

The Canadian Bee Journal

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Whole No. 512

WITH this issue of THE CANADIAN BEE JOURNAL we have an important announcement to make. THE CANADIAN BEE JOURNAL has changed hands. The Ham & Nott Co. has sold the Journal to the writer, James J. Hurley, of the city of Brantford, of the Hurley Printing Co.

For the past ten years the writer has been an enthusiastic keeper of bees, and during that time has made several ineffectual attempts to secure the JOURNAL. Being in the printing business it was felt that his fondness for bee-keeping and the publication of the JOURNAL would dovetail nicely. We have at last achieved our desire. We undertake the task with no little misgiving as to results. It is well known to the bee-keeping fraternity that the JOURNAL has had a struggle for existence. It has never been a paying proposition. It has heretofore been issued under the auspices of the bee-supply dealer. Any loss that occurred was charged up to advertising and there the matter rested. We propose to change all this. We believe the bee-keeping industry of our prosperous Dominion will sustain the JOURNAL. Filled with this faith we put our hands to the task. We trust our readers will bear with us till we "find our feet." It is unfortunately too true that the CANADIAN BEE JOURNAL has not had the life and snap that it should

have had. This was no doubt owing to a combination of circumstances the explanation of which would serve no purpose now. This is no reflection upon the late editor, Mr. Craig, who to our personal knowledge did the best he could.

There is perhaps not one quarter of the bee-keepers of the Dominion on the subscription list. This is not as it should be. An enterprise of this kind must be self supporting. A journal that is to be a real aid to the bee industry must get its support from bee-keepers, rather than from a supply house. We look to the bee-keepers of the Dominion for renewed interest in the JOURNAL, and promise on our part to give them a thoroughly up-to-date and efficient paper—one that will repay them many times the price of the subscription. It was our intention to increase the size of the JOURNAL at once, but we are told that this change had better not take place until the end of the year, so as not to interfere with the plans of those who bind up the yearly numbers in a volume. This intention will however be carried out with the issue of the January number.

We trust all lovers of our little friend the bee, will write us encouragingly and assist us in the task we have undertaken. Let us have the benefit of your experience, and mutually help along a growing and profitable industry, which is

but yet in its infancy, and bids fair to prosper in like proportion with the present prosperity of our fair Dominion.

* * *

It will be noticed that we are making our journal forty pages this month instead of thirty-two as formerly. We trust that this will be appreciated. It is our purpose to put some life in the old woman, and to this end we have given her a dress of good white coated paper, and otherwise polished her up a bit. If she appears a bit frivolous write us. If her good looks should tempt any of you to become her escort during 1908, it will cost you one dollar. We think you will find her so entertaining and instructive that you will say that she would be cheap at double the price.

* * *

The laws of average are bound to prevail. We have had two or three bad years, and we think we can now look forward with confidence to a good season next year. Do not treat the bees indifferently this fall because the returns of the season have been poor. Put them in good shape for winter—do your part thoroughly—you will win in the end. A story is told of an Irishman who was inclined to be a trifle easy. He planted his potatoes and said he would now leave them to God. He gave them no further care. At the end of the season he found that God had partly left them to him—result, no potatoes. We are sorry to say that this is the experience with some bee-keepers.

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We very much regret that this issue of THE CANADIAN BEE JOURNAL should be so late in the month.

Circumstances over which we had no control made a late issue imperative.

* * *

We cannot too strongly impress upon our readers the necessity of feeding the bees well before finally placing in winter quarters. Your success next season will depend upon it. Remember the centre combs from which brood has hatched late in the fall will be empty. It is on these chiefly that the bees cluster. If centre frames are empty the bees may starve, even though the side frames may be well filled. It happens, if the weather is very cold, that the bees cannot break cluster sufficiently often to go after the feed; and results are the same as if they had no honey at all.

* * *

The Bee-keepers Association of the County of Simcoe held their annual meeting on Saturday, Oct. 19th. A notice of the meeting was sent us for publication in this October number, but we regret to say that publication was made subsequent to the 19th. We hope that our Simcoe friends had a good meeting nevertheless, and we hope to hear from Mr. Nolan, the secretary, with a report of the meeting.

