

THE  
CANADIAN  
BEE JOURNAL

Vol. 19, No. 9.

SEPT, 1911

\$1.00 Per Annum

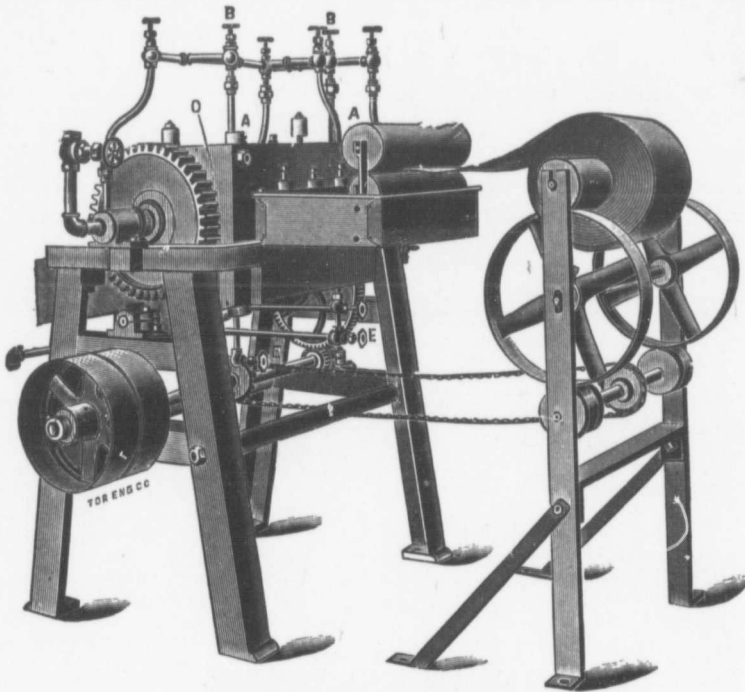


View of A. Buckindale's Apiary, Jarratt, Ont.

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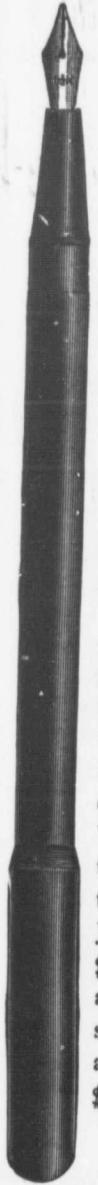
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**The Canadian Bee Journal**

BRANTFORD, CANADA

**The  
Canadian Bee Journal**

Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

Published monthly by  
The HURLEY PRINTING CO.,  
Brantford, Ont.

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# The Canadian Bee Journal

Brantford

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JAS. J.

Vol. 19, No. 9.

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September, 1911

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Offers

# The Canadian Bee Journal

PUBLISHED MONTHLY

JAS. J. HURLEY, EDITOR, BRANTFORD, ONTARIO, CANADA  
W. WHITE, ASSISTANT EDITOR.

Vol. 19, No. 9.

SEPTEMBER, 1911

Whole No. 559

A very short time remains for re-queening. The quicker it is done the better.

\* \* \*

Put your combs away carefully. The frost will not hurt them but the moths will if you allow them to get in. Disinfect with carbon-bisulphide if necessary.

\* \* \*

Don't put off feeding for winter stores until it is too late. September is the month in which to get the work done if it is to be done properly. Granulated sugar, two parts to one of water.

\* \* \*

Mr. T. W. Davis of Stratford, we regret to learn, has been very ill and unable to give much attention to his bees this season. He reports a poor crop and a poor quality of honey in his district. The C.B.J. sincerely hopes that he will soon be restored to health.

\* \* \*

The "Weekly Report" issued by the Department of Trade and Commerce, Ottawa, advises that a Manchester (England) agent, having a large connection in the provision trade, is desirous of handling Canadian honey. Application should be made by interested parties in the first instance to "The Enquiry Branch, the Department of Trade and Commerce, Ottawa," or to the Secretary of the Board of Trade at Brandon, Halifax, Montreal, St. John, Vancouver, Victoria and Winnipeg.

\* \* \*

The same issue of the "Report" states that last year Canada imported honey from the West Indies to the value of £402, (\$1960).

Friend Byer, writing to us, reports a poor lookout in his section. "Plenty of buckwheat in bloom, but no prospect of honey coming in for winter stores, let alone surplus." Other correspondents have written to the same effect. Bee-keepers will need to give their bees special attention in the matter of seeing that the hives are well supplied with stores for the winter.

\* \* \*

"What to do with our boys." Friend Byer tells us what he did with a lad of his this summer. Having purchased an out-apiary of some 220 colonies in May last, situated two hundred miles away, he was confronted with the difficulty of working it at such a great distance from his other yards. His boy, who is only 16 years of age, and whose practical experience in bee-keeping had been necessarily very limited, undertook the job. There were very few extracting combs in the yard, and the queens had not been clipped. Seasoned bee-keepers will appreciate the hustling that had to be done by the boy, who on the 29th of May was placed in charge. Some 2100 frames were shipped to him in the flat, together with a number of others that were made up, but which required wiring. We are acquainted with the lad—a fine manly fellow who would make good in almost any possible position, and we cannot but admire his pluck and perseverance. He proved himself to be equal to the task and appeared to have had a good time. He stuck to his work alone and manfully until at last the work of making up frames for supers and hiving the numerous swarms which were beginning to come off proved

Journal  
Canada

too much for him. Only then did he accept preferred assistance. We should much like to have from his own pen an account of his experiences this summer, and to hear what he thinks of bee-keeping.

\* \* \*

A season like the present always brings up the question, "Do bees and poultry pay." It seems useless to console our friends with the reminder that a previous year was one of great plenty, and there are very few optimists like Dr. Miller. Listen to the Doctor. "Here it is in the end of July with everything dried up and the stock in the pasture needing to be fed hay. Not only has there been no surplus honey to take off, but in some brood chambers there's hardly a pound of honey." Now here's a bad to-do; but let us hear what the grand old man of bee-keeping has to say about it. "Well," continues he, in the A. B. J., "I'm thankful that I don't have to work as I would in a prosperous year. I can lie abed in the morning if I feel like it...I'm thankful I don't have to bother about getting a crop ready for market; that it will be no loss to me if the price is low, and that I can rejoice with the other fellow if the price is high." And so on. Well, the doctor is a great expert in extracting "honey from everything." But the less philosophical among us have not yet comprehended the great lesson that adversity teaches us.

"For every evil under the sun,  
There is a remedy or there is none;  
If there be one try and find it,  
If there be none, never mind it."

\* \* \*

The greater number of bee-keepers who have met with a disastrous set-back are ever seeking for the remedy, and the most obvious suggestion that arises in their mind is that a means should be discovered of supplementing the bee-keeper's income through some "side-line"

or other. Do bees and poultry pay? Yes and no. Yes, because as a side line the poultry business may be and should be worked at those times when the bee-keeper does not usually get out amongst the bees, in the early morning and in the evening. Poultry certainly pays as a side-line and is a fairly safe source of income; but in order to derive any considerable amount of remuneration, the bee-keeper must sink a comparatively large sum of money as capital. It is not necessary to say here how the poultry business should be carried on, but we may state that in our experience this occupation can be profitably carried on alongside of bee-keeping and the man of modest expectations will be satisfied with the results. But, as a rule, the expert bee-keeper is not such a man. He speaks and thinks of honey in terms of carloads. He knows that year in and year out, bees and more bees, must be the object on which his mind should be concentrated. From the dollar and cent point of view we recommend bees and bees only, to the correspondent who has written us on the subject.

\* \* \*

Apropos of this subject friend Sibbald has an interesting article in the Bee-Keeper's Review under the heading "Keep More Bees. It counts when it comes to a grand total of \$5,000 from 350 Colonies." Mr. Sibbald tells us how with the help of one young man, he was able to perform his year's labors for 1909 in five months and a half, and as a reward reap the wonderful harvest above mentioned. The 350 colonies yielded him over 50,000 lbs—49,000 of extracted honey and over 100 dozen of comb. In addition he increased his stock to a little over 400 colonies.

\* \* \*

We learn from the British Bee Journal that a sum of £850 (\$4,250) is to be granted to the British Bee-Keepers' As-

sociation for the purpose of carrying out an experimental apiculture organization work. We believe that such a sum made to the B.B.K. late British bee-keepers in recognition of their claims, perhaps, by the government.

\*

Under the heading "Guard the Bees," the author points out to agricultural growers the economic value of the bee, both in field and garden, an alarm evinced by the old country on account of the spread of bee diseases and the loss of their cousins in Canada. In this matter, and we are sure that so influential an author should give precedence in its columns to the bee-keeper. To bee-keepers in the provinces where the bee is not so plentiful, the author obtains, the full benefit of sufficient amount of administrative authority of inspection carefully. We have heard it stated that in at least one province a foul brood inspector is not allowed to perform his inspection duties unless he is informed by the government that no further funds were available for his work.

