The Canadian Bee Journal

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BE SOMETHING

Be something in this living age,
And prove your right to be
A light upon some darkened page,
A pilot on some sea.

Find out the place where you may stay,
Beneath some burden bow;
Take up the task with willing hand,
Be something, somewhere, now.

Be something in this throbbing day
Of busy hands and feet,
A spring beside some dusty way,
A shadow from the heat.

Be found upon the workman's roll;
Go now, go reap, or plow;
Bend to some task with heart and soul,
Be something, somewhere, now.

Be something in this golden hour
With action running o'er;
Add some momentum to its power,
A voice unheard before.

Be not a king without a throne
Or crown to deck the brow.
Serve with the throne, or serve alone,
Be something, somewhere, now.

NOTES AND COMMENTS

By J. L. Byer.

The Swarming Problem.

Given a perfect system of controlling the swarming impulse, and at the same time eliminating the vast amount of hard work connected with all known **imperfect** systems, no doubt all will admit that **then** has been solved the greatest problem confronting bee-keepers in the running of out-apiaries. Mr. Davenport, in "American Bee Journal," claims to have discovered just such a system of management. Among the good features of his system, let me cite a few: After treating hundreds of colonies not one has offered to swarm. Each colony has worked with the same vigor as a newly-hived swarm. There is no shaking of combs and no looking for queens. The operaton does not take two minutes' work at the time, and about the same amount of time suffices for the second and final act any time inside of ten days. The treatment is so simple that Mr. Davenport says he could hardly think it possible such good results would follow, and was not thoroughly convinced until after having tried it on hundreds of colonies. It sounds too good to be

true, yet Mr. Davenport is an extensive producer and doubtless knows what he is talking about. While the so-called "shook swarming" plan is practised by many, it has many drawbacks well known to all that have used the plan. Much was expected of Mr. Sibbald's modification of the same system, yet, while it undoubtedly has worked well wth Mr. Sibbald, as near as I can learn, it is not in much favor with a great many who have worked along the same line of management.

There is, according to some, too much of a "dribbling" process in getting a large force of bees to work in the supers on the old stand. With the orignal "shook" system the full force of working bees, as well as most of the young ones, are thrown at once in the hive with supers on, i.e., at the old stand, consequently better work is done than is the case when the same stock is reinforced gradually by the moving of the parent stock from time to time.

What is Mr. Davenport's system? Ah, the provoking part of the tale is yet to come. Mr. Davenport has not yet decided if it would be to the interests of the bee-keepers to make the plan public. Say, Mr. Davenport, if you are afraid by so doing that you would offend the fraternity, won't you take the liberty to write out the system and send it to the writer in a sealed envelope? Don't know but that I would be willing to invest in a stamp for the forwarding of the letter, but you know Uncle Sam wouldn't pass a letter with a Canadian stamp attached.

A Libel on the Carniolans.

In "Gleanings," March 1st issue, Mr. Doolittle makes some charges against the Carniolans that will cause admirers of that race of bee to wonder if Mr. Doolittle is not influenced by the fact that he has **Italians** to sell. The most of us have known for some time that if Carniolans are kept in small hives they are more inclined to swarm than Italians, but it will be news to the majority to hear of some of their other failings as recorded by Mr. Doolittle.

For the enlightenment of an enquirer from Montana, after telling of the various markings of the Carniolans he has had, he says, in answer to the question as to whether they are good honey-gatherers or not: "The individual bees might be good honey-gatherers, but the trouble was I could not get enough of these individual bees collected together at the time our honey harvest was on to do more than gather honey enough for the feeding of the brood." After telling how they would use all the honey they gathered for feeding brood, he further says: "When the harvest was past they would starve unless fed wth sugar syrup or combs of honey from their thrifty Italian neighbors." Poor things! Why, Mr. Doolittle, I have seen just the reverse of the case. Have known of some blessed Italians reared not a thousand miles from Borodino that had to be fed from their "thrifty Carniolan neighbors." While some have not liked Carniolans on account of their swarming propensities, previous to this all I have ever heard express an opinion on the race have claimed that in one point they excelled all other races, and that in the matter of building up quickly in the spring. In my own opinion, almost any spring, I think even a novice could pick out the Carniolan colonies on any day the bees were working by merely telling them to notice a certain number of extraordinary strong colonies. Messrs. Post, Holtermann and others have told me the same thing in regard to this trait of the Carniolans. No, I haven't any Carniolan queens to sell, neither have I five cents' interest in any queen-rearing establishment, yet I believe in giving "even the Devil his due,"

Raising Combs of Brood to the Extracting Super.

In an exceedingly interesting and instructive article in March "Review," Mr. Chapman of Michgan holds up the advantages of intensive bee-keeping as opposed to the claims of those who encourage the keeping of large numbers of bees on the rough-and-ready system.

While the most of Mr. Chapman's arguments are sound and logical, we are sure to differ with him in some minor points, as is but natural.

Mr. Chapman lays great stress on the desirabilty of hoisting two combs of brood (as much sealed as possible) to the extracting super when it (the super) is first put on. Again, in a few days, he takes out two or thee more combs of brood and puts them in the upper story. While the plan has many things in its favor, sometimes, as I found to my sorrow last year, it involves considerable risk.

If we were always sure of weather conditions all would be well, but if Michigan is anything like Ontario, weather is a factor always to be taken into account.

Last season, at the Cashel apiary, we hoisted brood into quite a number of upper stories the day the supers were put on. Weather was ideal and colonies strong, but within 12 hours the temperature was near the freezing point, the bees deserted the upper stories entirely, with the result that nearly all the brood in the upper stories perished.

While this might not happen again in a number of years, yet it was an expensive experience, and likely to make the experimenter go a little slow before trying the plan again. Another point Mr. Chapman scores against those who do not use queen-excluders is that the super combs become clogged with pollen. That is my main objection to putting combs of brood **above** the excluder, as I find the bees carry a lot of pollen into the super combs whenever there is brood near them. I wonder if Mr. Chapman is not troubled in this way? Perhaps locality may make the difference. At any rate, when I pressed the question on Mr. McEvoy (the greatest exponent of the plan in Ontario) he admitted that pollen went into the combs, but added that the greater amount of honey produced more than compensated for the damaging of the combs.

Some Experience (Not Experiments) in Wax-rendering.