* * *

They are holding a national exhibition in Dublin. The Irish Bee-keepers have made application for space to exhibit the Bee Industry, and have been denied. The English bee-keepers, however, have been permitted to exhibit. Little wonder our Irish friends are indignant. Not allowed to exhibit at their own national exhibition! Another injustice to Ireland!

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The Ontario Bee-Keepers Association will meet in annual convention in Toronto on Nov. 13, 14 and 15, at the same time and in conjunction with the Fruit, Flower and Honey Show. The program was announced last month. It is hoped that a large number of our Ontario bee-keepers will avail themselves of the benefits of this convention. The meeting will take place in the York County Council Chambers, Adelaide street, east. The first session will convene at 1 p.m. on Wednesday 13th, and close at noon on Friday 15th. Special rates have been secured from the Palmer House of \$1.50 per day; accommodation may also be had at the Albion Hotel at \$1.00 per day.

* * *

In renewing his subscription for two years, Mr. Levi Baker, of Hamilton, writes under date of Oct. 17th: "Bees did fine this summer. They ran me close to one hundred pounds per colony, extracted honey. Did not increase any and did not have to feed one pound this fall. I have hives with a lot of brood in at the present time. The later you can keep them breeding the better." This is a splendid report. How many of our readers can equal it? Would it not be well to give the bees a little feed when brood is all hatched out, to fill up the empty cells? We think it would be a wise precaution.

* * *

Mr. Byer, in his notes appearing in this issue, urges feeding in September. In our experience this would not be satisfactory. We prefer to feed when last batch of brood has hatched. Wintering bees in empty brood frames is dangerous,

Secretary Hodgetts informs us that it is doubtful whether Mr. Aspenwall will be able to attend the Convention, but he feels reasonably sure that Prof. H. A. Surface, of Harrisburg, Penn., Secretary of Pennsylvania State Bee-Keepers Association, will be present in Mr. Aspenwall's place. There is, however, a possibility that both may be with us.

* * *

In another column will be found an interesting discussion on the treatment of foul brood by the United States Inspectors at their meeting in San Antonio, Tx. It will be noticed that the curing method discovered by Wm. McEvoy, of Woodburn, received strong endorsement. The U. S. Inspectors know a good thing when they see it, and have not hesitated to give credit where it belongs. The formalin method has been exploded. The writer has had very bitter experience with foul brood, and has demonstrated to his entire satisfaction that if the bees are treated according to the McEvoy method, and the work carefully done, it can be cleaned out absolutely. In the season of 1906 we had twenty-three colonies diseased. We engaged the services of Mr. F. J. Davis, of Brantford, to treat them. He was with the bees constantly every day to the end of August. We procured a small tent, which could be placed over the hive while it was open. This prevented robbing, and made the handling of that particular hive a very private matter. Mr. Davis did the work splendidly, the disease being entirely wiped out. The colonies were increased to thirty-four. This

fall the yard was examined by Mr. Armstrong, who gave it a very critical examination. He declared the yard clean. If there are any Bee-Keepers in Ontario who have not the time to do this work thoroughly, we would gladly recommend the services of Mr. Davis, who in all probability would be available next season. We can guarantee that if he is placed in charge of a yard there will be no foul brood left. Ontario beekeepers ought to be proud of the fact that they have among them a man of such world-wide distinction as Mr. McEvoy, of Woodburn. His great services to the bee-keeping industry is not yet fully recognized.

HIS LAST WORD

In handing over the "keys" to the new Editor and Publisher we do so with our very best wishes for the future of the "C. B. J." and its readers. We believe that the change will be healthful for the Journal. Under the recent management, other duties necessitated the Editor giving but a limited amount of attention to this work, in fact the income from this source would not pay for anything more. While it was under our care however, we can truthfully say that we have endeavored to give our readers the best matter attainable, perhaps not as large an amount of original matter, as some of our contemporaries, but our selections were carefully made and from the very best sources. Under our management the Journal has been carefully guarded from being the organ of any clique or party, nor have we allowed it to be subject to the supply business with which it has, until now, the fortune or misfortune of being con-

nected, or influenced by it in any way. We believe that the readers will bear us out in this statement.