\* \*

In the case of British Columbia a model disease bill has been passed by law, even though the bee-keeper has not made its appearance. It is evident that the authorities are now aware of the danger to the fruit growing industry, and that the other parts of the country are doing in what are they doing in connection with the awakening of the public to the importance of the bee-keeper. We receive an answer to the

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British Bee Journal  
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sociation for the purpose of establishing an experimental apiary and for general organization work. This is the first time we believe that such a grant has been made to the B.B.K.A. and we congratulate British bee-keepers on the recognition of their claims, somewhat belated perhaps, by the government authorities.

\* \* \*

Under the heading "Fruit Growers, Guard the Bees," the Fruit Magazine points out to agriculturists and fruit growers the economic importance of the bee, both in field and in orchard. The alarm evinced by the fruit growers of the old country on account of the rapid spread of bee diseases, might well cause their cousins in Canada to reflect upon the matter, and we are pleased to find that so influential an organ as our contemporary should give the subject prominence in its columns. What is the remedy? To bee-keepers the answer is simple. In provinces where "disease" legislation obtains, the funds set aside should be of sufficient amount to enable the administrative authorities to do the work of inspection carefully and thoroughly. We have heard it stated on good authority that in at least one case in Ontario a foul brood inspector could not finish his inspection duties this year because he was informed by headquarters that no further funds were available for the work.

\* \* \*

In the case of British Columbia where a model disease bill has recently become law, even though the disease has not yet made its appearance there, it is quite evident that the authorities are fully aware of the danger which threatens the fruit growing industry. But what about the other parts of the Dominion, and what are they doing in the matter? Perhaps with the awakening of agriculturists to the importance of the subject we shall receive an answer to this question.

We are glad to be able to place before our readers this month three articles on subjects very closely related to each other and of very great importance and interest to progressive bee-keepers. It is beginning to be recognized very generally that regular and wholesale requeening furnishes the bee-keeper with the key to several problems in apiculture, whilst at the same time, it is also considered by many prominent men that the line along which their profession may best be advanced is the same as that followed by breeders of other kinds of live stock. The purpose of the three papers is to show that it is within the power and means of every bee-keeper to rear his queens and to a limited extent to improve his strain of bees. We do not suggest for a moment that the queen breeder is to be put out of business. It is to him, indeed, that we look for the real improving of the honey bee. What we mean is that in the case of improved stock, in the absence of continuous effort on the part of the bee-keeper, that stock will tend to revert to the normal type. We believe that it will pay bee-keepers to keep a record of the achievements of the individual colony, and, after careful discrimination, select one colony annually as being best fitted to supply queens for succeeding seasons.

Dr. Miller, whose name is a guarantee as to the soundness of his advice, exhorts Canadian bee-keepers to "keep better bees," urging them to aim at a higher type. He shows how every bee-keeper may become a bee-breeder. His methods of requeening are simplicity itself, and it is a long time since we saw anything so useful and so practical printed in the bee papers.

\* \* \*

Mr. Hand is well known all over the American continent as an exponent of scientific methods of artificial selection in bee-breeding. In his valuable contribution he tells us how he practises in his

yard what is known among breeders generally as "line-breeding." This system is universally recognized as the best for effecting improvement in all kinds of animals. No other system has secured the results that line-breeding has, and it is doubtful whether any other will ever get as much out of a given breed or variety.

\* \* \*

Line-breeding of course involves the breeding together of closely related individuals. For example, in Mr. Hand's system the progeny of the selected queen mate with their half-brothers. In breeding pedigree stock there is always a danger of ignoring fertility and vigor. Line-breeding, for instance, is practised among poultry keepers for "type," color, etc., and it is very often the case that the question of fertility and vigor is ignored. In fact the difficulties in breeding are infinitely increased every time we add a character to those that we desire to improve. Thus the statement that inbreeding implies a loss of vigor and fertility has some foundation in ordinary practice. But we desire to point out that as a general rule, although not invariably, in the case of the bee, the best breeder is the best honey gatherer. It will be found, we urge, that we shall be breeding for vigor and fertility, and thus, by inbreeding, we shall actually intensify those traits.

\* \* \*

Mr. Chrysler is intimately known to our readers as a successful Canadian bee-keeper, and one of the Ontario foul brood inspectors. His paper just fits in nicely with those of Dr. Miller and Mr. Hand and shows how, even under adverse circumstances, wholesale requeening may be practised. He places special stress upon the provision of ample stores of royal jelly for the larvae, in which he has the strong support of most progressive bee-men.

W. W.

### THE STING OF THE HONEY MAN

A man from Dundalk, a honey producer, turns the sting into a Toronto honey dealer rather deftly. The Toronto dealer sent a circular card headed in large capitals. "Important to Apiarists" to all the honey producers in the country, warning them that "if reciprocity carries extracted honey will be cheaper," and hinting at a vote against the agreement on September 21. Here is how it strikes the Dundalk bee-keeper as told in a letter to the *Globe*:

Dundalk, Aug. 8, 1911

"Editor of the *Globe*:"

"Dear Sir,—I enclose a card which I received recently. The sender is no doubt concerned, very much concerned, for my welfare, and represents himself as such. He, however, appears strangely indifferent to the interests of his customers in Toronto and elsewhere. I had no knowledge that any such consideration was felt for me as a producer of honey by a stranger who is willing to sacrifice his customers, poor and rich, that my produce may be protected. I expect every honey producer has received the same kind warning. But I can tell him that I am not afraid. I do not fear competition with American honey. I want Laurier and the larger market.

"Yours respectfully,

Chas. Palmer.

That letter has the true Canadian ring. This whining of city dealers over the fate of the "dear" producer if his market is enlarged is an insult the sturdy farmer and rural producer properly resents. All he wants is a fair chance and the chance for the farmer gives the consumer a chance, too.—*Toronto Globe*.

The above is taken from the *Toronto Globe*, and refers to the card circular sent out by Rutherford, Marshall, Limited, which appeared last month. It seems that this firm does not like the

idea of cheap honey is not one of the good to be taken in by the part of the "example showing 'ests' become when with the loss of protection. It is pork packing and "dealer" comes for the producer and time. The product will be lower, while towns and cities is by the threat that Rutherford, Marshall know how to play method of playing sumption that the ant as some of the in protectionist Toronto the hand that robs Marshall, Limited, a sion business for the

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Mr. J. E. Hand's by Twentieth Century just been received. iastic about the methods greatly inc tion of honey, but w a little sceptical. teaches us that bee- tionally enthusiastic out some particular which is going to re ing. Not that we do Hand's methods. In tical and experience will doubtless produc their possibilities for problematical. No



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idea of cheap honey. Mr. Chas. Palmer is not one of the gullible ones and is not to be taken in by such tricky work on the part of the "city man." Here is an example showing how saucy the "interests" become when they are threatened with the loss of privileges obtained under protection. It is the same story in the pork packing and horse business. The "dealer" comes forward to save both the producer and consumer at the same time. The producer is told that prices will be lower, while the consumer in the towns and cities is thrown into hysterics by the threat that prices will be higher. Rutherford, Marshall, Limited, evidently know how to play the game, but their method of playing it involves the assumption that the producer is as ignorant as some of the consumers who live in protectionist Toronto and who caress the hand that robs them. Rutherford, Marshall, Limited, are not in the commission business for the health of the honey

producer. They prefer a market with a tariff wall around it, so that they may control both the buying and selling ends at one and the same time. A large, free and open market, uncornerable by the middle man will be found more profitable for the honey producer than a small market fenced in by a tariff. This incident should be an eye-opener to some who have been caught by the fallacies of protection. Reciprocity should be embraced by the average man because of the enemies it has made. Note the last sentence in the last paragraph, "And we sincerely believe those who sell first will get the best price." Such unsophisticated sincerity! How delightful it would be if the honey producers of Ontario would tumble over each other in their efforts to "sell first" to this patriotic and philanthropic "Home Market." "We always voted 'Reform' but—" now they will vote for protection and the dealers' dough!

J. J. H.

## WOMAN'S DEPARTMENT

CONDUCTED BY

Miss Ethel Robson, Ilderton, Ont.

Mr. J. E. Hand's book "Bee-Keeping by Twentieth Century Methods" has just been received. Mr. Hand is enthusiastic about the possibilities of his methods greatly increasing the production of honey, but we own ourselves just a little sceptical. Our own experience teaches us that bee-keepers are constitutionally enthusiastic and always working out some particular idea of their own which is going to revolutionize bee-keeping. Not that we doubt the value of Mr. Hand's methods. In the hands of a practical and experienced bee-keeper they will doubtless produce good results, but their possibilities for the novice are problematical. No amount of system

will make up for that instinct acquired by constant living with the bees. The following paragraph paints what seems to us an impossible picture.

"A careful reading of this book, it is hoped, will enable anyone of average intelligence, with a fair knowledge of the rudimentary principles of bee-keeping to produce paying crops of honey from the start, and have his bees under perfect control all the time. It will tell the industrious farmer how to utilize the nectar that is going to waste upon his fertile soil, and turn it to his own account in securing paying crops of honey without materially interfering with his more arduous duties of legitimate farming, and

without the loss of swarms, which may mean the loss of the honey crop."