During the early winter, as a result of going over about 3,000 extracting combs, cutting out pieces with pollen in, scraping off burr combs, propolis etc., I secured material enough to turn out 82 pounds of wax by melting in a wash boiler and pressing in a Gemmell press. The slum gum was saved until about a month ago, when, having nothing to do, I concluded to put the residue through the steam wax press in small quantities at a time, and see how much more wax I could get. We gave each batch lots of time and lots of pressure, spent nearly a day and a half over a roaring hot fire, and, when all was done, I had 1½ pounds of second-grade wax.

Oh, well, I had satisfaction anyway, and have learned, in regard to wax-rendering, that what the Gemmell press won't take out is not worth bothering about until we get some better implement on the market than we have at present. Did I save the slum gum again? Sure thing, and I imagine that Buffalo chap is just itching to get a-hold of it and take out a lot of wax from material I have handled twice over. No, friend Hershiser, you won't get a chance to poke fun at me in that style, as I shall "bide a wee" until the improved "get-all-the-wax" presses are on the market, and then

extract all the hidden wealth for my own benefit. See?

Clipping Queens Without Handling Them.

Some time last year I made mention of the fact that I had learned to clip queens without ever touching them with my fingers. Just wish a few would-be doubters as to the feasibility of the plan would secure a small pair of curved scissors and see how nicely the job can be done. Of course, the first thing to do is to find the queen, then balance the comb on one corner on top of the hive, holding comb with left hand. As the queen runs up or down, as the case may be, with scissors in right hand, quietly slip under her wings, and the job is done without the gueen being aware of the fact. This method will appeal to any who may have had the misfortune to have valuable queens balled by the bees after being released.

Markham, Ont.

REMARKABLE HONEY CURE.

We find reported in The Schweizerische Bienenzeitung, a case showing the efficacy and medicinal value of honey. A young woman was suffering from a very severe form of anaemia, and the eminent Dr. K—— at last told her that nothing more could be done for her, and that she could not live long, but without holding out much hope of her recovery, he recommended her to try honey and milk. She was to take this several times a day, and take walks in the woods so long as she was strong enough to do so. She carried out his advice, and in a few months became perfcetly well and strong again. This is an example where honey has been the means of rescuing a life from the grave, and should be an incentive to the more liberal use of honey as an article of food.—British Bee Journal.

MANITOBA BEE-KEEPERS CONVENTION

The Manitoba Bee-keepers' Association met in convention in the Carnegie Library, Winnipeg, on Thursday morning, February, 15th. In the absence of President Mr. S. A. Bedford, the Vice-President, Mr. J. F. Mitchell, delivered the following address:

Gentlemen and Fellow-Bee-keepers:

It is customary at this stage of the proceedings to have the president's address. I must say, and I am sure that we regret very much the unavoidable absence of our worthy president at this, our annual convention. He has been the main-stay and an earnest worker and a valued member of this society; but on account of his work in connection with the special seed grain train he is unable to be with us this session.

The duty has devolved on me, as vice-president, to preside at this annual meeting. It therefore affords me honor, as well as pleasure, to extend to you a hearty welcome at this, our third annual convention.

Another year has rolled around, and we are gathered again to talk over the past and the present, also to lay out and make plans for the future, and to devise the best means of taking care of the bees in this country.

We should feel that it is our good fortune that our lot has been cast on the fertile and expansive acres of the great Western Canada. We should also feel thankful that Providence has saved this grand and glorious West for our inheritance. And while it is recognized as the greatest wheat-growing country in the world, and the granary of the British Empire, yet it can be truthfully said that it is a "land flowing with milk and honey." Its broad

expanse of rich pasture lands await the flocks and herds, while its millions of acres of fertile prairie are covered with rich, honey-producing flowers, awaiting the coming of the little honey bee to gather its sweet nectar and store it for the future needs of itself and that of mankind. Now, the point I wish to draw your attention to is this: That it is our duty, as members of this Bee-keepers' Association of Manitoba, to use every means to encourage the cultivation of this industry, which offers such great possibilities. I think there is no industry that is so interesting, instructive and fascinating as apiculture. And it should receive a good deal more attention, especially from the farmers, who could keep a few hives at very little cost or trouble.

During the convention there will be some matters of importance brought before you for your consideration. Among them I might mention the securing of legislation similar to that of Ontario, the publication and distribution of our annual report, the question of representation on the Exhibition Board, so that this Association may be placed on equal footing with similar societies. Also to take steps to stop the importation and sale of adulterated honey in this province, and to make apiculture a study at the Agricultural College, and the appointment of an inspector of apiaries by the government.

In conclusion, I would like to say that it was with a feeling of very deep regret we learned of the death of Mr. James Duncan of Emerson. He was a true friend of the bees, and an earnest worker in this society. He was one of the founders, and never tired of working for the good of this Association. He has lived a good and honorable life, and has now gone to his reward. It should remind us that ere long we, too, will be called hence.

I wish to thank you for the hearing you have given me, and also for the honor you did me in electing me your vice-president for the past year, and I trust that you will assist in making this convention a success.

Secretary's Report.

The report of Thomas Gelley, secretary-treasurer, showed the Association to be in excellent shape. The receipts for the year were $141.10, including $100 government grant and $17 membership fees. The expenditure had been $10, leaving a balance on hand of $131.10. The Association, after negotiating with the Winnipeg Industrial Exhibition Board, had failed to secure a representative on that board, as the charter did not permit them to appoint any more. The Association had not seen any benefit to be gained by holding a special exhibit of honey at last year's fair, considering the cost and the poor results to be obtained. Mr. Gelley, in his report, strongly recommended the offering of some premium as an inducement to new members to join, such as Root's A. B. C., Langstroth on the Honey Bee, a bee journal, a tested Italian queen, or some printed advice to beginners, compiled by experienced members of the Association, each member receiving such a premium to be obliged to report to the secretary of the Association, annually, the number of hives he has and give detailed information regarding their condition, development and production. He also suggested the appointment of an experienced and capable person to visit and inspect the different apiaries in the province.

Want More Members.

After full discussion the following motion was unanimously passed: "That the Bee-keepers' Association offer some premium to induce new members to join." Last year there were but 17 paid members, whereas about 250 persons were known to keep bees in the province. Rev. H. G. Gunn pointed out that these 250 people could not be ex-

pected to take an interest in the Association before knowing its work and objects. He advised that the full reports of the convention be sent to them, with a request to co-operate.

Some difficulty had been experienced in Manitoba with hives of bees dying, due to a foul or chilled brood. It was felt that there should be some inspection. It was unanimously resolved: "To recommend to the Manitoba government the appointment of an experienced bee-keeper, to visit different apiaries in the province and at the same time, if possible, inspect all incoming hives of bees."