Editor Hurley is not altogether unknown to Bee-keepers of Ontario. He has been for a number of years a member of the Ontario Association, is an enthusiast in bee-keeping as well as being manager of an extensive printing establishment. We bespeak for him the confidence of the readers of the CANADIAN BEE JOURNAL and their co-operation to make it larger and better and more influential and useful to the industry than it has ever been before. Remember it is your national Magazine, representing the Bee-keeping Industry in this great Dominion of ours, and its success or failure is bound up to a great extent with your faithfulness to it.

We are grateful to the readers of the Journal, not only for their financial support but for the kindly and encouraging words so often addressed to the Journal, and to the editors of contemporary Bee Magazines with whom we have had the most friendly and cordial relationship during our office.

W. J. CRAIG.

THE HURLEY PRINTING CO. would be glad to hear from any bee-keepers who may be in need of business stationery or labels of any kind. It is our intention to prepare a special label for ten and five pound pails. We would be very pleased to receive a few samples of labels from those using them, in order that we may have a better idea of what may be required in this line. We can supply immediately letter heads, bill-headers, envelopes or anything in printing that you may need.

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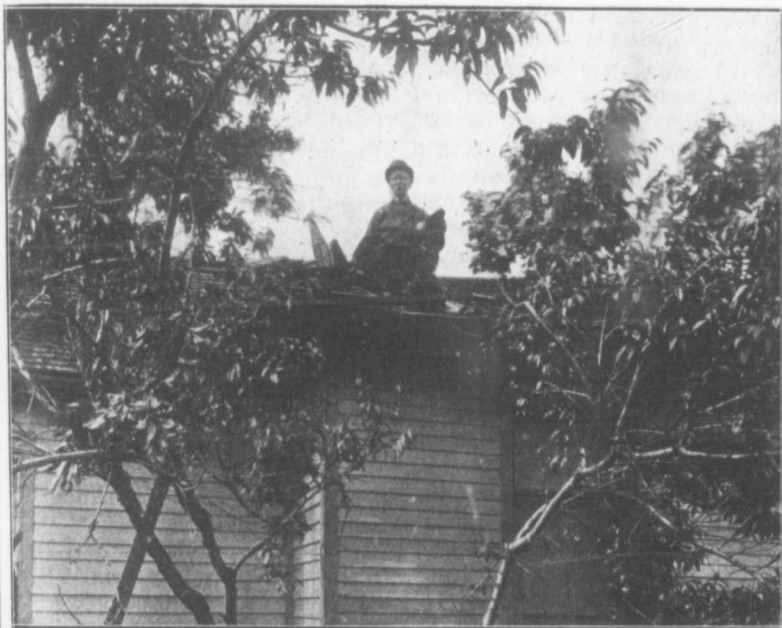


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NO EASY JOB

Combatting foul brood when taken seriously is by no means a simple operation. To cure a man's apiary of the disease is not all, for so long as there remains a vestige of disease in his surroundings, or within a radius of four or five miles, he is not safe; his apiary is subject to contracting the disease

"swarm" must be examined and moved. The camera caught him in the act of removing a large bank of comb from under the wall after much disagreeable labor. The swarm was diseased and would not have been a fruitful source of honey had it been allowed to remain. There was a large tub full of comb and about 75 lbs. of honey which was all perfectly



again. We have a case in point in the accompanying illustration, where one of our Ontario inspectors, Mr. James Armstrong, is engaged removing a swarm from the roof of a cottage in his district. The swarm settled there some six years ago, locating itself behind the studding of the wall. The inspector finding the disease in an apiary adjoining decided that the "house

liquid. Evidently the bees know better how to keep their honey liquid than we do.

HONEY TEA-CAKE. — 1 cup honey, $\frac{1}{2}$ cup sour cream, 2 eggs, $\frac{1}{2}$ cup butter, 2 cups flour, scant $\frac{1}{2}$ teaspoonful soda, 1 teaspoonful cream-of-tartar. Bake 30 minutes in a moderate oven.—Miss M. Chandler.

Notes and Comments

By J. L. BYER.

