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# CANADIAN BEE JOURNAL

PUBLISHED MONTHLY.

NEW SERIES  
VOL. II, No. 11.

BRANTFORD, ONT., MAY, 1895.

WHOLE No.  
363.

Messrs. Holtermann and Pickett were appointed a committee to secure an increased grant of \$200 for the Ontario Bee-Keeper's Association. No increase was placed in the estimates but the Hon. John Dryden, Minister of Agriculture, placed \$150 in the supplementary estimates, which passed the House. The association would have liked to receive the \$200 asked for, but when so many demands are made we should be thankful for the \$150. The association will make good use of the money, and must exercise economy in every department.

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At the recent convention of Ontario Beekeepers Mr. W. Z. Hutchinson rather argues that as a country becomes settled and civilization advances bee-keeping is likely to become less profitable. Under those circumstances we would probably feel justified in expecting that in the long settled countries the number of hives of bees kept would be very small. Such is however, not the case. Germany has 1,910,000 hives; Spain 1,690,000 hives; Austria 1,550,000 hives; France 1,000,000; Holland 240,000; Russia 110,000; Denmark 90,000; Belgium 200,000; Greece 100,000. The value of the annual production of honey and wax is estimated at \$14,750,000. There undoubtedly is reasonable ground to believe that some districts have water advantages for the production of

honey when first entered by the settler, but as a rule the flowers in a state of nature are in time replaced by another growth artificial and natural. The increased skill of the bee-keeper of course overcomes some disadvantages. In Switzerland there are 2367 bee-keepers possessing between them 10,509 stocks; this makes an average of less than five colonies to each. Very few possess as many as thirty and in looking over a long list we find one having as many as 80 colonies. The bees will then be pretty well distributed, but imagine the number of colonies kept to the size of country. We find the number of square miles in each country as follows:

Country.	Square Miles.	Colonies per Sq. Miles.
Germany..	212,027	9.00
Spain.....	200,000	8.45
Austria....	115,903	13.37
France ..	950,000	4.65
Holland ...	240,000	13.09
Russia....	110,000	1.00
Denmark..	14,124	6.37
Belgium...	11,373	17.49
Greece ...	25,000	1.20
Ontario....		.74
Canada....	230,000	.06

These countries practically consume their own production of honey. Owing to their age they are a more scientific people, owing to the small amount of earning they have to be an economic people. Science and economy will teach people to consume honey. Very few of our Canadian people are aware of the value of honey as a food. Bee-keepers must exert themselves in this direction until it becomes the habit of the nation when the custom will perpetuate

itself. If we look at the value of bee-keeping in a country it is inestimable. Europe produces nearly eighteen million dollars worth from what would otherwise go to waste and not only that, but in the fertilization of flowers it in all probability adds a similar sum to the wealth producing powers of the country. Bee-keepers are surely fully justified in feeling that their industry represents nothing insignificant and that it will stand on just as high a plane as they may place it. If they call it a trifle, a bagatelle and the like, they must not blame the public for placing it at no higher standard.

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Some of the readers of the CANADIAN BEE JOURNAL have been aware of the fact

that C. A. Ouellette, Til-

A Purchase. bury, Ont., has been publishing the *Practical Bee-*

*Keeper*. At first it was a quarterly, but for some time it has been published monthly. We have not expected Mr. Ouellette to work in the interest of the CANADIAN BEE JOURNAL, and Mr. Ouellette has not expected us to work in the interest of the *Practical Bee-Keeper*. Mr. Ouellette has also been a manufacturer of Bee-Keepers Supplies and we believe has had a very fair share of trade. Lately Mr. Ouellette has seen an opening for a box factory and has made Goold, Shapley & Muir Co. (Lta) an offer, which has resulted in the purchase of the *Practical Bee-Keeper* and the machinery, etc., for the manufacture of bee-keepers' supplies.

There is not room for more than one Bee Journal in Canada; a substantial financial backing is required for even one Journal. Canadian bee-keepers cannot afford to be without that journal, and they should give it their hearty support. When it comes to the supply business, Mr. Ouellette is quite willing to admit there are too many in the business now, and he would advise any one to go slow before engaging in that line of manufacture. Mr. Ouellette is not the only manufacturer of Bee-Keepers' Supplies who has within the past year offered to sell out.

R. F. Holtermann. Brantford, Ont. has been appointed lecturer in apiculture at the Ontario

An Appointment. Agricultural College, Guelph. He

has also been appointed to conduct a series of experiments in apiculture. Although on the college staff, and the reports of the work done will be given through the Ontario Agricultural College and Experimental Farm Report, Mr. Holtermann will remain in Brantford going by rail or bicycle to Guelph, a distance of 25 miles.

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For a number of years the Ontario Government has sent out deputations to deliver addresses at Mr. F. W. Hodson. the regular Farmers' Institute meetings

Until recently President Mills of the Ontario Agricultural College has done a great deal of work in connection with these meetings and we may add this work has been done in addition to his regular duties and without extra charge. During the last year it was felt by the government that the appointment of a regular superintendent was a necessity, and by common consent Mr. F. W. Hodson, owing to his ability and energy, was looked upon as the man. The appointment has been made by the Minister of Agriculture and we have no doubt Mr. Hodson will prove to be the right man in the right place. Bee-keeping will be a subject which will receive due consideration by the newly-appointed Superintendent. We are indebted to the Canadian Live Stock Journal for the excellent engraving on another page.

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The March 7th issue of the American Bee Journal has five editors of Bee Journals to adorn its first page. We expect to see all of them at the North American Bee-Keepers' convention in Toronto:

Some of those who are in the position of doing a great deal of good or harm according to the wisdom

Requeening in or otherwise of what Spring. they advocate have been favoring the

requeening of colonies in the spring of the year. Some of us who write much have a strong influence upon bee-keepers at large, and we should remember that it is our duty to advocate what will do no harm and to be too cautious rather than over venturesome. We may at times require correction along this line. We know that we feel sure about points which others dispute, and because we doubt that requeening in the spring of the year pays it may yet be the proper thing. As we look upon it at the present time we incline to condemn it. Our arguments are as follows. A good queen should not have lost her full vigor the second season or if requeening be done during the honey flow or at its close she should yet be in her full vigor within a year of her birth. This being the case the hive need not be disturbed for this purpose at this season. We have heard the argument that the hive need not be queenless for any length of time, but in practical experience we all know that in the purchasing of queens, their shipment, the taking out of the old, the introduction and acceptance of the new are matters that do not always run smoothly. The order may not be shipped promptly, early in the season. When they arrive it may not be favorable weather for hunting up the old queens, and the conditions may be yet more unfavorable for keeping queens which have had a long journey already outside the hive. Then at that time it is by no means certain that the queen will be safely introduced. We know the argument that may be used, how *reasonably* certain it *generally* is that the queens will be accepted we grant that but sometimes when the honey flow has slackened quite a percentage is lost, and that means a very serious set back to a colony. Days are lost and each day not only decreases the

output of young bees but it otherwise demoralizes the hive. Many an inexperienced bee-keeper has lost his hive of bees by thus tampering with them at this time, and amongst the better bee-keepers we can find some who have had colonies which have taken the entire season to build up. Again if we are careful bee-keepers, love our work and our bees, we should have, or at least we should think we have, a blood in our apiary which we would not readily exchange. How can we breed a strain of desirable bees by requeening our apiary every spring, how promote longevity? And now comes another point: Is it in the interest of the northern part of this continent to get our stock from the south? When such wide-awake bee-keepers as we find belonging to Vermont State say queens should be brought from the north it is time we gave this matter careful consideration. Because they can be bought earlier and at the lowest price from the south does not go to show that they are the best to buy. Certainly the fact that some find it to their profit to requeen every spring with queens from the south demonstrate practically that the queens fail sufficiently in prolific qualities in one year, to go to the trouble and expense of requeening, we should want a stronger argument in favor of the system.