We cannot help wondering if Mr. Hand ever attempted to run a farm with an apiary for a side line. There may be some industrious farmers who can do it successfully, in which case we should be very doubtful about the quality of their farming. The average farmer as we know him has already too many irons in the fire to keep properly hot without adding bee-keeping to the number and taking the chance of spreading disease among neighboring apiaries.

In his remarks re honey prices, Mr. Hand puts the case very clearly when he says, "honey is a luxury which people can do without, and if the price is high they will do without it." This is perfectly true; the families are rare where honey is considered as a necessity, though probably every bee-keeper has a few on his list where it is so regarded. But for the family who consider it a necessity it does become a luxury if the price goes very high because they want to consume large quantities of it, and high prices in many homes are prohibitive of this. The aim of the bee-keeper is to have honey considered a necessity by all families, hence every effort ought to be made to keep down the cost of production as much as possible, in order that the consumer may not have to pay an exorbitant price for it to permit the producer to reap a fair profit. To quote Mr. H. again, "It is not higher prices for honey that is needed so much as more modern methods of production—methods that by their power to economize labor will cut the cost of production in two." And of the present methods he says, "The word 'manipulation' that is so often used in connection with bee-keeping methods is but another name for labor. It is safe to assume that three-fourths of the time spent in manipulation by the average bee-keeper could

be put to better use by keeping more bees and adopting short-cut labor saving methods." Perhaps this is putting the matter too strongly, but undoubtedly scientific methods can greatly cut down the work of caring for an apiary as well as increase the output. But, to 'fess up honestly, don't bee-keepers, for the most part love to putter. If Mr. Hand's book does anything towards inducing better methods of management it is certainly a worthy work. And right here is the opportunity of Editor Hurley, who has been finding an outlet for his altruistic principles in the advocacy of reciprocity, to stir up the bee-keepers of this country to better and more efficient methods of honey production, in order that his brother the ultimate consumer may be provided with a cheaper and better article of honey.

Does re-queening every year tend to reduce swarming? This is something which I should like to know. The greater proportion of my queens were raised last season, and the number of swarms this year was wonderfully small, considering the care the bees received. The clover coming on early, and being absent on Institute work, I got behind, and practically all that was done to prevent swarming was to give plenty of room. Yet, while getting a good crop of honey from my 75 colonies, considering the season, I had only some half dozen swarms. Years ago, when no re-queening was practised, with much the same number of colonies, we used to have many times more swarms. The weather may have had something to do with it. A few cold days always followed the days of intense heat and these seemed to check any rising desire to swarm. But this cannot be entirely the explanation, neighbors who keep a few according to old fashioned methods have had swarms from every stock, but here again the question is complicated, as they run

mainly for comb one who knows good enough to think?

Now that Editor of this department of this little spectacular industry question a principles involved place in this department involved is reciprocity or free trade long principle of our editor, we are noble band of me dream dreams, via always practicable which, nevertheless origin in an intense and a keen sense of fellow may have a are the salt and sav ship. But we must the fact that two necessary to progress wheels are necessary and a large charity cover not only the eye with us, but all differently, must be

But there is one agreement which is that does not seem quite attention. A made of the dangerous connection, brought given to the moral Closer trade relations much to bring about of morality. As a nation in a position to boast lines, but certainly and both moral and than in the United a tariff is maintained countries there will division line, as at a tionable if at this

se by keeping more short-cut labor saving ops this is putting the y, but undoubtedly can greatly cut down for an apiary as well put. But, to 'fess up keepers, for the most If Mr. Hand's book ards inducing better ment it is certainly a right here is the op- Hurley, who has tlet for his altruistic vovacy of reciprocity, eepers of this country efficient methods of n order that his bro- onsumer may be pro- er and better article

every year tend to This is something to know. The greater eens were raised last mber of swarms this ly small, considering eceived. The clover nd being absent on t behind, and practi- done to prevent ive plenty of room. good crop of honey s, considering the some half dozen go, when no re- sed, with much the onies, we used to ore swarms. The ad something to do days always followed eat and these seem- ng desire to swarm. ntirely the explana- keep a few accord- methods have had tock, but here again licated, as they run

mainly for comb honey. Would some- one who knows about the matter be good enough to let us know what he thinks?

Now that Editor Hurley and the con- ductor of this department have had their little spectacular squabble over the reci- procity question a few words as to the principles involved may not be out of place in this department, for the princi- ple involved is not one either of reci- procity or free trade. It is the old age- long principle of human progress, and our editor, we are sure, belongs to that noble band of men who see visions and dream dreams, visions and dreams not always practicable and workable, but which, nevertheless have their root and origin in an intense love for fellow-men, and a keen sense of justice that the other fellow may have a working chance, and are the salt and savor of human relation- ship. But we must never lose sight of the fact that two elements are always necessary to progress, just as two cog- wheels are necessary to transmit power, and a large charity which is able to cover not only the man who sees eye to eye with us, but also the man who sees differently, must be cultivated.

But there is one feature of this trade agreement which is before the people that does not seem to be receiving ade- quate attention. A great deal is being made of the danger of weakening Bri- tish connection, but little thought is given to the moral side of the issue. Closer trade relations will undoubtedly do much to bring about a common standard of morality. As a nation we may not be in a position to boast much along these lines, but certainly the general stand- ard both moral and social is higher here than in the United States. So long as a tariff is maintained between the two countries there will remain a sharp division line, as at present. It is ques- tionable if at this formative period of

our growth it is wise to remove those barriers which help to keep us distinctly a people by ourselves.

Do bees carry eggs from one cell to another. The question is often asked, but I paid little attention to it until this summer. When extracting I found a num- ber of supers with drone larvæ in one or two cards, but no worker brood; either the queen must have come up through the excluder and gone down again after depositing the drone eggs, else the bees must have carried them up. It looked a little like the latter.

A free trade husband! Alas, indeed! But the other day my sister and I were taking some snap shots in the bee-yard for the Woman's Institute Report. We tried very hard to get the cat in the picture but pussy absolutely refused to be snapped. It may have been an omen.

In response to a request sent to Mr. Hodgetts some time ago, Mr. Pettit has forwarded me a list of the women bee- keepers in Ontario. It is larger than I expected. There are 170 names, 106 being married women, the remainder of course single. I have no means of know- ing how many bees they keep. We should like very much to hear from them in this department.

Queen-rearing is a delightfully simple operation when you succeed, but if the necessary attention is not given it is wonderfully easy to fail. The other day I went out expecting to have a fine lot of queen cells ready. You can imagine my disgust at finding every one of them eaten out; a cell had been overlooked in one of the cards, a young queen hatched and the damage done. It will now be another ten days before a fresh lot will be ready, and the season is getting late. Unceasing vigilance is certainly the price of queens. Then, after getting them safely hatched, there is always a certain worry until they have begun to lay.

The first appearance of eggs from a young queen always brings a sigh of relief. You then feel that you have something to build on. So many queens this year have hatched safely and then disappeared out of the hive, it is certainly very trying at times. But there is no doubt about it being work well suited to a woman.

ETHEL ROBSON.

### GOOD RESULTS FOLLOW FEEDING

Indexed

Dear Sir,—Enclosed please find a synopsis of my work since last summer. I have not many colonies, but what I have I pay the greatest attention to, as I have them for two reasons—pleasure and pastime. I agree with feeding in the fall as well as early in spring. I will now state reasons and give proof. Late last fall I commenced to feed three colonies which were each of about the same weight. I was therefore determined to try and prove what extra feeding would do so I fed one more liberally than the other and early in the spring fed again.

On the 18th day of June I had two swarms from that colony. They alighted in two different places, though I united them in one hive. They are there to-day, a fine flourishing colony. About three weeks since Mr. English a bee-keeper, came and weighed the hive, saying it weighed 100 pounds. On the 28th of the same month another fine swarm came off, and on July 1, another, but smaller, which I commenced to feed. Next day, after my putting them on their proper stand, the queen started laying as soon as there was a cell for her and young bees and drones appeared in about 25 days. They too are a fine flourishing colony. Besides, swarm No. 1 has three full supers. This is the result I believe, of proper care and liberal feeding.

I do not feed from pans on the outside as it causes robbing and maiming of bees. I have invented and constructed a feeder for the inside, which answers most satisfactorily. It is a pleasure to see the bees when feeding—no robbing, no wet feet, no besmeared wings. They go down as clean as they go up, taking them 1½ minutes to fill themselves; I have timed them. Mr. Geo. Thompson and also our P.M., Mr. J. K. Norris, after seeing the feeders, each purchased one and are willing to testify to its efficiency in every way. I am advised to get it patented. How would I proceed to obtain a patent; would it be costly? Hoping you will be kind enough to answer me in this matter I am, yours truly,

CHARLES VIVIAN.

Blenheim Ont.

[If you care to send us a full description of your feeder, together, if possible, with a drawing, we shall be pleased to advise you in the matter.—Ed.]