For some reason I never have had much trouble from robbing. Although I have more than once fed large quantities of sugar syrup for winter stores to bees at my out yard, at all hours of the day, yet I have never had any robbing. To be sure, ordinary precautions, such as contracting entrances, avoiding the spilling of syrup, etc., are observed. In all my experience with bees, I believe I can truthfully say that I have never had a colony robbed out. Please don't misunderstand me; by the word "colony" I mean a stock of bees in normal condition, i.e. headed by a queen. I have had queenless stocks at an outyard to be robbed out in the early spring. Having said so much by way of preface, the little incident I am about to relate may be of interest. With us, feeding the bees has been our sole occupation during the past two weeks, and, to make as much time as possible, the forenoons have been spent at the home yards, adjusting feeders, wetting up sugar and getting things in shape for feeding late in the evening after returning home from either of the two outyards. Monday evening about 8 o'clock, a number of colonies were fed from 10 to 25 lbs of syrup each, according to their needs. By the way, for full feeding I want feeders large enough to hold all the syrup that the colony may need, then one operation is all that is necessary for each hive. Tuesday morning was fine and warm, and on going into the yard about 8 a. m. every-

thing was quiet and orderly. Of course, those colonies that had feeders on were flying more or less, as is always the case, the bees when taking feed often fly out with a load and into the hive again instead of depositing the syrup at once in the combs.

No. 29, although it had no feeder on, was flying fast, and, from the way the loaded bees were falling in the grass, I suspected it was robbing from a neighbor's apiary. After a time I felt pretty sure its source of supply was nearer home, and getting some flour, threw it in the entrance, and inside of two minutes I found they were helping themselves at hive No. 10 at the opposite side of the yard. Back of these colonies are strong nuclei headed by Carniolan queens, but the bees of No. 29 all have a yellow band, showing a cross of Italian. The strange thing about the robbing was that although the bees of No. 29 had free excess to hive No. 10, yet the bees of No. 10 would pounce upon any other intruder that would come along.

The way an occasional bright Italian would get treated when it came nosing around proved this conclusively. I threw a lot of wet grass in front of No. 10, and as a "counter-irritant," a feeder was placed on No. 29, the object being to give them something to do at home. About an hour afterwards the grass was taken away and I went to dinner, but when I came back the same game was quietly going on. You could hardly call it "robbing," the bees of No. 10, judging from their actions, looked upon the inmates

of No. 29 as privileged to these

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of No. 29 as being especially privileged, and paid no attention to these whatever.

As I had to go away in the afternoon, a friend helped me to change the hives around, i. e. No. 10 was placed on the stand of No. 29 and vice versa. They seemed so knocked out by the change that I felt sure everything was all right now. Next morning I was still of the same opinion till about 11 o'clock, when I discovered that No. 29 had got located all right again, and was once more helping itself out of hive No. 10 at the opposite side of the yard. What did I do now? As I had to go to the Cashel yard that day, in disgust I threw No. 10 on the wagon and took it with me. It was placed down in a yard of over 80 colonies, right in the middle of the day, and it would fight anything that came near it. Why they acted as they did before moving is a mystery to me.

When shall we feed for winter stores, early or late? As has already been intimated, we have a lot of feeding to do this fall. Sept. C. B. J. is just to hand, and in this issue there is considerable along the line of this subject. At the October convention Mr. W. J. Brown is reported as saying: "Is it a general thing throughout the whole Association to feed with sugar syrup? Why not feed honey, their natural food? When I find colonies short of stores I take out the empty combs and replace them with honey."

This advice is probably all right if you have the honey, but bless you, friend Brown, what would you do if you had a few

hundred colonies light, and no honey in sight to make up the deficiency? Aside from the fact of sugar being a sure winterer and much cheaper than honey, I would not, for obvious reasons, risk buying honey for feeding purposes if I could get it for 2 cents per pound. Anyway, we are confronted with the problem of making up a deficiency of some 3,000 lbs if we wished to winter our bees, and just when to start the work was a question. While there is more danger of feeding too late rather than too early, experience has taught me that, for various reasons, it is not wise to do much feeding previous to 20th of September. This year, as an experiment, we started to feed 12 colonies during the first week of September. The bees are in 8-frame L hives and all headed by young Italian queens. Six of the colonies were fed syrup made of equal parts of sugar and water and the other six a syrup made of two pounds of sugar to one of water. All were fed rapidly until they refused to take any more food, at least they would take it so slowly as not to amount to anything. On examination to-day (Sept. 28) I find those colonies fed the thin syrup quite light, with altogether too much brood for the time of the year; later on, after the most of this brood has hatched, each hive will need about 10 lbs. more syrup to make them as heavy as I desire.