We should be pleased to have the views and experiences of others and if they conflict with our own views all the better.

\* \*

Although it will be months before the North American Bee-Keepers' Association meets at Toronto, we The Toronto have not been idle. The Convention. splendid auditorium in connection with the Normal School has been secured for the convention. This is situated in a very desirable part of the city of Toronto. The Toronto Industrial Exhibition apiarian prize list has been increased about \$100, and other advantages have been secured. The prize list has been changed to encourage less extensive exhibits and we want a good

many to make an extra effort to send extracted and comb honey, bees-wax, etc., of the best quality. We are trying to arrange in conjunction with Mr. H. J. Hill, the energetic manager of the Toronto Industrial Association to get the best possible rates from leading points in Canada and the United States. Some may think it is early to move in this matter but we cannot begin too soon.

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We cannot at present tell what the winter losses have been. They appear to be much the same as other years.

**Wintering.** Some have wintered without the loss of a colony, others have lost almost all. Our own apiary after a careful examination appears to have wintered about the same as the winter of 1893-94. Three were lost in the cellar, but last fall many nuclei were united; these we think never winter as well as normal colonies.

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The Canadian Bee Journal has a very fair advertising patronage, and what makes matters even

Our more satisfactory is that Advertisers. quite a few stay with us from year to year. The circulation is good and we are constantly sending out large numbers of sample copies, of which our advertisers receive the benefit. It is unjust to judge the value of an advertisement from the number of enquiries; many sales are made through ads. for which the medium receives no credit, and it is upon this subject we wish to speak.

When our readers correspond with the Bain Bros, manufacturers of waggons, etc.; or Buck's Stove Works, or Canada Machinery and Supply Co., or Messrs. Chrysler, Myers or Dadants for supplies, or Manum or Sherrington for queens, or the Good Bicycle Co. for bicycles, or you see or correspond with their agents, let them distinctly understand you saw their ad. in the CANADIAN BEE JOURNAL. We cannot hold ourselves responsible for our

advertisers, but we would like to say that any publication could feel proud of such patrons as we have. Again and again we have refused advertising and hard cash from men we did not think reliable or articles not of merit. All whose ad. appears in the CANADIAN BEE JOURNAL do business on business principles as far as we know.

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### Five-Banded Bees.

(Part of the report of the Michigan State Agricultural Station).

Having a desire to test the so-called five-banded bees, I introduced two queens of this variety in the spring of 1894. As in the case of so many other experiments, the unfavorable character of the season prevented anything like a fair test of their abilities as honey gatherers, yet it can be said that nothing appeared to show that they were lacking in this respect. Though called "golden Italians," I would have pronounced them anything but Italians judging from the disposition they exhibited. While they are not the most irascible of bees, they are yet very nervous and quick to manifest a recognition of intrusion, from which characteristic I should have judged them to be largely of Syrian blood. But the most marked characteristic exhibited by at least one of the two colonies was an inclination to rob. If there was any attack to be attempted on a colony or any chance to pry into a case of honey, about one-half the would-be thieves out of a large apiary were from one or both of these colonies. It is to be hoped that this peculiarity may stand them in stead in the gathering of nectar when an opportunity occurs.

R. L. TAYLOR.

Lapeer, Mich.

Bee-Keepers' Review.

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### Brant County Bee-Keepers' Association.

The quarterly meeting of the Brant Bee-keeper's Association will meet at the Court House Brantford, Saturday May 11th, afternoon 2 p. m. Business of importance will be transacted. Questions upon spring management and other subjects will be discussed. Kindly take notice and attend.

R. F. Holtermann,  
President.C. Edmonson,  
Secretary.

Brantford, April 20th, 1895.

## Rearing Queens in Upper Stories.

Written for THE CANADIAN BEE JOURNAL.

—A. E. MANNING.

In describing my method of rearing queens in upper stories, I shall omit describing the building of queen-cells in upper stories above full colonies. To do so minutely, with all the paraphernalia required to conduct this particular work, would require too long an article. I will therefore confine myself to the hatching and fertilizing of queens in the upper story. I use four apartments, or nuclei over each full colony. I take a half-depth brood chamber—such as are often used for extracting supers—and divide it into four apartments—for my hive of twelve frames—for a nine or ten frame Langstroth hive, two or three apartments are all that can well be made, in order that each apartment may admit of three combs, unless the combs for this purpose be short and used crosswise. In that case, four or five apartments could be made but I would advise but four, in order to have the entrance open at four different points of the compass. On the bottom of these apartments I tack wire screening and in some cases I have used perforated zinc excluders for bottoms, but so far, I prefer the wire cloth with  $\frac{3}{8}$  in. mesh. One of these is now placed over a colony and a comb containing brood in all stages of development with adhering bees is given each apartment together with a comb containing honey and pollen. In forming these nuclei, it is important that sufficient young bees be given each apartment to care for the brood given them. Less bees are required however for this method, than where the nuclei are set on the ground or on blocks; owing to the fact that the colony below helps to keep the nuclei warm. After these nuclei have been formed forty eight hours, a matured queen cell may be given them, and in due time the queens will hatch, become fertilized and commence to lay. The greatest difficulty I have had with this method, has been in the loss of queens when they take their first flight. The percentage has been much greater with this method than with the old way of setting the single nuclei boxes in by-places here and there.

I have succeeded in raising queens in these upper stories by using zinc excluders between the upper and lower stories as

mentioned above. But about twenty-five per cent of the young queens would either be killed as soon as they are hatched—and as I suppose by going below—or, the old queen herself would be killed, or in some cases a swarm would issue. I have noticed a great difference in the disposition of bees in working this method, some colonies over which I have raised queens seemed to be indifferent to what was going on above them, and I have over such clever colonies raised two or three sets of queens while other colonies seemed to be determined not to allow young queens above them, while a laying queen was below. (I am speaking now of where the zinc excluders were used.) If I could succeed with the zinc as well as with the wirecloth (which cuts off all communication between the two) I would prefer the zinc because it is less work and care. Since with this method, the bees from the same colony go up through the zinc excluders and care for the brood given above and also care for the young queens. Saving the apiarist the care and work of looking after the honey supply above.

There is another method which I am in hopes will prove more satisfactory than that where a single zinc is used, and that is to place an extracting super between the brood chamber and the queen rearing apartment, with a sheet of perforated zinc under and over the extracting super. In this way the young queens are so far removed from the old one, that I hope there may be less danger of quarreling or swarming. I tried this double method with but one colony late last season. It worked well then, but once trying does not always prove a thing either good or bad, when experimenting with bees. I shall give this double plan a more thorough trial this coming season.