### THE GUESTS OF THE HONEY BEE

In a paper read at the annual conference of the Victorian Apiarists' Association, Dr. W. Brown refers to the various organisms that make their home in the body of the bee. Says Dr. Brown:

The alimentary tract of the bee is the habitat of various kinds of micro-organisms, and some are absolutely essential to the well-being of the bee. The normal bacteria are the following:

1. Short rods which furnish non-liquefying greyish-white colonies on gelatine.
2. Long rods which furnish greyish-white non-liquefying colonies.
3. Long rods which furnish yellow slowly-liquefying colonies on gelatine.
4. Torulæ which furnish pink colonies on gelatine.
5. Yeasts.
6. Moulds.
7. Nosema organisms.

### KEEP

Indexed Dr.

A good slogan W. Z. Hutchinsc "Perhaps a better Bees." Certainly application. For able to keep mor sible. But for bees, whether he thousand, it is b able to keep bette

I am glad to Bee Journal is e favor of improve be glad if any w to stir up some o tle toward raising bees, who so far I tively to them. I to think that im something solely fo the queen-breeder. is a matter for ev fertilization is b probably always w or less dependent whose drones may Reciprocally, your improvement may scrub bees. So for well as for himself, better bees. These procity.

Many a one will go through that fu reared in artificial c lieve it would pay. need to do everyth breeder does; there's you can do. If you l you could buy a q and that would make provement. If some ary are better than queens from one or And don't forget the

## KEEP BETTER BEES

*Indexed* Dr. C. C. Miller.

A good slogan was that of the late W. Z. Hutchinson, "Keep More Bees." Perhaps a better one is, "Keep Better Bees." Certainly it is of more general application. For some it is not advisable to keep more bees; for some impossible. But for every one who keeps bees, whether he has one colony or a thousand, it is both possible and advisable to keep better bees.

I am glad to see that the Canadian Bee Journal is earnestly committed in favor of improvement of bees, and shall be glad if any word of mine shall help to stir up some one to do at least a little toward raising the standard of his bees, who so far has left the matter entirely to them. The general mistake is to think that improvement of bees is something solely for the specialist or for the queen-breeder. On the contrary, it is a matter for everyone. So long as fertilization is beyond control—and it probably always will be—you are more or less dependent on every bee-keeper whose drones may reach your queens. Reciprocally, your neighbor's efforts at improvement may be thwarted by your scrub bees. So for the sake of others as well as for himself, each one should keep better bees. These are the days of reciprocity.

Many a one will answer, "But I can't go through that fuss of getting queens reared in artificial cups, and I don't believe it would pay." Well, you don't need to do everything an expert queen-breeder does; there's more than one way you can do. If you have very poor stock you could buy a queen of good stock, and that would make at least a little improvement. If some colonies in the apiary are better than others, you can rear queens from one or more of the best. And don't forget the drones. They play

half the part; some think more than half. Encourage drones in a few of the best colonies. In the rest either cut out the drone brood before it hatches out. comb, or else keep the heads shaved off the drone brood before it hatches out.

If you breed from the best, of course you must know which is best. Each time you take honey from a colony, put down in black and white just how much you take. Do that this season, and you will know which colonies to breed from next season.

Seeing you're afraid of that cup business let me tell you something easier, and between you and me, just as good. As soon as weather is warm and bees are gathering lively, perhaps on clover, take an empty brood frame and put in it one or two small starters, two or three inches wide and about twice as deep. Now go to your best colony, take out half or more than half of the brood, (if you take out only one frame you may get nothing built but drone comb), and put in your prepared frame. In a week or less you ought to find the frame more than half filled with new comb containing eggs and brood. Trim away the eggs, and put the frame in the middle of a strong colony from which you have removed the queen. All the better if the colony is preparing for swarming, only destroy all cells already started. In 10 days you will have a lot of fine queen-cells ready for use. One or two cells may be started on the old combs, but the bees greatly prefer the tender new comb with plenty of room at the margin.

If you don't want to take even that much trouble, always allowing the bees to swarm, here's something easier still. Try to have your best colony swarm first, giving it brood or bees from other colonies early to strengthen it. When it swarms, set the swarm on the old stand, removing the old colony, which

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CHARLES VIVIAN.

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## THE HONEY BEE

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we will call A, to the stand of another strong colony, and putting this last in a new place. When A swarms again, set the swarm in place of A and set A in place of another strong colony. Continue this as many times as A swarms and each time you will have a good swarm having a queen of A's stock. As a rule any swarm after the first and especially after the second, is likely to be a weakling, but in this case they are not weak, for when the depleted hive is set on the stand of a strong colony all the field bees of the strong colony enter the depleted hive, strengthening it.

Even if you have only two colonies, and both in box hives, you can do something. Have the two hives sitting close together in spring. About the first of May move B, the poorer colony to a place 8 or 10 feet away. The field force of B will return to the old place and join A, the better colony, making it swarm first. Each time A swarms set the swarm in place of A, and set A in place of B, setting B in a new place. Begin now keeping tally of what each colony yields this season.

Marengo, Ill.

#### IMPROVEMENT IN BEES BY SELECTION AND LINE BREEDING

Indexed

J. E. Hand.

The improvement in bees by selection in breeding is claiming the attention of wide awake and progressive bee-keepers. Perhaps no branch of our beloved pursuit is more fascinating or offers greater inducements to the up-to-date bee-keeper than the improvement of bees by careful selection and judicious breeding along chosen lines. Viewing the subject from the standpoint of the practical bee-keeper the development of an improved strain of bees is not a difficult matter. It is true that we cannot mate our queens with drones with the

same degree of certainty that surrounds the breeding of other domestic animals, and yet the queen-breeder who is able to control the flight of drones within a radius of three miles can mate his queens with sufficient accuracy to enable him to establish fixed characteristics, such as gentleness, industry, and uniformity of markings, all of which are indications of well bred stock.

While perhaps all will agree as to the desirability of improvement in bees, there is a diversity of opinion as to the best method of accomplishing the desired result. For more than a quarter century the writer has been devoting his best energies to the improvement of bees and bee-keeping methods; while we do not claim to have the best bees in the world, we believe we have made some progress along the line of establishing uniform traits that by persistent effort have become fixed to such an extent as to be transmitted to future posterity.

It may be interesting to some to know how we have developed and maintained a strain of bees that are noted for uniformity of habits as well as uniformity of markings which are indications of well bred stock. It is one thing to find a queen whose bees possess traits of a highly desirable nature, and quite another thing to find one that will unerringly transmit those traits. The object of this article is to tell the readers of this journal how, and to what extent we have been successful along this line.

#### Line Breeding

When we laid the foundation for our present strain of bees we procured queens from some of the most noted queen-breeders in the country. These were carefully tested in our apiary and from the lot we selected a breeding queen. This particular queen was chosen because her bees were very gentle and industrious as well as being beautifully and uniformly marked.

Besides, this queen duplicate herself thing that not This queen was queens and drone ony with abundance by stimulative f produce thousand no others were neighborhood. 47 in the vicinity w young queens wi certainty, and we the yard with a particular breede every queen in th seded by a young original breeder, to their half brot

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oundation for our ees we procured the most noted e country. These in our apiary and ected a breeding ular queen was bees were very is as well as be- uniformly marked.

Besides, this queen had the power to duplicate herself in her queen progeny, a thing that not one in a thousand will do. This queen was used as a breeder of both queens and drones; by supplying the colony with abundance of drone comb, and by stimulative feeding we were able to produce thousands of choice drones, and no others were permitted to fly in the neighborhood. There being no other bees in the vicinity we were able to mate the young queens with a tolerable degree of certainty, and we stocked every colony in the yard with a queen reared from this particular breeder. The next season every queen in the yard was again superseded by a young queen from the same original breeder, all of which were mated to their half brothers.

Not being able to find another queen that would duplicate herself in her queen progeny with an equal degree of certainty the old one was used as a breeder of both queens and drones as long as she lived. As our colonies increased we were ever on the alert to discover a colony that displayed unusual qualities along some particular, chosen line; such colonies were marked for further inspection and closer observation, and if the desirable traits continue under adverse conditions, that queen was used as a breeder of queens and drones.

Thus by beginning with a single individual having the desirable traits that we wished to develop and establish, and by practising a rigid system of line breeding we have been able to develop a strain of bees of approximately uniform marking and habits, a thing that can scarcely be accomplished by miscellaneous selection and cross breeding.

Having thus laid the foundations for a strain of bees that would transmit uniform traits we have ever been cautious about introducing new blood that might undo the work of years. While we occasionally introduce new blood from the

most noted queen breeders no queen is allowed to rear drones in our yard until her progeny have been thoroughly tested. We believe we have made some progress along the line of establishing fixed characteristics, and by carefully weeding out undesirable queens and breeding from the best we hope to be able still further to improve our bees.

Concerning the theory of eliminating the swarming instinct of bees by selection in breeding, we are willing to accept it as a theory until it has passed the theoretical stage, which from all outward appearances, will not transpire in the near future. We believe we can devote our time and talent to better purpose by practising methods that will enable us to control the swarming instinct of bees. Personally, swarming has lost its terrors, for us and we have little use for a non-swarming strain of bees. However, if some of the advocates of the non-swarming theory will show me a non-swarming colony of bees I will agree to establish a non swarming strain of bees. Birmingham, O.

#### RAISING GOOD QUEENS IN A POOR HONEY FLOW

Index.