Bee-keeping in Alberta.

The first paper by Ira W. Russell consisted of an account of his experience in bee-keeping in the Lacombe district, Alberta. In 1902 he started, but the first year proved a failure. He concluded that Alberta was not suited to bee-keeping. He made no effort to feed the bees, simply putting them in his cellar. They pulled through, and he assigned the failure to the wet season. He placed those left out in summer stands. The result was about 100 pounds of honey that season. He had now four colonies. The next season they produced 300 pounds of honey, and sent out one swarm. Mr. Russell pronounced the honey as white as the white clover honey of Iowa and of exceedingly fine flavor. He did not know what plants the bees obtained nectar from. He had noticed considerable sweet amise seed there.

Rev. R. A. Rutledge of St. Charles delivered an enthusiastic address on his experience in bee-keeping. Ill-health had caused him to leave the ministry and take up bee-keeping. His first experience led him to believe that it was not possible in this country. The experience of the late Mr. Duncan of Dominion City encouraged him, however, and he finally succeeded. His bees had paid their own way from the first. His hives averaged about 100 pounds. He had now 44 hives. So far this year he had averaged 200% for his labor. His bees this year had averaged 75 pounds and had given 50% increase.

A motion was passed granting the secretary-treasurer, Mr. Gelley, $25 for his services.

Among the Bees in the Spring

By G. M. Doolittle, Borodino, N.Y.

The first thing to be done in the spring is to get each hive or colony in as good shape as possible for the comfort and prosperity of the bees. As soon as spring fairly opens I go over all the hives in the apiary, and, to do this intelligently, I begin on one side of the yard and open the first hive. If the bees have wintered well I may find that the colony has brood in three or four combs, while the sealed honey along the top-bars of the frames, and more still in the combs next the outside of the hive, tells me that they have an abundance of stores, so that all this colony needs is to see that the hive is made as tight and comfortable as possible, except the entrance, which should be about 3 inches long by ⅜ deep. When thus fixed a little stone is placed on top in the center of the cover, which tells me that the colony is a good one and needs no further looking after till the fruit-trees bloom.

The next two or three colonies prove about the same as the first, so are marked the same. The fourth or fifth colony may prove to be only a fair one, with some dead bees on the bottom-board, which are either removed or a clean board substituted. As they have brood in two or three

combs they are treated similarly to the first, except that a frame of honey is placed on either side of the brood, as such colonies are apt to get short of stores, or a cold snap may come to keep them from going to the outside of the hive where their honey is most liable to be. Then, such a colony does not have the number of bees to go to the fields to secure the little early honey there may be, as do the stronger ones in bees, so it is always best to make sure that all will have honey enough, and that close to the brood, to last till the bloom from fruit trees opens. The stone to mark this one is placed on front side of the cover, which says "fair."

As I pass along, I find more good colonies, with now and then a fair one; or a poor colony may be found. When such an one appears on opening a hive, I will find it has brood in only one or two frames, and only small patches at that, while the little honey there is, is scattered throughout the hive. To fix such a colony best, I take the two frames having the brood in and set them near one side of the hive, and then take all the other combs, after brushing the bees off which may be straggling on them, to the bee-house. After getting two combs quite well-filled with honey, which were left over from the previous season, I return with them and place one each side of the two combs of brood, drawing all as near the side of the hive as is consistent with the necessary bee-space, after which a division-board is nicely adjusted to suit the requirements of the little colony, with a quilt carefully tucked about them on top, under the cover, and down the side of the division-board. The entrance of the hive is now regulated so that but one or two bees can pass at a time, and is so fixed that it comes beyond the division board, thus shutting off the cool, outside air, coming directly upon the bees, as well as enabling the little colony to protect itself much better from robber-bees. The stone to tell the condition of this colony is placed on back side of cover, telling that the colony in the hive is weak.

In this way I go over all the colonies in each row of hives in the apiary putting each colony in the best possible condition when they are left undisturbed till the opening of the fruit-bloom.

When the fruit-trees bloom I again go over the bee-yard as before, so we will again commence with colony No. 1. After opening the hive the first thing to do is to look for the queen to see if her wing is clipped. If I find her wing not clipped, the clipping is now done, as it is much easier to find queens for this purpose now, than it it will be later when the hive is more populous in bees.

Having clipped the queen I now observe the brood, and if the colony has gotten along as it should there will be brood in seven or eight combs, the centre ones being nearly or quite full, while those on the outside are from half to two-thirds full. I now change this brood right around, that is, I place the outside frames of brood in the centre, and the centre frames on the outside. This causes the queen soon to fill those part-filled outside combs completely full of brood, while the combs filled full of brood, next the frames partly filled with honey, near the side walls to the hive, cause her to put eggs in them, or in every cell not occupied with honey, so that in a week or so every available cell is occupied with brood, and this in just the right time to produce the maximum amount of bees in time for the white clover honey harvest.

By this time the fair colonies may have nearly or quite caught up with the good ones, and if so they are

treated the same. If not the brood-nest is reversed the same as with the good ones, while a frame of honey is brought up on either side of the brood so as to make them feel "rich" in stores. This will cause them to remove this honey, feed the queen more abundantly, and she in turn fill the combs to completion with brood; and by the time the harvest arrives, such colonies will not be far behind the very best.

The brood in the weak ones is looked after, and if it is found all in one end of the frames, one or two are changed ends with, so as to cause the frames to be filled with brood which have any in, and coax the queens to greater egg-laying. Two more frames of honey are put in, one on either side of the brood, which also adds "zest" to this little colony, which will soon be on the road to prosperity, so that all will be as nearly ready for the harvest as soon as possible, when it arrives.

This getting of the bees in the right time for the honey harvest counts more towards cash and fun in the apiary than all else, unless I have made a great mistake during the 28 years of my bee-keeping life.—American Bee Journal.

THE APPLE SUPERSEDED.

The trade at the close of 1905 shows that the banana has now become the most popular fruit handled in the British markets. At one time it was the orange the apple or the tomato. To-day the banana heads the list easily. Over 5,500,000 cwts. of this fruit were imported last year, against 4,350,000 cwts. of oranges, 3,250,000 cwts. of apples, and 1,100,000 cwts. of tomatoes. If only from this fact alone, 1905, as far as the import fruit trade is concerned, may well be termed a remarkable year. The banana business is still only in its infancy. We paid over £2,000,000 for our banana supply last season.—Trade and Commerce report.

ALSIKE CLOVER.