I have no difficulty in hatching queens over full colonies that have a laying queen by using a zinc between the lower and upper stories. My queen cells however are all built under the swarming impulse, and when matured are cut off the combs and each cell is hung in a small cage: which I call a nursery cage. Sixteen of these small cages just fill one of my half depth-upper-story frames, called a nursery frame. These nursery frames when full or partially filled with cages containing cells, are hung in an upper story—usually an extracting super—by removing an extracting comb and placing the nursery in its place. I sometimes have four or five of these nursery frames in one super. Here, the queens will hatch as well as though they had been left in their own hive, each queen being by herself in one of these removable cages.

Whenever the apiarist wants a virgin queen he goes to his nursery, takes out one of these cages that contains a hatched queen and returns the nursery. The bees will feed and care for all these young queens so long as they are gathering honey, but as soon as the honey flow ceases, the young queen will be neglected and the apiarist must then feed this colony, or place food in each cage containing a queen. I have kept virgin queens in these nurseries fifteen days when they were successfully introduced to queenless colonies. But, I do not recommend the use of queens that have been kept so long. Five days is as old as a virgin queen should be used. I prefer to introduce them very soon after they hatch, or within three days. But the sooner the better.

I have experimented in a small way in having queen cells built by the Doolittle plan, but it is *too fine* work for me, and so long as I am able to get plenty of cells that are built under the swarming impulse I prefer to do so and save so much fussing.

Bristol, Vermont, U. S.

### Spreading Brood—When and How to Do It.

By G. M. Doolittle.

As the time of the year is upon us when active work must commence in the apiary, I thought that a few words on spreading brood would not be amiss, especially as some seem to think that Doolittle recommends and indiscriminate practice in this matter. If in any article that I have ever written I have conveyed the impression that an indiscriminate spreading of the brood would be of value, either to the novice or the expert, I wish to take it all back, for I never wished to convey any such idea.

In some of my articles I have placed the time of commencing to spread the brood about May first. This was done with the expectation that each one would use judgment, that judgment to be based on the locality, the condition of the bees and the advancement of the season. For instance: One season when the first of May arrived there was not a particle of brood in any of my hives to spread. For me to have tried to spread the brood at the time would have shown that I was devoid of common sense. Again, in 1878, when the first day of May arrived, all of my hives were filled with brood and bees. Some colonies having eggs and larvæ in the queen-cells preparatory to swarming. To have waited till the first of May before touching the bees, in such an early season as was that of 1878, would

have shown that I was not up with the times as I should have been.

Once more: All colonies in my apiary cannot be treated alike. Take an ordinary year in this locality, the date being May 1st. In the first hive we open we find a goodly number of bees, say enough to cover seven combs on a frosty morning. We open the hive and find brood in only five combs. The centre comb of the five has brood in it nearly to the bottom and side-bars, as well as at the top. The two on either side of it are two-thirds filled, while the two outer frames have brood in each to the amount of one-third of a frame full. Now, practical experience covering a period of more than twenty years, has proven to me that a gain of two days in bees can be secured by reversing those combs of brood, or, in other words placing the middle combs, or those fullest of brood, on the outside, and those from the outside having the least brood in them, in the centre. By this plan we have not really spread the brood, but we have placed it in such shape that we have made an ample number of bees desire all the brood which they could care for, and the result is, that in about a week or the next time we open the hive, we find those five frames solid with brood—a state of things which always delights any bee-keeper.

We now put a comb of honey, having its sealing broken, in the centre of these five filled combs of brood, which so stimulates the bees, by its removal, that, should a cold night now occur, the bees will be so active that the required temperature is kept right up, and a gain of two or three days more is made. So we keep on with this colony till the hive is filled with bees and brood, and that at the right time to take advantage of the honey harvest when it arrives. Having the bees thus, they will make all the difference between a full crop of honey and half a crop, or in extreme cases or short seasons, no crop at all. Will not this then pay for the fun we have had in thus building up that crop of bees?

The next hive I come to gives off a light buzzing sound, scattered down between two to three spaces between the combs, thus showing that there are but few bees in the hive, for I do not know that I ever opened a very weak colony without hearing this sound. I know that it is weak in bees from this, but am surprised that they have brood in three combs, and the wonder is that the bees have held that brood as well as they have. Now, should I treat this colony as I did the first, any one would say I was a fool. This colony has all of the brood

crowded together, so there is only just space enough between the combs for a single tier of bees to stand, or what is known as "the contraction plan" is used, and the bees are shut on these combs of brood and tucked up as warm as possible,

same as we did the first and they should not be so treated any earlier.

Away back, years ago, after a hard winter, my bees came out very weak in the spring, I having only forty-six remnants of colonies left. About May 1st, I went to



F. W. HODSON,  
Superintendent of Farmers' Institutes.

so that they can hold this brood till it matures. Here they are kept till they have these frames filled with brood, clear down to the bottom corners, and till the bees begin to crowd out beyond the division-board when it is time to treat this colony the

visit a bee-keeper living in a warm sunnynook, and found him spreading brood, with his colonies all in a prosperous condition, I came home to my own poor apiary, situated in its bleak location, and when I really saw how poor it was I came nearly



being discouraged. I sat down and meditated about buying bees, but to do so meant running in debt. I finally decided no, and went to work with a will to do the best I could with those I had, on the plan above given. I gave the bees attention just when it was needed, according to my best judgment, leaving no stone unturned which I thought would add a farthing to the success I was striving for, and in the fall I had almost \$1,600 as my pay, the 46 colonies producing an average of a little over 100 pounds of comb honey per colony, spring count. This put an ambition into my life never before enjoyed, and which has much to do with my love for the work in the apiary that has followed me ever since.

After twenty-six years of work in the apiary, I can truly say there is no pleasure in apicultural life greater than that which comes in making colonies build up in time for the honey harvest, so as to work to the best advantage in it.—Borodino, N. Y. *American Bee Journal*.

### Reports.

Bees have had a hard time of it here and winter losses will be heavy in this section.  
B. LUNDY.

Marbury, Ont., March 29th, 1895.

My bees have wintered well not having lost a single colony out of forty.

MORRISON HALL.

Sarnia, April 15th 1895.

Bees are out, have only lost one colony. I know by the pollen in the combs it was queenless, the rest are in fine condition.

S. T. PETTIT.

Belmont, Ont. April 10th, 1895.

My 109 colonies have *every one* wintered in fine condition and I would like you to just see them as they are.

WM. McEVoy.

Woodburn, Ont., April 11th, 1895.

I have taken three colonies out of four through the winter all right.

A. SMITH.

Hill Green, Que., April 11th, 1895.

### An Offer.

To increase the circulation of the CANADIAN BEE JOURNAL yet more rapidly, we make the following offer to *new subscribers*. The Canadian Bee Journal from now until end of 1895, fifty cents. Please draw the attention of bee-keepers to this. Remit to

GOOLD, SHAPLEY & MUIR Co., (Ltd),  
Brantford, Ont.

### Queen-Rearing.

#### THE RESULT OF THREE YEARS' EXPERIMENTAL WORK.

(Continued from page 474.)

Another, and perhaps the simplest, method for the unskilled hand which has occurred to me is what I call my plan of substitution. I start a queenless stock raising queen-cells on worker larvæ, and as soon as royal jelly is being supplied to the embryo queens I take the combs containing them to my work-room, get a frame of young larvæ from one of my best breeders, remove the common, or worker, larvæ, and substitute the larvæ from the selected stock, choosing of course, larvæ of the right age to produce the best queens. The cells are then returned to the stock from which the comb was taken. Sometimes, if the season is right, I give the cells to a queened stock as before mentioned, and have had far finer queens than by any ordinary method. No hot iron or flame must touch the cells containing the young larvæ or the consequence would either be fatal or would probably so injure the inmate that the resultant queens would be imperfect and, in my opinion, worthless.