W. A. Chrysler.

The honey flow for this season has been small, and as to raising queens by artificial methods, it seemed to be out of the question without resorting to feeding, etc.

Having two out-yards that I wish to requeen, and so far apart that I cannot visit them conveniently very often, I hit upon a plan which I like very much and by means of which I have raised excellent queens, without feeding, and without having many details to keep track of. It is, I consider, the simplest plan for a bee-keeper who has had little or no experience in queen rearing or re-queening his apiary.

Our provincial apiarist, Mr. Pettit, has expressed himself that there will be and is at present a great demand for Italian queens, owing principally to the fact that European foul brood is cured, or rather is conquered by the introduction of Italian queens.

I have had no experience with European foul brood, but I feel confident that the manner of re-queening which I have practised this season would rid European foul brood and improve the race of bees.

My plan is as follows: Find the queens you wish to replace; pinch off their heads and in about five days go to those colonies whose queens have been removed, examine closely for queen cells and remove the larvæ from the same. In five days there will be some cells capped. These should be entirely torn down and only those saved that were not capped and that contained the largest quantities of royal jelly. Cells that were found to be nearly ready to cap were shortened. Next, go to the hive of your choice queen, remove a frame that has eggs or newly hatched larvæ, and with a transferring instrument, or tooth-pick, remove the larvæ from your choice queen into as many of the choice cells that are seen to be well filled with royal jelly in the queenless colony.

Eggs may be "grafted" in the same manner as the larvæ, although I cannot speak very positively as to the results, but the larvæ grafting may prove to be more desirable in that they may be removed much easier by an inexperienced person.

This grafting on to a large quantity of royal jelly, being performed while the larvæ are so young, more perfectly developed queens are the result. It is desirable also not to rear any more than two or three cells in a colony in order to get the best that can be produced under the circumstances. If this plan is followed

out during a poor honey flow, there will be no danger of swarming when the queens hatch. If cells are not wanted for other colonies, care must be taken when grafting not to overlook any cells that were produced from the queen that was destroyed.

While practising this re-queening at my out-yards I have made my visits five days apart and after doing the other necessary work at the yards, would pinch the heads off a certain number of queens. The next five days, regraft them; pinch off some more heads; the next five days distribute some cells if the occasion requires, pinch off some more, regraft the ones that were pinched off five days previous. It is not advisable to do too many in one day especially where the honey flow is poor, as bees will start robbing unless a tent is used.

I consider this plan of queen rearing not the most economical as regards time and labor for the experienced queen-breeder, but I do claim it is the easiest and surest for the inexperienced, as I have very seldom, if ever, found a transferred larvæ not accepted, and has been with me always a success under adverse circumstances that have occurred. I regret very much that it is so late this season for others to try this plan of re-queening, but I trust that next year the readers of the C.B.J. who have not hitherto practised the re-queening of their apiaries, will give the plan described a trial.

Chatham, Ont., Aug. 24, 1911.

Every province in the Dominion will have a composite exhibit of its resources at the Canadian National Exhibition this year.

The Art Loan Exhibit at the Canadian National Exhibition this year will be made up of pictures of the year from European galleries and a selection from the private collections of Canadian and American millionaires.

## THE ITALIAN

Indexed

Wm

1. Are there any Italian bee?

2. If so, which use for Italianising

3. Is the black first or last shakin Italian queen intro

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### THE ITALIAN BEE—HOW TO RE-QUEEN

*Indexed* Wm. McEvoy

1. Are there more than one kind of Italian bee?
2. If so, which is the better kind to use for Italianising against black brood?
3. Is the black queen caught in the first or last shaking, and when is the Italian queen introduced, and how?

The preceding questions were asked us by a correspondent, and Mr. Wm. McEvoy has been good enough to reply as follows:

1. No, there is only one kind of Italian bees and these are found in all shades of colors, from leather-colored to very yellow bees. Continual breeding from the yellowest queens and drones produces the most yellow bees.

2. Where Italian queens have been bred from the colonies that have given the largest yields of honey in an apiary, I would accept these in preference to any other for every purpose.

3. The first thing to do is to kill the black queen, and just as soon as you get the Italian queen take her into the house and clip her wings, and in a wire cage place her over some **unsealed** honey in a comb. The edges of the cage should be pushed right down to the bottom of the cells so that no bees can get under it. The cage should be large enough to allow more than a bee space between the comb and the cage, so that the bees cannot sting her through the cage. When this is done take a comb out of the hive you made queenless and put in your comb with the caged queen. Leave her caged for five days, after which if any cells are found remove every one of them. Leave the queen three days longer in the cage and again see that no queen cells have been started before releasing the queen. After lifting the cage off the queen see if the bees

form a half circle in front of her and commence feeding her, and if they do, all will be right. If, however, they don't and she runs from them, cage her again. Sometimes the queen will fly away if not clipped when she finds the bees ugly, and this is why I clip all queens before caging them on the comb. Thus they cannot fly when released. Not one queen in a hundred will get killed if introduced in this way and closely watched when she is allowed to run among the bees. I have had some very stubborn cases where the bees refused to accept queens for over 14 days, but I stuck to it and made them accept her.

Beware of Cyprian serpents. Very many of these are being sold through Ontario for Italians.

Woodburn, Aug. 27, 1911.

### NOTES FROM EASTERN CANADA

*Indexed* H. Harley Selwyn.

Dear Sir,—The enlargement of our apiary and the additional work resulting therefrom has kept us too busy to attend to much in the way of correspondence. What an extraordinary season this is proving to be, the honey flow really being a matter of only a few days, and the bees idling ever since, at least in this vicinity, and as I understand it, similar conditions prevail all through Ontario. And yet, to have looked at the fields of clover, one would have declared them to be of the very best, but such severe and continued heat must have in some way prevented the secretion of nectar.

A year when the man having weak colonies at the commencement of the flow would still be looking for his surplus.

Not only was the clover flow short, but ever since, the bees have been practically idle, for the fall flowers are not yielding even sufficient for the daily use of the brood in the hives, and capped stores are being broken into right and left,

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something not often seen at this early date. Undoubtedly there will have to be a large amount of feeding done this fall to insure good wintering.

One thing worth mentioning and especially in connection with the above conditions is the lack of room in an eight-frame hive for the prolific queens of modern rearing. We run for extracted honey and in almost every case the lower eight frames were packed with brood and so little honey that it has practically all disappeared since removing the supers. Surely a ten-frame body would have been left in a far better condition for wintering. As it is, we are preparing for extensive feeding.

Another point to be mentioned is that of allowing the queen access to sixteen frames. That we did this season and the task of shutting her down to her original chamber is no small one, when there are over a hundred colonies to go through, and unless put below a zinc excluder she will continue to make use of the upper body or bodies of the hive for brood rearing, no doubt on account of the greater warmth above.

No doubt the weight of a ten-frame super when full is rather excessive for the elderly bee-keeper, but as a man said to me the other day, "It's remarkable how a fellow can lift when he gets his arms around a super jam full of honey."

Everybody, nowadays, seems to be desirous of boosting the advertising of honey, but it seems to me we will have to go one further and tell the people where the honey comes from first. It is simply remarkable how little the average man knows of bees and their habits. When one hears a man say the bees were gathering wax from the luteercups and another that there must be lots of honey for his bees, as the flowers along the drive way (Ottawa) are so plentiful, it is quite possible to believe that they do not doubt we turn out artificial comb

honey, etc. After serious contemplation of the extractor in the honey house, a farmer exclaimed to me "What a dashed fine rig that would be for washing day." Evidently the revolving baskets took his eye.

The value of a publication such as the C.B.J. is brought home to us when we read such an article as that written by Mr. Hurley in the July number in regard to the wholesale man trying to cut prices, and the way our good editor is getting back at him.

It is to be hoped everyone will observe the instructions of the honey crop committee and hold for a fair and uniform price.

Kirk's Ferry, Que.

#### NO OPIUM—NO HONEY

Some unexpected results are found from the movement against the production of opium in China. In the Yunnan one of the provinces where opium was produced in large quantities and at a low price, and where a great deal of it was consumed, it appears that the poppy is no longer cultivated, owing to the recent measures, and the poppy fields have quite disappeared, according to statements made by Drs. Talbot and Rigaud. However, this has had a disastrous effect on the honey culture of the region. In fact, the honey from Yunnan was renowned for its quality, but as the bees had no more flowers, the production of honey is stopped as well. The new crops which replace the poppy, such as wheat or peas, are not such as will give a honey yield as well. On another side of the question, it appears that the habits of the population are not suppressed by the present legislation, as some supposed would be the case, but according to Dr. Talbot, opium smoking is again on the increase—Scientific American.

#### REVIEWS

##### American

J. L. Byer refers to two conditions familiar with, viz. bees and no nest. As to which is worse to say. There is a saying that "experienced this year tar and late bees, seven days late," friends at a field those seven days crop.

C. P. Dadant, though there is no greater on the subject of interestingly on "Bees Foundation" He mentions should be given crop is in full swing thin out and use them in the foundation. "There are two positions," states Mr.