The six fed the thick syrup are considerably heavier than the others; the food is all capped over nicely and, while there is some brood present, yet there is

not the amount that is in the others. Some may argue that the extra brood is in favor of the thin syrup fed colonies, but, as the majority of the bees were young, I doubt if the extra brood is good values for the stores consumed.

Friend Hand, page 271 C. B. J., says as to feeders: "A shallow pan placed on top of the frames, and with a piece of thin wood just a trifle smaller than the inside of the pan placed in to float on the feed, so that bees may not fall in and be drowned, works all right." It does "work all right" in a small way, but when you have to feed thousands of pounds I find nothing better than the Millar feeder, that sits right over the brood nest, and holds anywhere up to 25 pounds.

With about 20 feeders at each of three yards I can, thus equipped, easily handle 1,500 lbs. of sugar in a week. Returning to the matter of time to feed, my experience has taught me that, everything considered, strong colonies should not be fed previous to Sept. 20th or later than October 10th. I want the syrup thick; two pounds of sugar to one of water, and I want no colony to be longer than two days in getting its supply. I fail to see any advantage in feeding syrup as thin as equal parts of water and sugar, even for early feeding for winter stores, and for feeding after October 15th such thin syrup is apt to be detrimental.

GERMAN HONEY TEA—A cup of hot water with one or two tablespoon of extracted honey—is a pleasing and wholesome drink.

ADVERTISING HONEY

Bee-keepers do not advertise their honey to keep it before the public as an article of food, and a "food to be desired," as much as they should. Once in a while we come across a bee-keeper who does, but not generally. We were attracted by a 7x5 leaflet which was enclosed in one of our letters a short time ago.

MAPLE GROVE APIARY

Hark! Hark! do you hear the bees sing?
Hutchings' Honey is just the thing,
Good and rich, and thick and mild:
Just the thing for man, woman or child.

For Anything in

HONEY, BEES, OR BEE SUPPLIES,

Call on

HERBERT HUTCHINGS

Owner of Maple Grove Apiary
NEWBORO - - - ONTARIO

The idea occurred to us as rather unique, and we wrote its author asking how he used them. Well, said he: "I send these slips, like I sent you, to my customers, who buy my honey, to put up over it in their stores as advertising matter. I also send them to my friends when I write. At times I have this slip published in our local paper, and I put them up in all public places of interest, to let people know that I am in the business."

Needless to say friend Hutchings has no difficulty in disposing of quite a large quantity of honey locally. Let us have a little more of this "push."

RE-QUEEN WELL

Over seven bees in our June, through, old dwindling.

Spring d proportion neglect. O the beekeeper colony that fit up all v stores for w ing combs o aries, and s done, I asked every colony ans. Coloni continue bro season, and MORE YOUNG stronger, dw up faster and Fully ninety queens in On out for bette part of the se less starved that I took a except my o many colonie state with de had died for w dwindling and many colonies ing down, and to work these the queens, a queens, but it and to-day th best in the Pro

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RE-QUEENING AND FITTING-UP WELL BRINGS BIG PROFITS

Over seventy-five per cent of the bees in our Province died before June, through poor stores, starvation, old queens, and "spring dwindling."

Spring dwindling is always in proportion to the amount of fall neglect. On my rounds I urged the beekeepers to requeen every colony that had an old one, and to fit up all with the very best of stores for winter. After inspecting combs of brood in many apiaries, and seeing the poor work done, I asked the owners to requeen every colony with well-bred Italians. Colonies with young queens continue brood rearing later in the season, and go into winter with MORE YOUNG BEES, come into spring stronger, dwindle less and build up faster and gather more honey. Fully ninety per cent of all the queens in Ontario should be wiped out for better ones. In the fore part of the season I found more or less starved brood in every hive that I took a comb of brood out of except my own. The combs in many colonies were in a horrid state with decaying brood which had died for want of food. Between dwindling and STARVED brood very many colonies came very near going down, and out. It took time to work these colonies up, remove the queens, and introduce young queens, but it has all been done, and to-day these are among the best in the Province.