All tools, frames, cups, and other implements used should be kept in a temperature of 90 deg. for an hour or two before commencing to work; the wax is then soft enough to adhere firmly, by pressing any two parts together, without the application of any extra heat.

In preparing supers to receive the cells, it is necessary to place a frame or two of brood in the larval stage, sealed and unsealed, and some just hatching, if possible. My practice is to place one frame containing sealed and unsealed brood, and one of bees just hatching in the centre of the super; twenty-four hours afterwards the frame of cells is inserted so that when accepted we ensure a good supply of nurses in the upper chamber, and the nurse bees below soon discover what is going on, and come up too. Nurses, in my experience, generally know where they are wanted.

One or two incidents which should be here recorded, first, as showing the willingness of queened stocks of bees to raise new queens if only the proper conditions are brought about; and second the extent to which the above methods may be adapted to a variety of dissimilar circumstances, all tending to the end in view. When describing my earlier experiments, I always used the surplus chamber above a queened stock for raising queens, but as the work advanced, I had to press all the stocks in my

possession, found to be in good condition, into service, amongst them a "Wells" hive containing two queens of my own raising in 1893. This hive has already been mentioned in a previous letter as having stored 10 lbs. of honey at a time when some of my singled-queened stocks had to be fed. Well in the shallow-frame super of this hive—over two queens in their prime—some of my best cells were raised—in fact, the very cells that secured me the medal at the Royal Show this year for my queen-raising exhibit.

Having been so successful in getting queens reared in surplus chambers, and bearing in mind some experiments I had carried out with good results in 1893, it occurred to me to try what could be done under a stock having a laying queen above. I therefore prepared a hive in which was placed two standard frames of brood, with adhering bees from a strong stock, and at the same time I placed a frame of cells for acceptance, put on the excluder zinc, and over this set the hive—with its queen—from which I had taken the brood and bees filling the vacancies with frames of foundation. On examination a few days afterwards, I found the cells accepted. I then transferred food and larvae to the same, and had three parts of them converted into excellent queen-cells. This method entails a lot of heavy work and extra trouble, but very good and steady results can be obtained thereby.

Another method of raising queens in queened stocks came under my notice by accident or an oversight, but which I consider, when the *raison d'être* is fully understood, will give excellent results. Perhaps I had better relate what actually happened, even at the risk of being considered long-winded. I had a stock which it was desirable to re-queen; the old queen was, therefore, destroyed, and one of my special cells given, which latter hatched out in due course a very nice queen, so peculiarly marked that I could recognise her. Then the weather went wrong, in fact, was very adverse, and I got anxious about fertilization; so on June 13 I examined the hive, and behold my beautiful queen was nowhere to be seen. She was thoroughly searched for inside and outside of the hive and I reluctantly concluded that she had ventured out and was lost.

The stock was full of young bees and strong, so I determined to see what sort of queens they would raise, in order to compare them externally and internally with those being raised contemporaneously in queened stocks. Accordingly I gave them a prepared frame of nine cups. On examination after forty-eight hours five cups

were found on the road for queens. It must be understood that this frame of queen-cells was not in a super, but in the middle of the brood nest in the body of the hive. Three days before the cells were due to hatch out two of the new sealed cells were removed for use under the microscope, and on examining the grubs I was rather taken aback because of finding them in such excellent condition, and felt sure they would have been good queens. This being so, I determined to let the others mature. And therefore on the day prior to their being due the cells were intended to be cut out to give them to nuclei, but on removing the prepared frame I saw that all three cells left had great holes eaten in their sides and were empty!

The only way in which this could be accounted for was the assumption that there must be a queen somewhere here in the hive, and sure enough on the very next frame was my supposed lost queen, surrounded by as fine a batch of brood as need be seen, some of it capped over, too! And so the least expected had happened indeed. But, on consideration, the explanation was well enough, and has been fully verified by me several times since. The virgin queen through adverse weather, had been long in mating. Meanwhile, the bees in the hive becoming anxious, had, by the way of precaution, started queen-cells (I have since found they always do this when the same state of things exists), and, on my giving them the prepared frame, had at once set to work to provide for the exigency of their young queen being lost on her mating trip. Why the cells were not ripped open before the last day I am not prepared to say, seeing that the queen must have commenced to lay about the same time that these cells were sealed. Perhaps she was too busy over her own affairs to trouble about her immature rivals until there was a danger of their coming forth to assert their authority. It would not do to run the risk of raising all queens under these conditions; but it is worth noting as a subject of further experiment.

I have already raised the question whether queens ever deposit eggs in embryo queen-cells, and, if so, whether the bees would turn them into queens. Now, in order to test the latter part of the question, I several times transferred eggs to these embryo cells, but they were always removed. I went so far as to place the eggs in the cells on the day on which they were to hatch. I also added royal food, but always with the same result. Moreover, I had taken the young larvae when only a few hours old, and placed them in prepared cups in royal food, with curious result that some were removed, food and all, but where

this was not so, I invariably had the food removed and the young grub not fed again for twenty-four hours, when royal food has been given it and good queens reared. So that I arrive at the conclusion that it is possible to choose larvæ which is too young. I also find on one occasion where eight larvæ just hatched from the egg were transferred, three were removed, and four ultimately re-fed, and afterwards developed into good queens. This leaves one unaccounted for, as to which my notes are silent, and I cannot remember what its ultimate destination was. I see my notes state "as nearly as I can fix the time the larvæ must have been thirty to thirty-six hours old before being re-fed."—*Henry W. Brice, Thornton Heath, Surrey, in British Bee Journal.*

TO BE CONTINUED.

### Drones.

—R. H. Smith.

In the March number of the C. B. J. I see a letter from Mr. Wells, referring to experiments made by Mr. McArthur with drones from laying workers. Mr. Wells says he "tried it and it won't work;" again, "I concluded the theory was all bosh."

Well, on page 131 of the Honey Bee by T. W. Cowan, F.L.S., F.G.S., F.R.M.S., F.S.S.C., etc., I find the following statement: "Those drones born of mothers not impregnated, or drone breeders, are as perfectly developed and as fully virile as the others. This may be said of drones raised accidentally in queen cells, dwarf drones raised occasionally in worker cells, and drones from fertile workers."

Fenckart has well established the fact, for he found drones produced by an Italian fertile worker which gave, mated with black queens, workers of the mixed races. In these drones raised from fertile workers identically the same spermatozoa were found as in the others.

If Mr. McArthur's statement will take a pinch of salt, surely this statement of Mr. Cowan's will require a barrel.

St. Thomas, Ont.

Your C. B. J. is a very welcome visitor to our home. It is very much improved since you have had control of it. This has been the worst season for honey since we kept bees. We had 150 colonies, spring count. Took 1,100 lbs. of honey. Enclosed please find \$1.

GEO. HARRIS & SON.

Dungannon, Ont.

## FIRST STEPS IN.... ...BEE-KEEPING.

KEEPING EVERLASTINGLY AT IT  
BRINGS SUCCESS.

QUESTIONS SENT IN BEARING UPON FIRST STEPS  
IN BEE-KEEPING WILL BE ANSWERED IN THIS  
DEPARTMENT BY THE EDITOR.