"The first is that when there is no will naturally use of their ability. A comb is useless. When they can make this if the crop is on, in selves crowded for ed at once, and be secured some bees honey in them. The further improvement Then, in a heavy hach of the bees, but time, the process of gins, involuntarily this we are not ye ed. But does it no whenever the bees main loaded with honey the transformation of

## REVIEWS AND COMMENTS

## American Bee Journal

J. L. Byer refers epigrammatically to two conditions most bee-keepers are familiar with, viz.: Much nectar and no bees and no nectar and "much" bees. As to which is worse he is not prepared to say. There is a third that many have experienced this year, that of early nectar and late bees. "My bees are just seven 'days late,'" exclaimed one of our friends at a field demonstration, and in those seven days he missed half the crop.

C. P. Dadant, than whom, we believe, there is no greater authority in America on the subject of bees wax, writes interestingly on "Bees Working out Comb Foundation." He advises that foundation should be given to bees before the crop is in full swing, as then the bees thin out and use the extra wax contained in the foundation much more efficiently. "There are two possible reasons for this action," states Mr. Dadant.

"The first is that they have ample time when there is no crop, and that they will naturally use everything to the best of their ability. An excess of wax in the comb is useless. With plenty of leisure they can make this excess useful. But if the crop is on, in full, they find themselves crowded for room, cells are needed at once, and before much depth is secured some bees will have deposited honey in them. This puts an end to further improvement or manipulation. Then, in a heavy honey crop, the stomachs of the bees, being full most of the time, the process of wax secretion begins, involuntarily or otherwise. On this we are not yet sufficiently informed. But does it not seem probable that whenever the bees are compelled to remain loaded with honey for a long time, the transformation of a portion of it into

bees-wax becomes a natural necessity without any volition on their part?"

He believes also that some honey will be saved by giving the bees the foundation ahead of need.

Other useful contributions to the August issue of the A.B.J. are "Making Rapid Progress" by Louis H. Scholl, and "Watery Looking Capping of Section Honey," by G. M. Doolittle.

## British Bee Journal

The weekly issues of the British Bee Journal always contain much that is useful and interesting. Of British writers, perhaps none commend themselves more to the reading bee-men on this side than our friend D. M. Macdonald. We see that D.M.M. has been rubbing shoulders lately with old "Cotton" and he writes interestingly of ancient apiculture in a current issue. Cotton, writing in 1842 gives a list of over 120 works on bees, so that bee literature has always been great in bulk if lacking somewhat in scientific precision.

Bee literature shows a tendency to bend away from the upright truth towards an alluring picturesqueness. D.M.M. himself resents the condemnatory remarks of certain men of science who have recently passed somewhat severe criticisms upon their predecessors. We too, when we read Mr. Snodgrass' recent article in "Gleanings" had an uncomfortable sort of feeling that the present does not always make sufficient allowance for the past.

To return to the ancients, whose acquaintance Mr. Macdonald has been cultivating. He finds Virgil amongst the bee hives in "Sweet Parthenope." Virgil was one of the chief of the early writers on bees, and we should not condemn him because much of what he wrote was lacking in the matter of scientific correctness, but should love him rather because of his loving references to the honey-bee.

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## -NO HONEY

results are found against the produc- ina. In the Yunnan es where opium was antities and at a low great deal of it was rs that the poppy is , owing to the recent poppy fields have quite ling to statements t and Rigaud. How- a disastrous effect on the region. In fact, nman was renowned as the bees had no oduction of honey is The new crops which such as wheat or as will give a honey another side of the s that the habits of ot suppressed by the as some supposed but according to Dr. ing is again on the American.

"There is poetry and charity in Virgil's treatment of the complicated government and wonderful economy of the hive interior, and he believed, with others before him, that 'Bees have portions of ethereal thought.'"

Our readers will be interested in the assigned origin of "tanging the bees," a custom still observed in many parts of the old world. One story goes that the Curetes, wishing to hide the birth of Jupiter from his father, Saturn, set up a clashing of cymbals to drown the noise of his infant cries. The noise attracted a swarm of bees to the cave where the infant was hid, and their honey nourished him.

It is a good thing to be able to tear ourselves away at times from discussing whether (to quote Mr. York's words) "the swarming habit can be bred out, and whether it is necessary to disinfect foul-broody hives," and indulge in recreative reading of the kind that D.M.M. provides us with.

"Nemo" in the B.B.J., quoting from "Schweizerische Bienenzzeitung" refers to the foul brood insurance scheme of the Swiss Bee-Keepers' Society and to the working of the Federal Act which requires the notification of the presence or suspected presence of disease in apiaries. The members of the society are entitled to compensation for destruction of colonies. No purchase of bees can take place without a health certificate, and the purchaser who does not conform to this condition forfeits all right to compensation in the event of foul brood being found in his apiary.

#### Gleanings

Gleanings, as usual, furnishes the usual budget of matter interesting to the bee-keeper. That careful observer of nature, Wesley Foster, has been watching the work of his queens and he has got hold of "a few things that come pretty near

being-facts." This is what we are all on the lookout for,—facts. "The queens on May 1 had, on the average, about 7000 cells of eggs and brood in various stages of development, which, if in one frame of solid worker comb, with no pop-holes, would fill this frame clear to the wood on all four sides. This brood was in from three to five frames. By June 1 the queens had their hives full of brood and eggs. I have found that a good queen will rarely get over five frames of brood in an eight-frame hive; that is what would make five solid frames of brood filled to the edges. This amount of brood would be in seven or eight combs, as I get the queens laying in nearly every frame by spreading the sealed brood. As nearly as I can come at it, I should say that my queens laid on the average 40,000 eggs from the 15th of May to the 15th of June. I should think at least ten per cent never hatched out of the egg, either on account of being infertile or chilled by cool weather. Another ten per cent, perhaps fifteen per cent., was lost between the egg and the hatching of the bees. About 30,000 workers on the average is what I get in new workers from a month of laying in the breeding season. For this location, where the bees do not build up as rapidly as in the East and a good many other places, I think two months will be needed before a hive will be strong enough to swarm. I know there are colonies that will come through the winter almost strong enough to swarm; but the average will be on four and five frames. Our bees were more often found on two and three frames this spring than on even four and five.

"If a queen will be able to lay 80,000 eggs from May 1 to July 1, and have 60,000 of them hatch into bees, in all probability she will maintain throughout the honey flow a little over 50,000 workers, which I consider a good swarm of bees, fit for storing surplus. The mor-

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tality among bees is very heavy, and from watching the brood nests I am confident the heaviest loss is in the egg, larval, and pupa stages. Changes in temperature and moisture affect the early stages of bee development very much, for we find our bees having very definite ideas about drafts and moisture in the hive. The bee has for thousands of generations sought propolis to seal up holes with, and has sought the trees to avoid dampness principally, I think. The most primitive bees still have their burrows in the ground, and doubtless the mortality is very high among them."

We don't know whether we are any better off for its formulation, but William Beucus states the "law" of swarming thus: "Swarming among bees is a migratory habit which takes place under the pressure of conditions which render difficult or impossible the performance, by the inmates of the hive, of their respective functions."

Ch. Noel Eddowes has an easy way of preventing the balling of queens. Breed out the tendency; quite simple, don't you know? Perhaps!

European bee-keepers are familiar with the bee-louse (*braula cœca*) a parasite we have often observed on the black bee. Dr. Brunnich writes about this insect and tells us that it is only found on queens, young bees and drones. We have noticed it only on the queen. It would appear that probably the parasite obtains its food in some way or other when the bee is being fed, although so far the act has never been observed. The louse is never seen on old bees that are flying out and foraging for themselves. The creature has no eyes, but in two deep hollows, says Dr. Brunnich, are found two feelers which, it is presumed, fulfil the purposes of eyes. Living young are deposited by the female, the small, smooth pupa falling on the floor board of the hive where the little parasite

awaits the approach of its destined host, and with great activity climbs on to its back. The parasite does not constitute a source of worry to the bee-keeper, or apparently to the bee itself.

Mr. E. R. Root has made the discovery that feeders as now constructed allow the food to be taken too quickly. It is well known that a very light steady honey-flow will cause brood rearing to go on at a more rapid rate than a heavy, intermittent flow. This is exactly our own experience, and we have on several occasions advocated "slow" or "stimulative" feeding for brood rearing, and quick feeding for winter stores. Cowan's guide book explains the matter fully. Weak colonies may be greatly strengthened just now by slow feeding with a small quantity of syrup placed on the supers nightly, and afterwards rapid feeding may be resorted to for supplying winter stores. We believe the manufacturers on this side would do well to put a slow feeder for the purpose on the market.

Geo. Shiber describes a plan for requeening suitable for the busy honey-producer. He has a queen named "Jane," and he believes in Jane. He is using her for requeening all the undesirable and this is how he does it:

"After the flow she was put into a new hive to form a nucleus, and made just strong enough to avoid the danger of their building drone comb. Then a frame containing an inch or two of comb or foundation was given; and as soon as this was built out a little, and contained just-hatching larvæ, it was taken out and another put in its place. The comb with the young larvæ was given to a strong queenless colony. After ten days twelve or fifteen cells were found.