On page 20, of January number of "Canadian Bee Journal," I notice some remarks by Mr. Holtermann on the value of bees in fertilization of plants, and quoting the remarks of some parties having short crops of alsike seed, who thought they might have gotten more had there been bees in their vicinity. The keeping of bees for this purpose does not always work to advantage, as I have noticed on two or three seasons, in relation to alsike clover, when acres of it were grown for seed from a few rods to a half mile from my bees. On each of these seasons I have never seen a bee working on the alsike, and I never got an ounce of honey from it. The seed crop went between four and five bushels per acre. This partial failure of crop of seed and no nectar was all owing to climatic conditions, which all the bees in the world could not rectify, and climatic conditions might have had some effect on crop of parties, as mentioned by Mr. Holtermann. Climatic conditions are very variable even in short distances.

I have been reading Mr. Holtermann's articles in March number of "Gleanings" on his system of working with his new 12-frame hive. They are two excellent articles. Given a good bee pasturage, he has certainly made a big advance in the production of honey, and with wintering inside he is on the right track. For outdoor winterng I don't think such wide hives would be a success without a lot of labor in taking out some of the frames and packing up behind division boards to reduce the size, so the bees would not freeze. For outdoor wintering, I think, a hive with less frames and two or three inches deeper would be a more profitable one to adopt.

W. H. KIRBY.

Oshawa, April 2nd, 1906.

QUERIES and ANSWERS

1. What would be your advice to a beginner in purchasing bees? Are Italians very much better than the common bees?

2. Will it pay one who is intending to keep twenty-five or thirty colonies of bees, to sow clover or plant basswood for them? BEGINNER.

3. How can I best feed my bees in packing boxes outside? D. MAC.

4. Can you give me any information regarding the Canadian west for bee-keeping? Can bees be wintered outside there, or must some underground repository be provided?

M. G., Beachville.

5. Do you think when the bees are about ready to swarm if I take all the brood chamber combs out and put in empty combs, then place the brood combs in an empty hive on top of the old one, will prevent swarming until after the clover flow?

Would you prefer empty combs, or comb foundation to be put into the old hive?

D. A., Beaverton, Ont.

1. If I could purchase a good strain of common bees (not blacks), I would rather take them than pay a high price for pure Italians, and later, if I thought advisable, a pure Italian queen might be introduced.

2. Yes, if there is not much alsike clover grown within reach of the bees, and you have the land, the clover crop will pay for itself either in hay or seed, and the bees will have an oportunity to work near home.

Of late years the basswood has been rather uncertain as a honey plant. It is hardy, grows quickly, and is valuable for shade and timber, and if planted in good land (not too dry) will be more likely to yield honey.

3. When it is too cool for bees to fly a simple way to feed them, is to lay a comb of honey (after slightly scratching or breaking the capping) flat on top of the frames and cover up snugly, or when you have no honey a candy made as described in the October number of the C. B. J., will answer as well. We have several colonies in the cellar living on this candy the past two months, and they appear to be doing well.

4. Bees are being successfully kept in many parts of the Canadian west. In 1884 the writer had a few bees for experimental purposes near Indian Head, and found that while it was too exposed on the open prairie, when they were removed to the shelter of the bluffs of timber they did well. I did not try wintering bees outside there, but would expect they could be wintered outside, west of the fourth Meridian. A good cellar where the temperature can be maintained at from 40 to 45 degrees, would be safer in the colder parts of the country.

5. Do not wait until bees are ready to swarm, but give them room in the way you propose when they begin to show signs of being crowded. If I had clean worker combs I would use them, otherwise use comb foundation. Shake part of the bees with the queen into the lower hive and place queen excluder between upper and lower story. This will postpone swarming for a time, but if the colony is strong and the honey flow good, they will require a super on top in a short time

St. Thomas, Ont. R. H. SMITH,

Fortunate is the man who doesn't go lame when he has occasion to sidestep temptation.

THE CANADIAN BEE JOURNAL

Devoted to the Interests of Bee-keepers.

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Editor, W. J. Craig.

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EDITORIAL NOTES.

Many readers will learn with sympathy of the very serious illness of Mrs. R. F. Holtermann. We are pleased to know from the city hospital authorities, that she is on a fair way to recovery, having undergone successfully a very critical operation.

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We are in receipt of a copy of a very handsome "Manuel Du Jardinier," issued by Mr. Jacques Verret, Charlesboug, Que., his catalogue of vegetable and flower seeds, bulbs, plants and implements of horticulture, gardening and bee-keeping. The catalogue is in French throughout, very neatly gotten up and beautifully illustrated.

✠

Bees seem to be coming out generally satisfactory from the reports we have had so far. Mr. Frank Adams' "Bow Park" apiary of 225 came through all alive but one queenless stock. He thinks that clover has not been materially injured. They have a large acreage at "Bow Park" and should know. Here are some reports we have received from others:

St. Thomas, March 30, 1906.

Friend Craig:

We set our bees out of the cellar to-day. There was very little sign of dysentery. I never saw so many dead bees on the cellar floor, so they must have lost heavily. There were three colonies dead out of 113. The heavy snow and rains we have had lately have improved the prospects for the clover, which was heaved in many places. From reports I have, bees have wintered well, although many will be light in stores.

R. H. SMITH.

London, Ont., April 2, 1906.

Friend Craig:

Bees have, to all appearances, wintered fine, are flying strong. Clover on clay land was reported as being considerably heaved during February. March has been more favorable, and, on the whole, I do not consider it seriously affected in this district. White clover, of course, will be unaffected.

F. J. MILLER.

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"Nemo," in the "British Bee Journal," copies the following very complimentary item about Canadian honey from a European contemporary:

"Writing about the beautiful exhibit of Canadian honey at the Universal Exposition in Liege, M. Van Hay, in "Le Rucher Belge," says that Canada is a country especially favorable for the production of a pure and delicious honey in large quantities. Immense tracts of country are covered with clover, whose scented and nectariferous flowers are favorable to the production of honey in abundance. Canadian honey has been much appreciated at the different shows, owing to its beautiful color and fine flavor. The exportation of this honey is unimportant, most of it being consumed at home, but as the yield could easily be doubled by the employment of modern methods, it would be very easy, in this great country, to produce an increased quantity of cheap honey, which would be exported to European markets. The construction of hives and appliances in Canada is not costly, as the wood can be had for next to nothing."

We can readily, gratefully and conscientiously accept all the nice things said about our country and our honey,

but the last clause, that hives and appliances are so extraordinarily cheap, and that "wood can be had for next to nothing," is not so easy to believe for one who has resided here for a time.