During the month of May there is ample scope for good and bad work with the bees, much that may be done to advantage and much which has been advocated which had better be left undone. The beginner is often between two extremes. He may be everlastingly "tinkering" with the bees, or he may be under the impression that they require no attention whatever. The less a person knows about bees the greater the haste they should make to go slow in manipulating a hive. There are, however, a few directions it is safe for all to carry out. Keep the entrance no larger than the bees require to pass in and out when working at their best. During a warm day open the hive and see that they have sealed stores and plenty of them. If this is not the case the best way for a beginner or a novice to feed is by means of a cake of sugar or bee candy laid on top of the frames. Do not keep pulling the hive to pieces to see how much brood there is, or do worse, spread the brood to induce the queen to lay. I have foolishly done this: but never practice such manipulation unless after settled warm weather and when five or six out of the eight combs are already well filled. Under these circumstances I sometimes turn the outside of the comb on the outside of the brood chamber in. Before the end of May many supers should be on the hive, as stated some time ago, when the bees begin to whiten the edges of the comb along the top bar. supers should be put on. Not necessarily comb honey supers, until honey comes in freely. I generally put an extracting super on with a division board, one comb of brood, the less the better as long as it is unsealed, an 'two combs with foundation answers very well. The bees in this way can attach foundation and partially draw out the comb, when other frames with foundation can be put in its place. This must however not be done until there is no danger of chilling the brood. If comb honey supers are put on before honey comes in fairly well the bees will gnaw the

foundation and the sections are not as likely to be well finished.

QUESTION.—I have lost my bees. Would you advise me to get bees by the pound and put them on my combs or not?

ANSWER.—I would advise you to leave bees by the pound alone. Buy a first swarm from a neighbor without hives or combs or buy a strong full colony in May.

QUESTION.—What is the best method to whiten wax for commercial purposes for ladies' work in wax? P. E. L.

In another portion of the Journal will be found a valuable article on the subject by Mr. Weed.

QUESTION.—Do you think I can put swarms on full sheets of foundation. Some say they will say? E. G.

ANSWER.—Much depends on circumstances; if the foundation is attached only at the top bar when the swarm is thrown upon it and the swarm is strong, the day warm, it may more than sag, sheets of pure beeswax may break down. If the sheet is more than six feet to the pound and it is not attached and partly drawn out by the bees before swarming; it generally had better be wired. Then shade and ventilate the hive thoroughly and there is no great risk.

### Bee Paralysis.

—Chas. F. Muth.

Friend Holterman! I take it for granted that you don't know the difference between a bee-keeper and a poultry man. I didn't, but I was enlightened on the subject and I shall impart this knowledge to you. Says my friend: "A chicken raiser always has his own business secrets which he won't sell to the best of his friends; while a bee-keeper is enthusiastic and will sell you all he knows about it, and a little more, if any." There is a good deal of truth in it. It is this enthusiasm and this feeling—"pro bono publico"—which makes our young friends, and sometimes old ones, hold on to an erroneous idea of their own and defend it with an ardor worthy of a good cause.

Bee paralysis exists principally in the Southern States, and I don't doubt its existence by any means since we have good authority on the subject and an abundance of it. I have heard of the existence of the disease in my own neighborhood and by truthful parties. But I shall give you an experience of my own which will convince

you that we should never be too sure on anything.

It was one afternoon in July, 1894, when I went to my apiary and found a large number of dead bees in front of one of my brightest Italian stands. It seemed to me that one-half of the colony was lying in a pile at the foot of the flyboard and most of them showed signs of life yet. There was no excitement, no fight, and the bees were still quietly going about carrying out partly live bees. Upon opening the hive I found my fine yellow queen O. K., and peace reigned sublime, to all appearances. Here and there on the combs and on the bottom board I saw a bee carrying out a half dead sister, but without a struggle and without the latter offering a resistance. No dead bees on the bottom of the hive which could have caused me to think that there had been a fight. "Bee paralysis! What else can it be?" exclaimed two visiting neighbors. It looked like it.

After my friends were gone I was sitting in front of the hive and watching the bees still carrying out half dead sisters. Sisters! No, the color of the greatest part of the pile in front was not as bright as the bees of that colony. Could it be possible that a virgin swarm had entered in the morning or on the previous day and were killed off by the bees of the hive? This proved to be the correct conclusion, for I did find the dead virgin queen among the dead at the foot of the flyboard.

I had accidentally appeared on the scene after the fight was over and the battlefield was cleared. But ten to one my friends would have treated that colony to salt water and cured the disease. All bee-keepers should know that a colony with a virgin queen will never unite with a colony in normal condition.

Cincinnati, Ohio, Feb. 8th, 1895.

Enclosed I send you one dollar renewal to C. B. J. It is a nicely printed bee journal, neat, tidy, clean and newsy and up to the times. Long may it smile.

H. SMITH.

New Hamburg.

THE CANADIAN BEE JOURNAL for December has not yet arrived, and as others have received the December number, I am afraid it has miscarried, and as I think a great deal of it I do not want to loose one single number. Trusting it will make its appearance shortly, I am yours, etc.,

W. G. GARTSIDE.

Providence, R. I.

## Will the Bee-Keeping of the Future Differ From That of the Past ?

(Read at the Ontario B. K. Convention.)

All well-informed bee-keepers know something of the bee-keeping of the past. They know that in early times bees were kept in log "gums," or in straw hives. Next came the box hive made of boards. In those days there were no specialists; at least, not in this country, and as we understand the word. Probably not every farmer kept bees, but a large share of them did, and in the fall the heaviest and lightest colonies were brimstoned. Then came the grandest invention of which modern bee-culture can boast—the movable comb hive. With the birth of this hive came the specialists. Then followed the bellows bee-smoker, the honey extractor, the section honey box, comb foundation, and queen excluding metal, and new journals sprung up and disseminated apicultural knowledge broadcast over the land, and bee-culture soon attained to the dignity of a profession, in which ignorance, superstition and slipshod management were supplanted by scientific knowledge and positive and accurate methods that brought certain and profitable results. Our country was in just the right condition to bring the best results from bee-keeping. It was not a howling wilderness in which there could be found no white clover, no orchards with their blush of bloom in the spring time and no fields white with buckwheat in the autumn; neither had it reached that stage where all of the grand lindens had been made into broom handles, barrel heads or buggy boxes, the hedge rows supplanted by the barbed wire fence, and the swamps once gorgeous with the purple and gold of autumnal flowers had been drained and converted into meadows of timothy. Then there were great forests that acted as meteorological balance wheels. They prevented floods in the spring, and draughts in the in the summer. Under these conditions bee-keeping flourished until the greatest problem connected with business was the disposal of its product. Farmers dropped the business because they could buy their honey more cheaply than they could produce it.

But a change has come in many parts of country. Good crops are the exception. I know of no reason for this change except that the natural honey pastures are cut

away and the artificial resources are not sufficient to make of the business a profitable calling. Added to this is the summer drouth that results from the clearing away of the forests. A forest is like a sponge for holding water. The earth is shaded and covered with a thick coating of leaves that acts as a mulch. Then there are fallen and decayed logs, brush and tree tops, all of which absorb water and retard its flow. The amount of water that a forest will absorb and hold is astonishing. Slowly the water evaporates or soaks into the earth to reappear in the shape of springs. With cleared fields the water is off for the sea with a rush, and when the July sun pours down its rays there is no water with which to moisten the parched, bare earth. The time will come when irrigation will be needed in places where it is not dreamed of. Man will be obliged to store up artificially the water that nature once stored for him before he destroyed her reservoirs.