W.M. McEvoy.

Our good friend McEvoy has come to our aid with a little nut full of good meat. He does not

believe in having any old women around. He is determined to make the old lady do her duty, her whole duty, and nothing but her duty. He forces her queenship to the utmost, and then passes her along. He is wise in his day and generation, and his methods have brought him good returns. He has some more nats which we are determined to crack before the year is out. This is the penalty of being a big man in Breedom.—ED.

LIMERICK COMPETITION

Cash for Mail and Empire Readers.

The success of the Limerick Competition, which has been running for the past few weeks in the Toronto Mail and Empire, has been so phenomenal that they have decided to raise the amount of prize money in the contest, which commenced Friday, Sept. 27, to \$100.00. The person who sends in the best suggestion for the last line of the incomplete Limerick will receive \$30.00. The other prizes are as follows: the second, \$20.00; the third and fourth, \$10.00 each; the fifth and sixth, \$5.00; and ten consolation prizes at \$2.00 each. It is probable that these contests will be continued from week to week, and the conditions governing them will be found in both The Daily and Weekly Mail and Empire.

50 YEARS'
EXPERIENCE

PATENTS

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Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. HANDBOOK on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the

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CELLAR WINTERING

Two or three conditions are essential to the successful wintering of bees in the cellar, and named in the order of their importance they would stand about as follows:— Good quality of stores, quiet, even temperature, and ventilation.

It is about the second condition, keeping the bees quiet, that I wish more particularly to speak. Too often the work of fitting up the colonies for winter is left until the cool fall weather, when the bees are clustered in a semi-dormant condition, and any disturbance at this time is bitterly resented. Not only is the work uncomfortable for the apiarist, but it is positively harmful for the bees. The cluster that has formed at the first approach of cool weather is rudely broken and the clouds of smoke poured into the hives to subdue the thoroughly aroused and angry bees, cannot but have a most harmful effect upon their subsequent wintering in the cellar.

The evil effects of smoking the bees are not felt to the same extent if the work is done while they are flying freely, but if left until too late in the Fall it will be a serious handicap to successful wintering. The smoke causes the bees to load themselves with honey, and with no way of working it off, their intestines become clogged, and it is only a matter of time before the evil effects of this overloading is manifested by their restless behavior, and in many cases by dysintery, before the winter is over.

The only safe way to overcome this difficulty is to prepare for winter before the cool weather sets in, and our most successful apiar-

ists recognize this fact by commencing their winter preparations at the close of the honey harvest. It is true that at this time the hives usually contain a lot of brood, but it is surprising what a quantity of syrup can be forced into the brood nests by heavy feeding.

The next disturbance occurs when setting them into the cellar, but if proper precautions are taken there need be but little harm done at this time. Any cool cloudy day after the middle of November may be chosen for this work. The bottom boards should be pried loose from the hive bodies the evening before, so that there will be no jarring the hives when putting in wedges for ventilation. The Hives should be handled gently and no smoke used at this time. If colonies cannot be handled without the use of smoke then leave them alone until some more suitable day for the work. Disturbances in the cellar, either by jarring the hives, noise, or light, are all harmful and should be avoided.

There are other conditions necessary to successful wintering as stated before, but I wish to emphasize the necessity of perfect quiet not only during the time the bees are in the cellar, but also when they are clustered in the hives during the cool days of October and November. It is always bad practice to disturb a hive of bees that has clustered on the combs, and the thoughtful apiarist will see that hives are well filled with stores and all necessary winter preparations made just as early in the season as possible.

F. P. ADAMS.

We are glad to have the above article from Mr. Adams. The pro-

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FOUL BROOD NEW

Our bee-keepers in New Zealand are clamoring for legislation to protect their brood. We have expressed our opinion that New Zealand were from the pest. However, on the part of the Government to provide a grant is termed: "to minimize and protect in New Zealand which is as follows: BE IT ENACTED by the Parliament of New Zealand

nounced success that he has had with his bees, makes anything he writes of great interest. There are very few young men in Canada who have given the bee industry the study that Mr. Adams has given it. In our own experience we have found that seventy-five per cent of a man's success depends upon the proper care and manipulation of the bees in the fall. It would be well if bee keepers generally would give more attention to this feature. Too often we grow careless and indifferent after extracting. Our intentions are good, but the work is put off from time to time until cold weather is upon us, and we find it too late. Mr. Adams is a careful and zealous worker. We understand that in the matter of queen rearing he is meeting with results beyond his most sanguine expectations. We have no reason to believe that queens raised in this latitude should be in any way inferior to those raised in the south. We hope to hear more from him in the future.