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..Secretary Couse has received the following announcement of freight classifications fixed by the recent Railway Commission:

	L.C.L.	C.L.
Beeswax	2	4
Honey in pails with wooden covers	2	4
Comb wood, KD. or in bundles crates or boxes	3	5
Bees in hives	3-1	2

The decision of the Commission is rather disappointing, as Mr. Couse says in a personal note to the editor: "We expected a better rating than this. The only change of any practical benefit to bee-keepers is that on beeswax." The former rating on beeswax was first-class on any quantity. Honey in pails crated is placed the same as honey in kegs or barrels. Bees in hives less than car load remain the same as before, viz: Triple first-class; in carload second-class, minimum 12,000 lbs. instead of third-class, minimum 20,000lbs. "Comb wood," we presume, refers to sections, frames and such like, and will effect shipments of bee-keepers' supplies.

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HOME MARKETING.

Editor C. B. J:

I have lately noticed a few articles in The Bee Journal relating to the mistake of shipping too much honey to large cities and leaving the rural districts without or short of supply. The same is my opinion exactly. Bee-keepers could very well work up a much larger home trade if they would only give it their attention. Here is my experience; twelve years ago it took me a longer time to sell 500 to 1,000 lbs., than it takes me now to dispose of my present crops of 6,000 or 7,000 lbs. right around home. Many families commenced with buying a 5 or 10 lb. can, now they take from 20 to 100 lbs., and even more in a year. To grocers I sell maybe three times as much as before and the result of it is that parties buying in the grocery store will come to me and say: "I have bought now and again a can of honey with your label at the store, and want a larger quantity. I find that it is cheaper than preserves, and we like it." Again, I have different applications from the Northwest from parties before living here having used my honey. I sent some to one and he said he could sell a carload of it if he had it. Those people want their honey direct from the bee-keepers and not from Toronto.

I do not peddle as a rule. I only spent one day last winter and one day four years ago to introduce my honey a little among outside farmers, and with the best of results. To most of my farmer customers my price was 7 to 9c a pound net, according to quality. My honey not up to the best in flavor and color I sell as No. 2, and so have never had complaints. Buckwheat I am selling for 5c, but there is no demand for that here, because until recently there has been no buckwheat in this district, and it is only two years ago since farmers commenced to raise it with success; likely there will be more of it in future.

What is this honey mostly used for, table or manufacturing? Would like to have some information about it in the "Bee Journal."

JACOB HABERER.

Huron County, Ont.

[Buckwheat honey is used largely for manufacturing purposes by confectioners and tobacconists, and it usually finds a ready market, generally at a low price, but seldom at less than what you have ben selling yours for. Some people like it for table use, and we have sold tons of it for this purpose, but it is not likely to become a favorite. It seems to us less objectionable and sells more readily locally in its granulated form. Grocers in our city strip off the 60-lb cans or barrels and slice it with a knife. Here is a recipe for buckwheat honey ginger bread that we like in our house that you might try:

Stirt one cup buckwheat honey, one cup butter, ½ cup brown sugar, one tablespoon ginger, one teaspoon cinnamon together to a light cream. Put on the back of the range until warm (not hot); then add one cup sour or sweet milk, two well beaten eggs, one teaspoon soda, four cups of flour. Bake at once.—Ed.

ANNUAL MEETING ONTARIO BEE-KEEPERS' ASSOCIATION

The President—We are glad to have with us this evening Prof. Shutt, of Ottawa, and I will now call on him to deliver an address on "Notes from the Experimental Farm Laboratories, 1905." (Applause.)

Prof. Shutt—Mr. President and Gentlemen: It isn't very often that I have to apologize before making my remarks, but it is really with a good deal of diffidence that I appear on the program this year, but your secretary really wouldn't take No for an answer, and so I am here. This year I have been able to do very little in connection with or in reference to the chemistry of bee-keeping. I have appeared before you on several occasions previously and I think I can say without any boast that I have generally had something to say, but this year my material is very very slight. However, when it became known to me through the Minister of Agriculture that you would expect me to do something, being in Toronto, I endeavored to put in hand several small matters more or less closely connected with the keeping of honey, and I shall very briefly speak with regard to them now.

These subjects I might say were suggegsted to me. Our work at the Farm Laboratories are extremely varied. It covers the whole Dominion on every branch of agriculture and my duties are distributed over a great many subjects, so you see I haven't very much time to devote to this subject. However, we have been able to do a little during the last few weeks. These matters, as I said before, were suggested to me, and one was with reference to the candying of honey. what conditions honey would remain Could we learn the factors which control this matter Could we learn on fluid and what conditions favor the candying or the solidifying or honey. Before I tell you what I have done I might say there are two schools of thought. There are those who hope and desire to keep the honey fluid and there are those who prefer to have it solid. The way I look upon it is this. We are all agreed that genuine honey solidifies about November, it candies, and that is really a badge of its genuineness, and that is a factor that we should pay particular attention to. The question of adulteration of honey has been brought before you. We know that the chief adulterant of honey is glucose syrup, and it never solidifies, and if there is anything that causes a doubt about the genuineness of honey it is really the fact that it remains fluid. On the other hand, as I have learned on enuiry there are a large number of consumers and dealers who require the honey in a liquid form.

The factors which we investigated in this matter were practically light and temperature. That is, I proposed to take some of the same honey and place some of it in the dark and some of it in the light. I proposed to take another sample and agitate it. Another quantity I took and put in, what I may term, a number of crystalizing points. I wanted to see whether honey solidified any sooner by reason of solid matter in it. Then we wanted to astertain the effect of heating the honey and of preserving it in the light and dark respectively. I have a number of samples here which have been kept under these various conditions since the first of September. You must understand that all this honey was from one and the same sample. We took two of these jars and heated that to 122 Fahrenheit; the honey was perfectly fluid, but there was evidence of commencement of granulation—we

put them in a bowl of water and we heated them up till the honey became 50° Centigrade, or 122° Fahrenheit, and then we took the heat off and allowed it to become gradually cool. Then we took two other jars and we heated them to 70 Cent., or 158 Fahr., heated them up gradually, and then taking away from the light allowed them to cool. Then we put two others in keepers, one of each. All these honeys have remained perfectly fluid. This which was heated to 122° Fahr., is just as fluid as this which was heated to 158°, so that it seems that by warming the honey while already in a fluid condition is quite sufficient to keep it—this is going on now for three months, and it may remain fluid till your Annual Convention next year. There are one or two other points. Two of these jars have been kept in the light, right in the window, where they would get the sun, and the other two have been kept in the dark. Now, while all these four are perfectly fluid alike in that condition I think you will notice that these two which have been kept in the light, the 122 and 158, are both lighter in color than those which were kept in the dark. The action of the light while having no effect on the solidifying of the honey has bleached it to a certain extent. Although it has only been a couple of months that the honey has been exposed to the light, it is easily noticed that it is considerably lighter in color, and on testing it I thought I detected a slight falling off of the flavor of the honey which had been preserved in the light. I thought so, but I don't know whether your opinion will corroborate mine in the matter.