I have always advocated speciality, and I still believe that the highest success can be hoped for when only one business is attempted, but there are many localities now in which I should not dare to depend for a living upon bee-keeping alone. Unpleasant as may be the admission, it seems to be true that in many localities bee-keeping as a speciality is doomed. Letter after letter comes to me saying "I have no fault to find with the Review, but three years with no honey crop are more than I can stand, and I am going out of the business." Some mention four and even five failures in succession. The trouble is drouth and a lack of blessings. I am not a croaker, and I also know that, as a rule, the best time to buy is when everybody else is selling; that the time to embark in a business is when others are abandoning it, but not so if the natural conditions are against the business. There are probably localities where bee-keeping as a speciality will always be a success. In mountainous regions where the forests cannot be cleared away nor the posies plowed up; in Florida where there are orange groves and there is no inducement to cut down the saw-palmetto or the mangrove growing with their roots in the tide-water, or those localities where the alfalfa sends its roots so deep into the earth that it can smile at dry weather; in these favored spots, and in the newer portions of the country, bee-keeping as a speciality can be followed with every hope of abundant success; but those localities where the forests have been cut away, and the swamps drained, and fields of corn, wheat, rye, oats, potatoes and grass stretch away mile after mile, it

is folly to attempt making a living by the keeping of bees. To attempt to make a poor honey locality a desirable one by planting for honey is still greater folly. If the conditions are such that it will pay to raise honey producing crops for the crop alone, such crops will be raised—otherwise not. Where three, four or five years of failure come in succession, it is foolhardy for men to cling to bee-keeping alone, hoping that "next year will be a better one." In fact unless the purse is a long one, necessity will *compel* the adoption of some other business. If one has kept bees so long that he would feel lost without them, and I am one of that class, he can take up some other vocation as his main business, letting the bees become a side issue. It is astonishing to see with how little care an apiary can now be managed. It may be almost reduced to this; setting the bees out of the cellar, putting on the supers, hiving the swarms, taking off the honey and putting the bees in the cellar. Possibly the swarming may yet be done away with.

To sum the matter up in a few words, bee-keeping in the early days was a side-issue, then it became a speciality and will remain such in favorable localities, but over a large portion of the country it will again become a side-issue; but improved hives, implements and methods will make of it a more desirable and profitable avocation than it was in days gone by.

W. Z. HUTCHINSON,  
Flint, Mich.

### An Offer.

To increase the circulation of the CANADIAN BEE JOURNAL yet more rapidly, we make the following offer to *new subscribers*. The CANADIAN BEE JOURNAL from now until end of 1895, fifty cents. Please draw the attention of bee-keepers to this. Remit to

GOULD, SHAPLEY & MUIR Co., (Ltd),  
Brantford, Ont.

My bees have come through the winter in good order. All wintered out doors in Long Idea Doolittle hives placed in individual packing cases, with flat galvaniz'd iron covers. No fooling with wooden covers for me. Eight inches chaff for bees. Take covers off two or three times on fine warm days to dry out chaff. Only found one dead so far out of 37 colonies.

H. SMITH.

New Hamburg.

### Bees, How Long do They Live?

Picking up a paper lately, I read of a colony of bees which had lived in a certain log for twenty years, the language used showing that the writer of the item believed that the same individual bees had resided in that place for the length of time mentioned. In another paper I found that the life of the worker bee in the summer season, is but thirty days. Seeing, that there is so wide an opinion on the subject, I thought it might not be amiss to say a few words on the subject in THE CANADIAN BEE JOURNAL. I have several times conducted experiments along this line to see if I could arrive at the truth in the matter. Before any of the yellow races of bees came to our shores this was a matter hard to determine, but with their advent, all became plain, for we now had a chance to prove from their color which were old bees and which were young, a matter heretofore only guessed at. The experiments which I have tried were as follows: Take a black colony of bees, and about the tenth of June or when honey comes in freely, introduce an Italian queen into it. In twenty-one days the last black bees will have hatched, and the first Italian put in an appearance, provided the Italian queen commences to lay as soon as she is introduced by some plan of direct introduction. Now mark the date on the hive and it will be found that on the forty-sixth day from the time nothing but Italian bees can be found in the hive. At forty days many black bees will be seen going out and in at the entrance, but on the forty-fourth day only now and then one can be seen, so that we may safely say that forty-five days is the length of a bee's life in the working season. Bees wear out, or die of old age, just in proportion to the labor they perform, and so it happens that what holds good with them in the busy season does not apply at all in the fall and winter months when they go into a state of repose or partial hibernation such as the apiarist calls a quiescent state. We now find that a bee lives from fall to spring; or to be more exact, if we introduce an Italian queen into a colony of black bees during the forepart of September we shall find some black bees in this hive if they winter well, the first of next June, thus showing that during the winter season bees may live eight months. Because bees swarm in July, many seem to think that this comes on account of the old bees all

having lived to this time, to which is added the numerous hatching young bees of this season of the year. This is a mistake, for the bees which have been wintered over, are now dying faster than at any other time, if they are not already all dead. Swarming comes from the reason that the queen can and does lay many times more eggs at one season than she does at another. In May she begins to lay prolifically, so that by June first she is laying from two to three thousand eggs every twenty-four hours. These eggs stay in this form for three days, which they hatch out into little larva, which are now abundantly fed so that in six days they fill the cell, when they are sealed over and hid from view for the next twelve days, when the now perfect bee bites its way out of the cell. This bee is scarcely out of its cells before the bees clean the cell so that it is ready for the queen to lay in again, which she immediately does. Thus we see that it takes only twenty-one days for the queen to get one generation of bees on the stage of action, while they are forty-five days in dying off. This gives us two and one-seventh generations reared where one dies off, consequently the hive becomes so populous, when the queen does her best, that swarming is the result. As fall comes on the queen ceases her egg-laying to an extent only sufficient to keep the population of a hive good, hence there are no more bees therein than is necessary for the welfare of the colony during winter. One other item of interest right here, which is, that if we watch this hive in which we are testing the age of bees in June, we will find that the first yellow bee which we see at the entrance will take its flight on the afternoon of the sixth day after it was hatched, if the weather is favorable, thus showing that all the bees hatched stay in the hive till they are six days old when the colony is in a normal condition. If we continue to watch we shall find that the next day there are more of the yellow bees leaving the hive and returning in the forenoon, while the black laborers are as busy then as any other time of day. This shows that unless forced to do so no bee is a gatherer of honey till sixteen days old, for the flight we have seen these yellow bees enjoying in the afternoon are what the apiarists call "the young bees out for the play-spell." On the forenoon of the sixteenth day the first yellow bee comes in loaded, which shows us that if we would receive the most profit from our bees we must have the eggs for those bees laid at least thirty-seven days before the main honey harvest. Again if we watch the hive on the morning of the fourteenth or fifteenth day, we

shall see only black bees going in and out at the entrance, yet if we remove the cover and look in the surplus arrangement, we shall see only yellow bees or mostly bees of that color at work there. This shows that the young bees are the inside workers, of the hive, which build the comb, store the honey, etc. This also shows that the bees which collect the honey do not deposit the same in the cells, so that all entrances by which the bees may go direct from the field into the surplus arrangement are superfluous, even although may think otherwise. By thus knowing how long bees live, the duties they preform at different ages, etc., we can work our colonies to better advantage than we otherwise could and secure a greater profit for them.