Last fall I gave my way of introducing queens and cells to full colonies. In brief it is this: Find and destroy the poor

queen; then move the hive containing the colony to be requeened to a new location, and the virgin will be almost certain to lay on time without being worried by older bees; and not much is lost as the flow is over, and the old bees will go into nearby hives, and in a few days a new colony may be placed on the stand which was occupied before the removal of the hive. In this way there are no gaps in the rows.

"Mr. Hutchinson, in his book, outlines a good plan for requeening—give the colony, after removing the queen, a frame of larvæ, with slits cut in the comb, "and the job is done." Now, with me the job would not be done, for I should expect about ten per cent of such queens to be missing, or else that they would be "no good." But if about ten days from the time the larvæ was given, the hive is moved to a new location, so as to get rid of the old bees, everything ought to go well. In short, this is one of the best kinks I have stumbled on in some time. I am at this time, July 15, putting the plan to test, and it certainly makes good.

"There is no temptation to let a 'fairly good' queen go through, for she won't be any better next year. I do not know of any work in all apiculture that pays so well as weeding out poor stock."

#### Bee-Keepers' Review

The August issue of the Bee-Keepers' Review makes a good show, as usual, Geo. S. Demuth thinks most bee-keepers do not have enough to do. A man who does not operate more than 300 colonies, he says, should do something else. "It is the man who has idle moments who puts things on until a more convenient time, not the busy man. Ergo 'Keep More Bees.'" The logic no doubt is good, but it will not appeal to all in the same manner. To some the golden moments of leisure are treasure of far

greater worth than the accumulated results or arduous and unnecessary toil.

Fred A. Parker, at some length, describes how he has ridded an out apiary of foul brood. His method amounted to this. The bees are shaken into screened supers at night and removed to a fresh locality several miles distant. The brood combs were not saved, but were rendered into wax. The bees were kept in the screened supers until they began to fall to the bottom—until they began to starve, after which they were transferred to new hives. This was done in October. We suppose the colonies were fed and supplied with combs although Mr. Parker, who is a Californian bee-keeper, does not state.

Mr. H. G. Sibbald tells us how he obtained \$5000 from 350 colonies in the year 1909. We print the following extract:

"The spring work or management consisted of equalizing stores so that all had plenty (no feeding was done), unpacking, clipping queens, scraping and cleaning hives, supers, and combs.

"The season's management consisted first in supering. If the bees didn't come up and occupy the super promptly, brood was raised up. All the colonies were ventilated by raising the hives from the bottom boards three quarters of an inch. Queen rearing was started and at least 15 nuclei were kept in each yard so that a ready supply of young laying queens were obtained whenever required. When the first super was about half or two-thirds full it was lifted up and another put in underneath. In some cases three supers were used on a hive, but as a rule the upper one was extracted in time to relieve the second super when it was ready to lift up. Stacking up too much does not appeal to me any more. It's too much trouble and work to make the weekly examinations when more than two full sized supers are

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"Our system o prevent swarming possible by app and re-queening. percentage of the paring to swarm about as follows: with extra well started, probably ing, cells were de supers of combs g up or taken away dation or full con nest. This treati such a colony of

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used, and besides dark honey comes in the wake of the white and we must be up with the extracting or get our beautiful white honey darkened.

"Our system of swarm control was to prevent swarming conditions as far as possible by ample ventilation, room, and re-queening. In spite of all this a percentage of them would be found preparing to swarm, and were handled about as follows: If a colony was found with extra well filled supers and cells started, probably caused by over-crowding, cells were destroyed and new empty supers of combs given, some brood raised up or taken away and full sheets of foundation or full combs given in the brood nest. This treatment would often cure such a colony of swarming.

"If a colony had not been filling its supers up to the average, had plenty of bees and no very good reasons for preparing to swarm, only perhaps laziness, they were treated to shook swarming, and left destitute, a sure cure for such a colony.

If a queenless colony was found the cells were destroyed and a young laying queen introduced.

Superseding colonies were treated in the same way, also all colonies where the queen appeared to be failing. Every young queen successfully introduced makes a colony that can be counted on as safe and passed without the usual examination. If a colony is working well, from and to the entrance, no clustering there, the super showing good progress and the bees well up into the corners of it, a further examination is often unnecessary, and much time can be saved.

#### The Australasian Bee-Keeper

The annual conference of the Victorian Apiarists' Association was held in June last, and the whole of the July number of the Australasian Bee-Keeper is really a report of part of the business trans-

acted at the meetings, comprising three of the papers read before the conference. Dr. W. Brown, Government Pathologist, read a paper on "Paralysis or Dysentery of Bees." The following summary will interest Canadian bee-keepers:

For a long time past bee-keepers in Australia have been complaining of mortality amongst bees, and the complaints have been coupled with the assertion that the bees become paralysed before death supervenes. Further they say that there has always been plenty of food in the hives, and that the mortality is greatest in spring and summer—that is at the time of the year when food most abounds.

Now, in investigating any disorder amongst bees, it is absolutely necessary to exhaust every possible means by which the disease might be caused, and following out the plan, Dr. Brown propounded to himself certain questions. After having propounded the questions he furnished replies hereto as follows:

1. Is the condition caused by pollen grains of a poisonous type? **Reply:** Although poisonous plants might abound here and there, the number of districts affected and the fact that all hives in any given area are not involved, goes somewhat to disprove pollen poisoning. In any district all foraging bees would have equal chances of picking up poisonous pollen, and all hives should suffer alike.

2. Is it due to improper feeding? Bees well cared for and with plenty of proper food material have contracted the disorder. On Examination complete stores of honey and pollen have been found in the frames.

3. Is it due to insufficiency of food? Bees with plenty of suitable food have contracted it.

4. Is it due to weather conditions? The disease has appeared in genial seasons as well as in inclement seasons. It has occurred in cool as well as in hot summers.

5. Has the protozoan known as *Nosema* anything to do with it? *Nosema* can be found in all hives and in hives supposed to be perfectly healthy I have found *Nosema*. *Nosema* has nothing to do with it. *Nosema* is a messmate of the bee.

6. Is it an infectious disease? I think I shall be able to remove any doubts if any such exist, regarding its infectious character....The normal color of the chyle stomach is of a pinky nature, but in the diseased bee it is of a dirty white or brown color. In some cases enormous numbers of particular bacteria are present, and these bacteria we have been able to isolate. **They are the specific causal agent of the disease.** The alimentary tract of the bee is the habitat of various kinds of micro-organisms and some are absolutely essential to the well-being of the bee.

7. Are the foraging bees the first to suffer? Observations do not definitely show whether the foraging bees are the first to suffer. If the foraging bees were the first to suffer it would indicate that the disease was introduced from without. Nurse bees (not yet engaged in field work) and young bees have been found affected, and these young bees die without showing twitching of wings and distension of the abdomen.

8. Is the disease confined to foraging bees? No.

9. Are the drones affected? Yes. Queens also are sometimes affected.

10. Does the brood show any sign of the disease? No.

**Symptoms.** The first symptoms are a shiny appearance and listlessness, then sluggishness; their disinclination to move when touched, and their inability to fly supervenes. The wings are drooped. The disease, from the fact that the bees are unable to fly, has been called *Bee Paralysis*. In the course of the disease it is noticed that the abdomen is swollen, and that there is dysentery in a good many

members of the hive; hence the disease is called dysentery. The affected bees dwindle away and the disease has also been called *Dwinding*.

**Treatment:** Do not get queens from affected hives for fear of introducing disease. Diseased foraging bees may go astray and introduce the disorder into healthy hives. An affected hive should be disinfected and its members should be fed with medicated syrup containing sulphate of iron, 1 part in 700.

## BEE-KEEPING FOR WOMEN—II.

Miss Ethel Robson

(Continued from last month.)

Some of you may ask whether if many women were to take up bee-keeping, and so materially increase the output, the market would not soon be flooded? It seems unnecessary, at present to anticipate such a result, for with the development of our western provinces there is a constantly increasing market for honey. Bee-keepers are awakening to the necessity of educating the people to the use of honey by proper advertising. Honey is one of the most delicious and wholesome of sweets and once used becomes a staple article of diet. Then it has the advantage of always being ready for use and in no danger of spoiling after the can is opened. Even without advertising, prices have risen and the demand has increased steadily during the last few years. As long as a strictly first-class article is produced, there can be little fear that it cannot be sold at a remunerative price.

But important as the financial aspect of the question is there is another side which I would not have you lose sight of. I wish I could adequately express to you the delights of the work. They grow on you year after year, until at last they become a part of your very existence. There is the first visit to the hives in the spring when the sun has warmed the air

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until it is all atingle with the new life. As the packing is removed the warm, brown mass of bees boils up intoxicatingly over the frames. You lift a card from the centre of the cluster and find it full of sealed brood and larvae. From hive to hive you go, noting the condition of each. Here is one which is short of stores; there is one that has more than it needs; and so on through the yard. I don't think there is anything which sounds better to the bee-keeper than the hum of the bees in early spring, so full of repressed life, so full of promise for the harvest to come. Later comes the search for the fecund, pendulous-bodied queens. There is always a gentle rivalry between my sister and myself as to which shall find the greater number. Then to watch the cells being filled up with honey and being capped with the beautiful wax; the satisfaction of lifting the heavy cards; of watching the rich, golden liquid rolling from the over-filled cells as the uncapping knife prepares them for the extractor, and later filling the shining pails from the storage can. In the fall are the preparations for winter, until at last, every hive full of bees and stores, they are packed away for the winter,—and you are free.