—Ed.

FOUL BROOD LEGISLATION IN NEW ZEALAND

Our bee-keeping friends in New Zealand have also obtained legislation dealing with foul brood. We were under the impression that Australia and New Zealand were comparatively free from the pest. It is a move, however, on the part of the bee-keeper to provide against it. The bill is termed: "An Act to Economize and protect the Bee Industry in New Zealand," the full text of which is as follows:

BE IT ENACTED by the General Assembly of New Zealand in Parliament assembled,

and by the authority of the same, as follows:—

1. The Short Title of this Act is "The Apiaries Act, 1906."

2. In this Act, if not inconsistent with the context—

"Apiary" means any place where one or more colonies of bees are kept;

"Bee-keeper" means any person who keeps one or more colonies of bees or allows the same to be kept upon any land occupied by him;

"Colony of bees" means a collection of honey-bees domiciled in any hive;

"Disease" means foul brood (*Bacillus alvei*), bee-moths (*Galleria mellonella* and *Achroea grizzella*), and any other diseases or pests from time to time declared by the Governor in Council to be diseases;

"Frame-hive" means a hive containing movable frames in which the combs are built so as to allow of their ready removal for examination;

"Hive" means any box, basket, sep, barrel, or other receptacle in which a colony of bees is domiciled;

"Inspector" means any person appointed by the Governor to carry out the provisions of this Act.

3. Every bee-keeper in whose apiary any disease appears shall, within seven days after first discovering or becoming aware of its presence, send written notice thereof to the Secretary for Agriculture at Wellington, or verbal notice to any Inspector of Stock.

4. The Governor may from time to time appoint such inspectors and other officers, with such powers and functions as he deems necessary in order to carry out the provisions of this Act.

5. The Inspector may enter upon any premises or buildings for the purpose of examining any bees, hives, or bee appliances, and if the same are found to be affected with disease he may direct the treatment to be followed, and the time within which such treatment must be undertaken; or, if in his opinion the disease is too fully developed to be cured, he may direct the bee-keeper within a specified time to destroy by fire the bees, hives, and appliances so affected, or such portions thereof as he deems necessary.

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6. Where bees affected by disease are domiciled in common boxes, box-hives or any hive from which the bee-combs cannot readily be removed without cutting them, or, if already in frame-hives, the combs are not so built within frames that each comb can be removed from the hive separately and readily without cutting, for examination, the Inspector may direct the bee-keeper within a specified time to transfer such bees to frame-hives properly built as aforesaid.

7. (1) Every direction by an Inspector shall be in writing under his hand, and shall be either delivered to the bee-keeper personally or sent to him by letter addressed to him at his last known place of abode. (2) Every such direction shall be faithfully complied with by the bee-keeper to whom it is addressed, and, in default of compliance within the time specified, the Inspector may at once destroy or cause to be destroyed by fire, at the expense of the bee-keeper, any bees, hives and appliances found to be infected with disease.

8. No bee-keeper shall—

(a) Keep or allow to be kept upon any land occupied by him any diseased bees, bee-combs, or infected hives or appliances without immediately taking the proper steps to cure the disease; or

(b) Sell, barter, or give away any bees or honey from an infected apiary, or any appliance used in such apiary.

9. Every person is liable to a fine not exceeding ten pounds who—

(a) Obstructs any Inspector in the exercise of his duties under this Act, or refuses to permit the destruction of infected bees and appliances;

(b) Fails to comply with any direction of the Inspector;

(c) Commits any other breach of this Act.

10. No person shall be entitled to compensation for anything lawfully done under this Act.

11. The Governor may from time to time, by order in Council gazetted, declare any disease or pest affecting bees or apiaries (other than those mentioned in Section 2 hereof) to be a disease within the meaning of this Act.

