked on shares or for cash. All freight to Campbellville station C. P. R. If by mail to ABNER PICKET, Nassagawaya P. O. Ont. Agent for D. A. Jones Co.'s supplies.

WILL sell 200 eight frame Combination hives complete for ext. Honey at 50 cts each. Reversible honey boards 15 cts each, Supers 5 cts each, reversers 5 cts each. Part of the above have been in use for two seasons. Also brood foundation in 20 lb lots 45 cts. in 50 lb lots 40 cts per lb. For goods or further particulars apply to BURTON BROS., Osnabruck Centre, Ont.

A RARE chance for farmers, mechanics and others to increase their income. Having successfully kept bees for the last twenty years I am not now able to attend to so many as formerly. I will now sell or exchange for anything I can use a quantity of bees hives, surplus glass boxes, bee tents, &c., &c., also about 50 empty hives surplus. My hives are considered by experts to be the very best in this country and takes the improved Jones and Langstroth frames. WM. SNELLGROVE, Woodstock, Ont.

Lawn Mowers.

AT REDUCED PRICES.

We can furnish the Gowdy Lawn Mowers (Philadelphia pattern) at the following prices, shipped direct from the factory:

10 in.	12 in.	14 in.	16 in.
$4 00.	$4.25.	$4.50.	$5.00.

THE D. A. JONES CO., BEETON.

POULTRY

COOPS—We have on hand ready to ship quick, a large number of coops, sizes and prices as mentioned in advertisement in another column. The D. A. JONES CO., Ld, Beeton.

FOR SALE some grand White and Black Minorcas, cockerels and pullets also a good trio of Silver Wyandotte fowls cheap for want of room, Want good White Plymouth Rock cock. JOHN GRAY, Todmorden, P. O. Ont.

A $40 Gerrea Incubator (200 eggs) nearly new. Lot of Plymouth Rock fowls, 3 very highly-bred rusters 2 Pekin drakes and 7 ducks and a lot of young duces. Will sell cheap or exchange for bees, any portion or whole. G. VANDEVORD, Jr., Weston, Ont.

HOUDANS.—Eggs one dollar per setting, three settings $2. Won at Kingston, Sept., 1889: Houdans 1st on fowls, 2nd on chicks; Light Brahams 2nd on owls; Red Caps 2nd on fowls; Houdan eggs only for sale. Chicks to sell in the fall. WM. LAMBERT, Williamsville, Kingston, Ont.

FOR SALE—The finest Black Red Games in Canada as follows; First and second hens 94 94, first and second Pullets 94½, 93½. Owen Sound, second Pullet 94 Ottawa, two pullets 93½. 92½, two hens 94, 92½, the whole lot for $30.00, or offers singly. Imported cock Sam $30.00. Having got burned out in Owen Sound I have now no place to keep my poultry so they must be sold, until sold will sell eggs from above birds for $2 per setting. R. B. SMITH, care Brignall & Thompson, Belleville.

BEE MEN Should send five cents for Samples of our lithographed honey Labels. The D A Jones Co., Beeton

W. A. CHRYSLER,

MANUFACTURER OF

BEE SUPPLIES.

Single and Double Walled Hives, Sections, Shipping Crates, Feeders Etc. Price-lists free.

Box 450, CHATHAM, ONT.

ADVANCE NOTICE.

Owing to an increase in the price of tin the following will be the figures at which we will supply Pressed Screw Tops and Screw Caps.

No Lbs.	Per 1000	Per 500	Per 100
5 and 2½	$23 00	$12.50	$2.75
1 and ½	15.00	8.00	1.75

THE D. A. JONES Co.

Beeton Ont.

WHEN SHIPPING EGGS USE OUR LABEL

Eggs For Hatching

HANDLE WITH CARE

PRINTED IN BOLD LETTERS IN RED INK.

Price 25c. Per 100.

CANADIAN POULTRY JOURNAL.

MARKETING DEPARTMENT.

Honey Tins.

We can ship with reasonable promptness all orders for honey tins, at the following prices:

No lbs.	Per 1000	Per 500	Per 100	Less each
10.....	$100 00	$55 00	$11 50	.12
5.....	65 00	34 00	7 00	.07½
2½.....	50 00	26 00	5 50	.06
1.....	30 00	16 00	3 25	.03½
½.....	26 00	13 50	2 75	.03
¼.....	12 50	6 50	1 40	.01½
⅛.....	7 50	4 00	1 00	.01

Pressed screw tops and screw caps for the above tins:

No. lbs.	Per 1000	Per 500	Per 100
5 and 2½	$23 00	$12 50	$2 75
1 and ½	15 00	8 00	1 75

Most of the leading beekeepers admit that for shipping honey in bulk, the 60 pound tin, encased in wood, is the strongest and best article to be obtained for the purpose. The prices are:

60 pound Tins, encased in wood, each...$ 50
" " " per 10.. 4 80
" " " per 25.. 11 25
" " " per 100.. 42 00

Lithographed Honey Labels.

Every honey producer knows the advantages derivable from having his name on each package sold, and this series of honey labels are deservedly popular, being handsome, bright and attractive. Directions for liquifying are given and a blank in which the vendor's name is to be printed. They are varnished, and a damp sponge will remove all dirt. Samples of all our labels sent for 5 cts.

	Per 1000	Per 500	Per 100
5 pound labels.....	$8 00	$4 25	$ 85
2½ " "	5 00	2 75	60
1 " "	3 50	2 00	45
½ " "	1 75	1 15	25
¼ " "	1 75	1 15	25
⅛ " "	90	55	15
Labels for tops of tins	90	55	15
Printing name and address, first 100.....			30
Each subsequent 100 up to 500.....			15
Printing name and address, per 500.....			75
" " " 1000.....			1 25

Shipping Crates for Sections.

Sample crates, glass included, made up holding 12 or 24 sections 3½x3½ or 4½x4½ each.. ..... $ 90
Per 10..... 1 70

IN FLAT HOLDING 12 SECTIONS.

Without glass, per 10 ..... $1 00
" " " 25 ..... 2 25
" " " 100 ..... 8 00

IN FLAT HOLDING 24 SECTIONS.

Without glass, per 10 .....$ 1 50
" " " 25 ..... 3 25
" " " 100 ..... 12 00

We keep in stock crates that hold

12 Sections 4½x4½x5⅝
12 " 4½x4½x2⅝
24 " 4½x4½x5⅝
24 " 4½x4½x2⅝