G. M. DOOLITTLE,  
Borodino, N. Y.

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### Worth Repeating.

'Tis but a step down yonder lane,  
The little church stands near  
The church where we were wed, Mary,  
I see the spire from here;  
But the graveyard lies between,  
My step might break your rest,  
Where you, my darling be asleep  
With your baby on your breast.

I am lonely now, Mary,  
The poor make no new friends,  
But oh! They love the better still  
The few our Father sends.  
I bless yo ufor the pleasant words  
When your heart was sad and sore,  
Oh! I am thankful you are gone, Mary,  
Where grief can't reach you more.

I am bidding you a long farewell,  
My Mary—kind and true,  
But I'll not forget you, darling  
In the land I'm going to,  
They say there's bread and work for all,  
And the sun shines always there,  
But I'll not forget old Ireland  
Were it fifty times as fair.

LADY HELEN DUFFERIN.

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You will please find enclosed one dollar for your valuable BEE JOURNAL for the year 1895. I am only a novice in the apary business and can't afford to be without it.

I remain yours truly,  
DOUGLAS A. BARNELS.

Morven, Ont.

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Enclosed find one dollar renewal subscription for C. B. J. I see quite an improvement in the C. B. J. under its new management. Wishing you every success

I am yours, e. c.,  
JNO. BECKING.

Teeswater, Ont.

Passed at the Ontario Bee-Keepers' Association Convention, Stratford.

Neatness of crating.....	5
Style of section.....	5
Total.....	100

ONTARIO EXHIBITIONS.

Moved by R. F. Holtermann and seconded by R. H. Smith in view of the unsatisfactory method of judging honey at exhibitions he it resolved that we recommend the following score card for judging the quality of honey.

Name of Exhibition.....  
Place.....

SCORE CARD FOR EXTRACTED HONEY.

Kind.....Granulated, Liquid

Extracted honey will be judged on the following points, the figures set opposite indicating the maximum per cent. the total of all such maximums being 100.

Flavor.....	35
Body.....	35
Color.....	25
General appearance... ..	5
Total.....	100

..... Exhibitor  
No.....

Flavor.....	
Body.....	
Color.....	
Finish.....	

Total.....

Name of Exhibition.....  
Place.....

SCORE CARD FOR COMB HONEY.

Kind.....

Comb honey will be judged on the following points, the figures set opposite indicating the maximum per cent., the total of all such maximums being 100; for defects deduct from the perfect.

Flavor.....	30
Sealed Cells.....	10
Freedom from Pop Holes.....	10
Absence of travel stain or propolis on wood and comb.....	10
Evenness of color of honey.....	10
Evenness of comb (drone or brood)....	10

..... Exhibitor  
No.....

Flavor.....	
Sealed Cells.....	
Freedom from Pop Holes.....	
Absence of travel stain or Propolis on wood and comb.....	
Evenness of color of honey.....	
Evenness of comb (drone or brood)....	
Pollen in the sections.....	
Neatness of crating.....	
Style of section.....	

Total.....

Be it furthermore resolved that this association recommends that where display is mentioned as well as quality, display and quality count equal, display counts a maximum of 100 divided as follows:—

Magnitude.....	35
Originality.....	15
Neatness and artistic design..	50

Total..... 100

That in sections where quality of honey is not considered, artists be secured as judges.

That a copy of this resolution be sent to the Secretaries of the leading Exhibitions in the Dominion of Canada.

Convention Notice.

The spring meeting of the Lambton Bee-Keepers' will be held in the town of Petrolia on Saturday, May 11th. All are cordially invited to attend.

J. R. KITCHEN,  
Sec'y-Treas.

Weidmann, April 12th, 1895.

An Offer.

To increase the circulation of the CANADIAN BEE JOURNAL yet more rapidly, we make the following offer to *new subscribers*. The Canadian Bee Journal from now until end of 1895, fifty cents. Please draw the attention of bee-keepers to this. Remit to

GOOLD, SHAPLEY & MUIR Co., (Ltd),  
Brantford, Ont.



## The Bleaching and Cleansing of Bees Wax.

—E. B. Weed.

While beeswax may be bleached by means of chemicals the results are inferior to sun bleaching, and the latter process is, I believe, the only commercially successful way.

To bleach wax by this method it is first cleaned by the sulphuric acid process, which if properly done, will restore the blackest and dirtiest wax to its original color.

To cleanse wax by this method take a whiskey or alcohol barrel and put about six inches of water in it, adding to the water a small quantity of sulphuric acid, the quantity varying with the amount of dirt in the wax, two pounds of acid to one hundred of wax would generally be sufficient. Then fill the barrel about two-thirds full of wax. Next turn a jet of steam into the bottom of the barrel, slowly at first until the wax is all melted. Do not be afraid of getting the wax too hot but keep the steam on until a froth rises to the top of the melted wax. Now watch the froth carefully for this is the critical point of the operation. If you stop the steam too soon you will not have cleaned the wax. If the steam is on too long you will make a soapy mess of the whole thing. The time to shut off the steam is when the bubbles in the froth begin to grow larger, say about the fourth of an inch in diameter. Having shut off the steam wrap carpet or anything else that will keep the heat in around the barrel and let the wax settle until it is nearly cold, when it may be dipped out and all the dirt will be at the bottom.

To prepare the wax for sunning a little machinery is required. This consists of a tank to hold melted wax, having near the bottom a row of holes about two inches apart. This tank stands over a trough of cold water some ten or fifteen feet long. Revolving in one end of the trough and about two-thirds submerged is a roller covered with felt, the tank of wax being directly over it. The melted wax flows from the holes in the tank upon the wet felt and is instantly chilled into the shape of ribbons about one-eighth of an inch thick. the revolving of the roller at the same time moving the wax forward into the tank of water, thus making as many continuous strips of wax as there are holes in the bottom of the tank. From the tank the wax is taken to the bleaching ground and spread upon frames covered with white cloth. Here it is exposed to the action of the sun and air until the outside of the

strips are bleached, when it is remelted and again run into strips and sunned, the operation being repeated until satisfactory results are obtained.

It should be said that not all beeswax is suitable for bleaching, the wax from southern countries, with a reddish tinge, generally proving very difficult to whiten.

Brantford, Ont.

## The Toronto Industrial Exhibition Prize List.

Editor C. B. J. :

DEAR SIR,—In the December number of the C. B. J. Mr. Deadman severely criticises the prize list of the Toronto Industrial. As I have been an exhibitor for the past eight years I can claim to know what sort of satisfaction it has given to exhibitors and visitors. I believe Mr. McKnight was the prime mover to change the prize list to its present form (with the exception of the word largest in Section 15 that has been added by the other directors) and for a number of years it has filled the bill. Never till last year was there such a difference of opinion as to the meaning of the wording of the different sections.

The Toronto Industrial Prize List cannot be looked upon in the same way as a township or county show list, where the apiarian department would be comprised of a few entries and small quantities and would attract as little notice. Some years ago there was a class of entries that called for quantities of ten pounds in some sections, but it failed to bring out the smaller beekeepers; but when the prizes were made larger for a greater quantity it became a success in the way it was intended as an educator.