Now as to those honeys which were agitated as against those which were just left alone by themselves. These which were agitated show no signs of more immediate granulation than the others. It didn't seem to hurry the granulation at all.

These other two jars which show the candied honey were kept respectively one in the light and one in the dark. These were all put in the same way, and while they are both equally solid there is no difficulty in seeing that the one that was kept in the light has bleached very much more than the one that was kept in the dark, and I fancy —it may be only fancy—that there is a lack of flavor or a difference in flavor as against this one which has been kept in the dark. Now whether honey is fluid or solid the action of the light is towards bleaching it at any rate, but it doesn't seem to effect the granulation of it.

Here is some honey which was agitated for a certain number of days, but it solidified in the same time as that which was quite quiet. Our cold storage is probably in the neighborhood of 40° and we find that the honey granulated just as quickly, but no more so than that which was kept at the ordinary laboratory temperature. Well, what can we learn from that. If we wish to keep our honey fluid, if it is desirable, it is not necessary to heat our honey to more than 120° Fahrenheit, and then I should speak too emphaticaly that it should be preserved in the dark. There is one point which is still uncertain, and that I shall find out, and that is, going down in the scale, to what temperature I can subject it before it granulates. I don't know now at how low a temperature I can preserve this fluid honey without a granulation, but it certainly does not show any granulation at ordinary temperatures. This honey (referring to sample) we kept the covers on, but nevertheless we have from time to time taken the tops off to test it so that it has been opened a good deal.

Now I have told you what we have

done, but as you know I am a chemist, and I like to have things accurate, I like to get at the facts. However, I am inclined to think the high heating of honey destroys the flavor to some extent. But these are only thoughts of mine, it is only an impression. Now there is a thought which strikes me here. What is it gives the flavor to honey. It contains two sugars, one of which is fluid and one is solid, one levulose and one glucose. I am very sure it is neither of these sugars which gives honey its peculiar flavor. We have clover honey and basswood and golden rod and buckwheat, but I think it is a certain minute quantity of the volatile oils which are secreted and which are possibly changed somewhat while passing through the bee which gives it its characteristic flavor. Now they can, and I believe do, at high temperature escape, and when they are gone the honey goes. Now I would like to take some honey and seal it up, that is, put a stopper on it, and take another sample and leave it exposed for a number of months or years undisturbed, and I think I could prophecy that you would find the exposed honey would become flavorless while the other would retain its flavor. If that is true it points towards the fact that high temperature would have a disastrous effect upon that fine flavor of honey, although I think myself 158 is not at all an excessive temperature. Probably over that the flavor of the honey will go more quickly. I will try and make some further experiments along that line next year, and see what the results will be.

Question—How long did you keep it at 168?

Prof. Shutt—About fifteen minutes. We warmed it up in water, always in a water bath. We put the honey inside another vessel, and put it in that until the honey has gone to that temperature and then took it away. Then we put the top on and left it.

Another point, this honey was all fluid when we put it in. This honey didn't begin to granulate until about a week or ten days after it was put in. If you have to liquify the solid honey you can't do it at such a low temperature as we keep this fluid at, 122. We found that although this solid honey begins to liquify at a temperature of 90°, between 90° and 100° it needs a higher temperature. The levulose comes into a solution at once, but the dextrose doesn't liquify so quickly, so that while it became in a pasty mass between 90 and 100, it didn't clear up until considerably over 120, so that you see you require to use a higher temperature, probably 150 or 160 at least, but I shouldn't keep it in any longer than just necessary to liquify the honey.

That is how the matter stands. I see one or two points where it might be made more complete, and that is to find out to what temperature it can be reduced without solidifying. However, we have found that light has no effect on solidifying, it doesn't hurry it, neither does it retard. And agitating it doesnt seem to hasten it or retard it, but the heating is quite effective in keeping the honey in a fluid condition.

Now another matter upon which we have done a little work is in the bleaching of wax. I looked up a number of methods and processes that we would try in the laboratory, and I have in these envelopes thirty or more samples of wax which have been treated by the various chemicals. I am not going to take up your time by discussing them all individually, it really isn't worth it. I might say as far as the results are concerned they have for the most part been failures. We have tried sulphuric acid in different strengths and we have tried nitric acid and sulphide of potash and sulphuris acid and hydrogen paroxide, and so

forth, and I would like to show you these, but I will leave these out in the envelopes and you will agree for the most part we have been very unsuccessful. I think possibly that which has given the nicest wax is one per cent. nitric acid. This wax was all taken from one sample which was an exceedingly black looking mass. We have filtered it through charcoal and it would be very hard to suggest anything that we have not tried. The upshot of it all is we have obtained the best results by keeping it in warm water which is practically at the boiling point and straining it and repeating the operation and finally allowing the water to cool and pouring off the wax and then exposing it to the sunlight until it is bleached. In these two little glass jars we have the same wax, but this one was put in the light of a window for about two weeks, while the other was put in the dark. You will readily see that we have reduced the color very much. I have no doubt myself if you were to wash the wax in this way, and expose it to the atmosphere, and the sunlight that it would bleach it. On looking up the literature on the subject that this method has been used and used successfully, and has probably been found the best method that can be devised. We have treated it in a great many ways, but we have not had anything like the success as we have had by simply putting it in this way and then having it bleached in the atmosphere. I don't know what your experience is on the subject. I didn't bring all the samples down because it would serve no purpose. However, I have one or two with me which are very good. I was surprised to find that nitric acid gave us better results than sulphuric acid which tends to darken the wax rather than to bleach it.

Question—Did you try how much acid it would take to destroy the wax?

Professor Shutt—Yes, we have boiled the wax in thirty per cent. sulphuric acid. It begins to darken then if boiled for any length of time. But you can use five per cent with safety. It begins to decompose the wax. There are many of these chemicals which bleach at the expense of a certain part of the wax. You can't use strong sulphuric acid. I have some here which was boiled in thirty per cent., but I think about five per cent. is the limit. Here is some that was boil.d in about twenty per cent. sulphuric acid. But that is a matter which the bee-keeper is not very much interested in, because you can't boil it in metal vessels at all. You can't use iron.