Some time ago I read in one of the bee journals that a bee-keeper is always a philosopher, and there is something of truth in it. You can work day after day among the bees, where there is no such thing as self aggrandisement, when the individual is always sacrificed to the benefit of the whole; where all are content to labor to their utmost, and others will eat the fruits of it. You cannot be in the midst of this day after day without learning some lessons. Nor can you imagine anything more suggestive of peace and contentment than to stand in the midst of a bee-yard with the sun beating down warmly, the air heavy with the perfume of blossoms, the sun-

shine glinting on golden wings, and all about you the steady hum of bees rising in a subdued roar. O! then you know how goodly a thing it is to be alive.

Now, in conclusion, we are in the midst of a period of wonderful development. Our country is alive as never before. If the women of Ontario would take their proper place they must become capable, well trained and efficient. It will give then a fuller insight into life and broaden their sphere of usefulness. We cannot hope to compete with men in business. It would be a poor thing for the race if we could, but at least we can develop the best that is in us, that we may be worthy to rear and train a race worthy of the noble heritage of this Canada of ours.

[From an address to the Milverton Women's Institute.]

## DESIRES FREE TRADE—NOT RECIPRO- CITY

Wm. L. Couper

I am certainly inclined to side with the able editor of the Woman's Department, in her assertion that logic has little to do with human affairs. "Right thinking" seems to be rather a vague definition of logic, which I should rather be inclined to define as "correct deduction from accurate premises," though I admit that this is clumsy. Logically, direct taxation is the more economical method, actually it is always more unpopular than indirect because the tax payer thinks he may avoid the latter.

In this province of British Columbia the reciprocity bill is hopelessly unpopular even among the Liberals. Even now the American fruit growers compete successfully for the North-West market, owing to the much lower price of labor on the other side of the line. I don't think the bill will hurt the honey-producer

much, but I think it is absurdly unfair. A manufacturing firm such as the Massey-Harris, which boasts of competing with other nations on equal terms everywhere except in Canada, cannot do so there without high protection. The fruit grower here has to pay duty on all his raw material, such as spray pumps and other implements, even on his young fruit trees, though there is only one nursery in British Columbia which even pretends to grow its own trees. The bee-keeper has to do the same, and now the small duty which helped the fruit grower to compete on equal terms with the American, who has cheaper labor, implements and trees, is to be withdrawn. If the bill were a free trade bill I should be in favor of it, but a bill that protects the rich manufacturer at the expense of the poor fruit grower, does not appeal to me.

One often hears it said that the men who get protection are the ones who can afford to subscribe largely to party funds and it certainly looks like it. If it is necessary to approach free trade gradually, at least the steps should have some appearance of equality. At the beginning of this discussion Laurier said that somebody would have to make sacrifices. Who so convenient as the small producer who has no political influence?

Hatzic, B.C.

#### QUERIES AND REPLIES

Kindly let me know how to keep the moth from the combs, and how to strengthen weak colonies in spring.

R. D., St. Mary's, Ont.

#### Reply

Space combs two inches apart, if possible, in supers, which latter should be stacked one above the other. On top super place queen excluder, upon which

should stand an open vessel containing bisulphide of carbon. The fumes will descend, and circulating about combs, destroy moth. The fumes are very explosive. Keep away all lights. Strengthen colonies in spring by feeding thin syrup, half a pint per colony each evening. Add frames of capped brood when weather becomes warm.

\* \* \*

I have twenty hives to winter outside (eleven Jones and nine Langstroth "ten frame"). What is the cheapest way to make above winter quarters; also the best way to keep mice out from bees that are being wintered outside.

Our honey crop has been short in this district, averaging about 50 lbs. clover per hive. The bass-wood has been a non-yielder in this district this year.

F. G., Norval Station, Ont.

#### Reply

In our opinion the best wintering cases are those that will contain four hives each, the four entrances facing the four points of the compass. Bees so wintered are found to cluster towards the centre, and the individual colony is benefitted by the combined warmth of the four. There is also an economy effected as regards the amount of material used in making the cases. There should be a space of some four inches between the surface of the hives and the outer case, the space being filled with planer shavings. Mice will be found to cause but little trouble if the entrances are of no greater depth than the ordinary depth of the hive entrance. It is a good plan for several reasons to retain the hives according to this arrangement after their removal from the cases in the spring. The yard will consist of groups of four hives each.

Indexed Wm. C.

My experience is rather limited than years ago as I was a hobby. Bees seem being the most ins most profitable, and have found them I about them at first we had any amount here, a scrubby tree north of Winnipeg, everywhere by the waste ground. From frost we have qu or willow herb, be about 25 different together with lots pollen bearing plants mention. A few families beginning to grow have not been able it is patronized much is not grown here you see my bees have and collect honey as I expect if an expert followed me around bees he would have at some of my way but I started without perience, and without observation and without hints received from can assure you they siderably. I put 8 cellar last winter or touched them the other I hard time keeping, as I have a furnace, them boarded off as it was a hard job so temperature just right managed to have it degrees. I took them April and found them well, with the exception lost its queen. The well filled with eggs

## BEE-KEEPING IN MANITOBA

Indexed

Wm. C. McKinnell.

My experience in keeping bees is of a rather limited character. I started three years ago as I wanted to have some hobby. Bees seemed to appeal to me as being the most instructive as well as the most profitable, and I might state that I have found them both. I knew nothing about them at first, but I did know that we had any amount of pasture around here, a scrubby country about 40 miles north of Winnipeg. White clover grows everywhere by the roadside and on any waste ground. From the first of July to frost we have quantities of fire weed or willow herb, besides dandelions and about 25 different kinds of wild asters, together with lots of other honey and pollen bearing plants too numerous to mention. A few farmers around here are beginning to grow alfalfa, although I have not been able to find out whether it is patronized much by the bees. Clover is not grown here at all as a crop. So you see my bees have practically to live and collect honey all from wild flowers. I expect if an experienced apiarist had followed me around since I have kept bees he would have been highly amused at some of my ways of handling them; but I started without knowledge or experience, and anything I did was from observation and with the assistance of hints received from your journal, and I can assure you they have helped me considerably. I put 8 colonies away in my cellar last winter on Nov. 9th and never touched them the entire winter. I had a hard time keeping them cool enough, as I have a furnace, and although I had them boarded off and a fresh air inlet, it was a hard job sometimes to keep the temperature just right. But I generally managed to have it somewhere about 45 degrees. I took them out on the 15th of April and found they had all wintered well, with the exception of one that had lost its queen. The others were all fairly well filled with eggs and brood. I man-

aged to save the queenless colony by supplying it with two frames of brood taken from another hive. Queen-cells were started at once. I got my first swarm on May 30th and have now 19 good strong colonies. This year has not been with us, a very good one. April was fine, as was the first part of May, but June and July were wet, cold and windy. August has been a fine month. Our honey-flow comes a lot later here than in the east and south. I have extracted about 700 lbs. already and expect to get about as much more. Of course there will be a lot of hives that will not give me any this year, and it seems very little when you read of the yields elsewhere, but I am well satisfied however, and hope to increase the yield per hive every year. The biggest trouble that I have had is that I am very busy in the summer time, and I am afraid I have not given them the attention that I ought. I should just like to mention that I was very much interested in the discussions that went through your journal re the different breeds and characteristics of them. Now, most of mine are Italians, of which there is no doubt. I can do anything with them with bare face and hands. I have also two or three hives of a kind slightly larger. They are well-banded and just as good as the Italians or even better, but instead of the yellow streak it is grey. As my Galician friends who keep bees up here say, they are "sharp." I would like to see the man or woman who could handle them uncovered. I have tried them all ways, and the only way I have found yet is to give them smoke, and lots of it too. The worst thing about them is that they will go for you when you are a distance away and not disturbing them. I should like very much to know what variety they are. They are good workers but will not go out in weather that the Italians will. They make a much whiter wax.

Teulon, Man.

[We are extremely glad to hear from our correspondent. Such contributions

are exceedingly valuable, as showing the conditions under which bee-keeping is carried on in the various parts of the great Canadian territories. We shall be pleased to hear from correspondents regarding the large grey-banded bee with a vicious temper. The crop was an exceedingly good one, all things considered. Some in Ontario this year have not fared so well.—Ed.]

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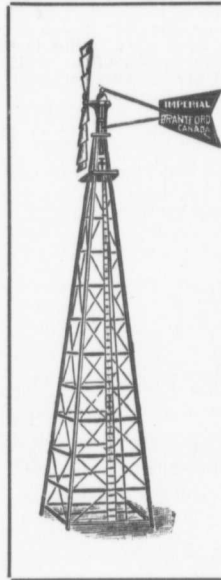
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