While I do not think the prize list cannot be improved I would certainly not make such drastic changes as Mr. Deadman suggests, and make such a mistake as to give a six dollar prize for a half gallon honey vinegar and only \$15 for 500 lbs. of comb honey. I agree with Mr. Deadman that Sections 11 and 14 may be left out to advantage and that the word display in the different sections be left out and quality only considered every time, and in Section 15, for the most tasty exhibit, etc., let display alone be considered, and not the greatest quantity, but only the quantities called for in the preceding sections.

The only other changes I would suggest is that the medals in Section 11 be given for inventions in addition to money prize. The 100 lb. lots of granulated and liquid be made equal, that is: 1st, \$9; 2nd, \$5; 3rd,

\$3; 4th, \$2. Honey vinegar should be added in proportion to its value, say: 1st, \$3; 2nd \$2; 3rd, \$1. And that prizes be offered for 20 lb. lots of extracted clover and linden. I think 20 lbs. little enough for any entry and it would be a mistake to reduce the prizes on the larger quantities. Any producer who has taken 500 lbs. of comb honey to Toronto has never considered the prize too large when he takes into account care needed for production and carriage, and the risk that he may not take a prize at all. Mr. Deadman thinks the prize list a disgrace and does not encourage apiarists. I know it has encouraged me for I certainly would not have gone to so much trouble to exhibit if the prizes had not been liberal. A superintendent should be attached to the department. We always had one till last year, but a superintendent cannot insure the safety of exhibits when the crowd is there, unless he has glass cases to lock up exhibits the same as in the dairy department.

With regard to the locating of exhibits I think Mr. Hill has done the best he could under the circumstances, and he has always allotted space. I know I did not always get the position I would have liked, but I have felt perhaps one year with another, I was as well treated as the rest of the exhibitors.

The greatest advantage the oldest exhibitors have is experience, and that is often dearly bought. If the directors could be prevailed upon to carry out Mr. Deadman's suggestions on page 417, I am sure it would add very much to the value of the exhibition in all its departments.

St. Thomas, Feb., '95. R. H. SMITH.

[This article was sent in too late for the March number of THE CANADIAN BEE JOURNAL, and either mislaid in the printing office or by the editor. Mr. Smith has kindly sent another copy of the article as per above. The prize list has been arranged as will be seen on another page. Some may consider the changes too sweeping, others not radical enough. In closing we might say we believe Mr. Smith was instrumental in getting a separate building for exhibiting honey.—[Ed.]

### An Offer.

To increase the circulation of the CANADIAN BEE JOURNAL yet more rapidly, we make the following offer to *new subscribers*. The Canadian Bee Journal from now until end of 1895, fifty cents. Please draw the attention of bee-keepers to this. Remit to  
GOULD, SHAPLEY & MUIR Co., (Ltd),  
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## Strictly Business

Your servant who conducts this department, has been so busy looking after orders for spray pumps and windmills that he almost overlooked a very tempting morsel Editor Holtermann offers for old and new subscribers. His queens are of royal stock and govern their kingdoms almost as well as some other rulers who live in palaces. Don't you want one?

\* \* \*

I have had many years' experience about newspapers but never knew a class of subscribers who do as little as ours to get new subscribers. Our list is constantly increasing, but it is almost altogether through personal effort. Don't you think you could interest some friend or neighbor in the C. B. J. and secure his subscription for a year or at least induce him to take a trial trip for four months for 25 cents, or the balance of this year for 50 cents.

\* \* \*

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\* \* \*

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\* \* \*

Renewals within thirty days of date of expiration and an Italian queen \$1.65. (Those whose subscriptions are in advance will be credited one year ahead if they send the \$1.65.) Those in arrears who pay up all arrearages and renew for one year in advance, we will offer for thirty days for amount of arrearage at rate of \$1 00 per annum, and the year's subscriptions and Italian queen for \$1.65. Orders will be filled in rotation. Queens will be reared from best stocks and in a method to secure the best queens. Owing to the demand there is likely to be for queens this offer will only hold good for one month or until May 31st.

\* \* \*

Here is another good offer for new subscribers. For 50 cents cash in advance we will send the Journal for the balance of this year. Tell your friends about this and induce them to try it for the rest of 1895.

### Sufficient Excuse.

Not long ago Miss Ella Potts told her pupils one "composition day" that they might each write a letter to her making an excuse for not inviting her to an imaginary birthday party.

The scholars were called upon in turn to read their letters aloud. One little girl made her excuse as follows:

"Dear Miss Potts.—I want to apologize for not asking you to come to my birthday party yesterday. I fully intended to do so, but—as I always do in everything—I put it off until the last minute. When at last I started, and reached your gate, I saw the doctor's buggy standing there, and thinking some one was very ill, I did not go in. What was my consternation the next day to learn that the doctor was courting your sister!"

Bouncing lawyer—Then you are prepared to swear that the parties came to high words? Coster witness—Nay, I didn't say that. I should say they were particularly low words.

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### Growing Tulips and Hyacinths.

The most successful growers of tulips and hyacinths advise the following treatment: If bulbs are wished to flower at Christmas, plant in September, writes Nancy Mann Vaddie in an exquisitely-illustrated article on "The First Flowers" in the April Ladies' Home Journal. They thrive best in a light, thoroughly-drained and rich soil, and in pots not too large. Give plenty of water. Tulips should be planted about two inches below the surface of the soil, but hyacinths should be covered with earth about half the depth of the pot. After planting, set the plants in a dark, cool place, from four to six weeks. When the growth has begun, bring the young plants to the light, but keep them in a cool temperature. Too much forcing will cause the leaves to grow too rankly, and the stock to bend and droop, weakening the bloom as well. The blossoms will last much longer, also, if not subjected to too much heat. If the hyacinth begins to bloom imperfectly, before the stalk has pushed up well from the base of the leaves, put a paper cap over it. Should it burst into bloom on one side, while the bells on the other side remain tightly closed, expose the closed bells to the warmth and light of a lamp, and you will be surprised at the rapidity with which they expand. These bulbs can be grown in water, but the result is never so satisfactory.

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**THE  
CANADIAN BEE JOURNAL**

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

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**R. F. HOLTERMANN, EDITOR**

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## To the Bee-Keepers of Canada.

The Ontario Bee-Keepers' Association desire to have as large a membership possible of those interested in apiculture, and as the bonus to members is worth more than their annual membership fee it seems but reasonable that all interested should become members, as the object of the Association is to benefit the industry and the engaged in it as well as being a benefit to the country at large.

THE CANADIAN BEE JOURNAL, of which the annual subscription fee is \$1.00 will be given to members of 1895. The report of the annual meeting is also given, which is a full report of all interesting discussions as well as giving financial statements, etc.

There is no doubt but what the Association is doing a good work in many ways such as having a Foul Brood Inspector going through the apiaries in the Province curing and clearing the country of that dreaded disease where found, and in getting laws passed by the government to protect the industry, even as to prevent the spraying of fruit trees with poisons which has been very injurious and caused great loss to the having bees poisoned where spraying was done at the wrong time.

The Association can fairly claim the support of all interested in bee culture and trust that all seeing this request will respond by remitting the annual membership fee of one dollar, (\$1.00) by registered letter or Post Office Order.

W. COUSE, Secretary,

STREETSVILLE