Mr. Hall—You can use tin when you boil in water.

Professor Shutt—Certainly, I am speaking about the acid. Here is a sample, ten percent nitric acid. (Professor Shutt here shows the different samples of wax produced by the different methods.)

Mr. Hall—In using water the color comes out with the water?

Professor Shutt—Yes, a great deal of the coloring matter washes out with the water. The nitric acid tests were very much more promising than the sulphuric acid.

Question—Did it injure the texture of the wax to bleach it?

Professor Shutt—I don't think so. You are probably a better judge on that than I am.

Mr .Holtermann—The way you suggest is the same as the large bleaching establishments use, I think.

Professor Shutt—Here is one we used hydrogen paroxide on. I felt rather surprised that we didn't get something more definite in the way of results. We put a good deal of time on that.

When I speak of acid I mean acid and water. When I speak of five per cent acid it means five parts acid to ninety-five parts water. Of course,

very strong acid would destroy the wax very, very rapidly.

Question—Do you dilute this acid before you introduce it into the wax?

Professor Shutt—Yes, you put the diluted acid in the vessel, and then put in the wax.

Mr. Hall—We add warm water to take out the things that shouldn't be in.

Professor Shutt—We washed it two or three times afterwards, that is we held it in hot water. I don't think it makes any difference if you hold the wax and put it in the acid or take the acid and put the wax in and stir it up.

Question—Do you find that the introduction of the acid causes the impurities in the wax to come out so that they can be skimmed off?

Professor Shutt—Yes, you will see on the bottom of these a certain amount that should be scraped off, which is a material which has been affected by the acid. This white one was at a certain expense of wax. (Shows samples.)

Question—Isn't it possible that some of these may have remained in the acid too long at too high a temperature. The color seems to indicate that. Now there is a dark shade to this wax. It is not bright.

Professor Shutt—I would like to show you a piece of the original wax, it was very dirty looking. I believe you can injure it by heating it up and cooling it, too quickly. These were heated up to practically the boiling point and then stirred. You see what the color of the original wax was. It was pretty dark looking stuff. This piece was filtered through chamois and it didn't take the coloring matter out.

Question—Do you think that the texture of wax is something that can be changed? That is if it is cooled too quickly, that that doesn't permanently affect the quality?

Professor Shutt—I think it is quite likely. If you heat it up, and then cool it quickly you get a granular wax, but by melting it up I think you can restore it. I wouldn't say that it could be entirely restored, but I think so. I was going to do some research work and then we might have determined that matter. I think you can alter the wax, but I think you can restore the ductility.

Now, so much for the wax, but I want to tell you something which you all know, and that is the nature of the skimmings from the larger cans of honey. It was suggested to me that I should make an examination of those skimmings so that we could state what they were, so we did so. In our own apiary at Ottawa we tried it and we proved that those skimmings consisted principally of bees wax.

Mr. Holtermann—During the past year I have proved to my own satisfaction the very opposite. That is in certain cases. I will tell you how. I claimed a year ago that honey passing through the atmosphere and drawing the atmosphere with it created a sort of froth. I had a strainer that the atmosphere didn't go through and you could strain a barrel of honey through it and there wasn't any froth. But I am always ready to admit that there was wax in it.

Professor Shutt—Those little particles of wax are brought to the top by specific gravity.

Then there is another matter as to the nature of what is called honey dew. A sample was sent to me from Charlottetown, P.E.I., and it was labelled honey dew from the Spruce. The needles of the spruce are covered with what would be called sugar. It was a very small quantity, but we were able to obtain a small quantity in a pure condition and examine it carefully. Now, it may arise from two sources. It may be a normal or an abnormal

condition of the spruce itself. After dry hot days and cool nights this saccharine fluid may exude. There are conditions under which the tree has taken up a large amount of moisture from the soil and it can't get away, through the small breathing parts of the leaves and this moisture will exude. There have been certain trees which to analyze it it wasn't honey at all. Honey, as I said, is a mixture of two sugars, levulose and dextrose, and a large amount of the material in this is the same as cane sugar, 69 per cent. is cane sugar, so I came to the conclusion, although I don't want to state the fact too emphatically, that this material rather was an exudation than

PROFESSOR F. SHUTT

ave been known to rain this honey ew upon the ground. Then there is nother source of honey dew. The afdies extract the dews and exude it gain, and it being of a sweetish naure it attracts the ants. The gentleman who sent this presumed that this aterial was an exudation from the ack afis. Now I am very much in ubt about it because when I came an animal product. It only contains about 16 per cent of glucose and about 69 per cent of cane sugar in it. I have been hoping that some members of the Association would send in some genuine specimens of this honey dew so that we could have some data. I think it would be an interesting thing There are certai ntrees, oak especially, I believe, is subject to certain condi-

tions of the atmosphere, and to exudation ofthis honey dew. During the coming year if any of you are able to get any specimens send them in and make special note as to the presence or absence of the afis.

Question—Do you think honey dew is a secretion of the insect?

Professor Shutt—It is possible it may be changed in passing through the bee to some degree. I considered on account of the large percentage of cane sugar it was of vegetable origin.

Mr. Darling—When I was at the Exhibition this year, passing along the walk every second tree was a Norway maple, and they were alive with bees. If I had thought you would have been interested in it I would have acquainted you with the fact.

Professor Shutt—When I tested I found about 60 per cent. of cane sugar, and 16 per cent of dextrose. So there is something else in it as well, which we haven't got.

If any of you would like to test these samples of honey after the meeting is over they are at your disposal. (Applause.)

Mr. Holtermann—Before you close, with regard to the granulated honey, I would like to make a suggestion, to stir the honey after it begins to granulate instead of stirring it when it is entirely liquid, and see if it will become solid more quickly.

Professor Shutt—We tried that in a sense because we had two samples in agitation. We had bottles with long necks and stoppers, and we have a machine in which these bottles sit, and then there is a handle which turns a crank; consequently these honeys were put in and these were agitated until solidification was noticed, and it began to solidify about as soon as it was in a quiescent condition. It was turned over and over.

Worth makes the man and want of it makes him worthless.

Spring Feeding and Feeders

(By F. P. Adams.)

Early spring feeding to prevent starvation is something that, theoretically at least, should not be necessary, but how few of us there are provident enough to give plenty of stores to all our colonies the previous fall, so that a few, at least, will not need looking after before settled warm weather is here.

Unless full combs of honey have been carried over the winter, for just such, the only way of feeding early that it has been my misfortune to practice is by giving a heavy supply of sugar syrup as soon as the excitement of carrying from the cellar has subsided. A good deal will depend upon luck, pure and simple, if such feeding is successful. Should the weather turn cold, as it is apt to do at this time, before sufficient syrup has been put into the combs, or should the colony use up more syrup for brood-rearing than we anticipate, then our labor will be in vain, but still it is sometimes necessary to take the ready to serve the needy, and kind Providence may favor us with warm winds and genial weather during the operation.

But it does seem extravagant to feed solid combs of honey back to the bees! Great, solid, bulging combs, that are capped clean down to the bottom bar, honey that is thick and rich with the aroma of last year's clover fields! Well, I used to think so until friend McEvoy came along and told me what he thought of bee-keepers too stingy to lay by a little of last year's crop for just this purpose. Possibly in just this connecton a little personal experience would not be amiss. A few years ago I succeeded in bringing the bees through the winter with comparatively little loss, but found on taking them

from the cellar that quite a number were light in stores. These were fed up on syrup until a cold snap prevented me from giving them any more. In eight or ten days the weather moderated a bit, and I looked through the yard to see how things had been going. They hadn't gone any too well, evidently, for some seven or eight colonies that had received my expert(?) attention had gone to the wall. Eight colonies gone to pot, and all because I hadn't eight combs of honey to give them when they needed it, and that summer the remaning colonies averaged me $7 worth of honey each, a loss of $56, besides the bees, against a saving of possibly $4 worth of honey. I wonder if it would really have been extravagance to have saved over that honey.

There is a time, however, when sugar syrup can be used to great advantage, and no outlay in the honey business will give more immediate or greater returns than stimulative feeding in the late spring and early summer, before honey comes in from natural sources. If fed in small quantities, regularly, it will keep things booming along in good shape, the queens will continue laying during a dearth of honey, and such a thing as starved brood will be unknown in the apiary. It is a well-known fact that bees will not use capped stores to feed the larvae when there is nothing coming in, and many a promising colony that may be well supplied with honey from the previous season receives a serious setback from this cause. The proper thing to do in this case is to uncap part of the honey every few days until it is used up, and after that feed a little thin syrup daily. The best feeder that I have used for this purpose is one recommended by A. W. Alexander in the "Bee-keepers' Review."

The syrup is poured in from the outside of the hive under the cluster and there is no disturbance to the bees whatever. During the coolest weather the syrup is taken up it put in warm, and no bees are lost by becoming chilled away from the cluster. This feeder consists of a block of wood four inches wide and as thick as the bottom board. It is four inches longer than the width of the hive, so that when placed under the hive body at the rear of the bottom board it projects out four inches from the side of the hive. This projection is covered by a heavy block that is easily removed when pouring in the syrup. The feeder rests on the hive stand and the hive body is pushed back along the bottom board, so that it covers over the feeder. Five or six wide sawcuts a short distance from each end, and these are made as deep as possible without cutting quite through the bottom of the block. It should be parffined to prevent the syrup from soaking into the wood and fermenting.

For stimulative feeding the syrup should be made thin, about half water and half sugar. Last season I melted up 25 pounds of sugar, with the same quantity of water, and fed this amount each evening to 150 colonies from May 1st to fruit-bloom, and again between fruit-bloom and clover.

There is no use attempting to build up very weak colonies by this method. Instead of helpng such, it is a positive detriment to them. Take out part of the combs of these weak stocks, and if they do not have enough honey to last them until the summer give them some from those that are better supplied. When giving full combs like this, never put them down in the centre of the cluster, but just at the sides, within easy reach of the bees. Then make the hives as warm and comfortable as possble, contract the entrance and leave them alone until they need more room for brood-rearing.

"Bow Park," Ont.

BEE-KEEPING IN SASKATCHEWAN

(By W. L. Couper.)

I have been requested by the courteous editor of the C. B. J. to send him an article on bee-keeping in Saskatchewan. My experience with bees only extends to a period of nine years, but as all of it has been in this province, it may prove of some small value.

It must be very carefully borne in mind by the bee-keeper who thinks of starting an apiary here, that by far the greater part of the land is, or will be, devoted to wheat raising. As, unfortunately, bees have not yet discovered a way to make honey from wheat, it is obvious that in the best farming districts the apiarist's occupation will not be profitable. There are however, parts of the country so broken by bluff and slough, that they are not likely to be laid under cultivation for a long time, and in these districts the bee-keeper should obtain a fair crop of honey of good quality, which will almost certainly find a ready and lucrative sale in this locality.

Practically all honey now, is obtained from the wild flowers of the prairie, but considerable interest is being taken by farmers in the possibilities of clover culture, partly as feed, more especially to renew the fertility of the land. If the experiments now being tried prove successful, the apiarist will benefit greatly.

My bees are taken out of the cellar the first fine day after April 15th. By that time the prairie is usually studded with small blue anemones, which appear as soon as the snow is off the ground, and from these the bees gather a certain amount of pollen, and (I think) honey. Before these are gone the first willows are generally in bloom and the different varieties of these will help brood raising till the wild cherry bloom appears. From that time till the end of August and sometimes later, there is a steady succession of nectar-yielding flowers, but the flow is almost always very slow, and consequently conducive to excessive swarming. I have twice seen a quick flow: the first lasting only three days, being terminated by heavy rains. The second (last year), lasted eight days. Surplus is usually obtained in the latter part of July and throughout August. Bees are placed in the cellar, sometime about November 1st.

The largest crop I have obtained was last season, sixty-nine pounds to the colony (thirty-two colonies, spring count). I cannot say how many colonies a moderate locality would carry.

There have been several articles on bee-keeping in Manitoba and the Northwest in the western farm papers and good success seems to have been obtained. One man reported one hundred and thirty-five pounds to the colony, but did not state how many colonies—a vital point.

There is one advantage in this country which may be of interest to queen breeders. There are no wild bees, and so very few bee-keepers, that an apiary could be quite easily located, so that one could be sure of every queen being purely mated.

Sask., March 21st.

The Victoria County Bee-keepers' Association will hold annual spring meeting in the Temperance Hall, Little Britain, on Good Friday, April 13th, sessions commencing 10 a.m. and 2 p.m. All are invited to attend.

R. F. Whiteside, President. **A. H. Noble,** Secretary.