SELF-HEATING UNCAPPING KNIFE

At the Universal Exhibition in Milan a novel uncapping knife was exhibited, by the use of which the usual water-tanks for heating the knives are dispensed with. It is the invention of M. Alessandro Tonelli, of Coccaglio, Italy, and consists of a knife in the form of the "Bingham" with a wide blade, the edges of which are bevelled and kept keen through constant heating by steam or electricity. The bevelled edge, which is very sharp, enables one to cut the cappings of the combs rapidly and without tearing them, and the width of the knife prevents the wax which is removed from adhering to the combs again. The cutting is done in the same way as when a "Bingham" knife is used from the bottom upwards. The cappings do not stick to the blade, but, as it is hot, slide over it and fall into the receptacle below. The complete apparatus for heating by steam consists of a spirit-lamp, on which is placed a support for the boiler above it. This is provided with a safety valve, so as to avoid any danger of explosion. The steam generated in the boiler is conducted by means of a pipe to the knife, through which it circulates, and returns to the boiler in a condensed form by means of a return pipe. The knife is hollow, and may have two cavities or one. The inventor prefers the one with two cavities, as this enables the steam to circulate better. It is evident that so long as steam is generated in the boiler the knife will be kept hot, and should con-

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den- sation be so great in the con- duits in the knife as to fill them with water, the boiler has simply to be removed from the spirit- lamp for a few seconds, when a vacuum is produced, and the cav- ities are emptied as if by magic. The boiler is filled with half a litre of boiling water, so that steam is generated almost at once. The apparatus takes up little room, and the tubes are long enough for ordinary uncapping. For those who have elec- tricity at their disposal the in- ventor has arranged a knife. Instead of tubes, electric wires are used, and connection is made with the main in the wall or at a lamp. The electricity consumed is about equal to that of a ten- candle lamp—that is about one penny an hour. Although the knife is a little heavier than an ordinary one, it is less fatiguing to use, because there is no adhe- sion of the uncapped combs which is caused by the honey, this being liquefied by the heated knife. The price of the appara- tus complete is 20 francs (16s. 8d) —British Bee Journal.

UPPER VENTILATION

Mr. Byer, in September Notes and Comments, speaks about J. E. Crane and his wintering methods, also refers to the plan I use. I claim no credit for being the first to use upper ventilators as described by Mr. Crane. I got the idea from a Mr. French, of Oshawa, as far back as 1885; previous to the above date hive entrances had to be regularly ex- amined and cleaned out with a long wire, which always aroused the bees, when they would other-



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The PEDLAR People (Est'd 1861).
Oshawa Montreal Ottawa Toronto London Winnipeg

wise have been quiet. With a ventilator as described by Mr. Crane, I have leaned boards in front of hives about the middle of November and never removed them till late in March, and, as Mr. Byer says, they are good for summer time as well.

In 1888 or 1889, the Ontario bee-keepers had their annual meeting in Lindsay. The late Mr. Corniell was secretary and he referred to the plan and asked me to explain to the meeting the details of the ventilator.

There is one little difference between Mr. C's plan and mine. He uses a tin tube, I use a block of wood with a hole through it. Have used tin tubes, but some times the bees died in them and blocked the hole and caused trouble.—Jas. Storer.

HONEY may be used to sweeten hot drinks, as coffee and tea.

TREATMENT FOR BEE DISEASES

Discussion by U.S. Inspectors of Apiaries
at their Meeting, San Antonio, Tx.

In discussing the methods of treatment it would be a good plan to call on each of the inspectors present and get each one to tell what method he employs. We should hear first from Mr. N. E. France, inspector from Wisconsin. He is the oldest inspector in the United States in point of service.

MR. FRANCE, Referring to the paper which was just read, I have tried some of the methods of using drugs in the apiaries of competent bee-keepers and invariably all these methods are failures in Wisconsin. The fumigating with formalin seemed for a time to check the disease, as did also some of the other drugs, but in the end they all are failures. The one method that has given universal satisfaction we owe to the oldest inspector in America, Mr. William McEvoy, of Ontario, and it has often been termed the "McEvoy method." The plan is to remove the bees from the infection and keep them away long enough to use up whatever infected honey there is in the stomach of the bee.

I am not satisfied to stop with finding disease in a yard and immediately prescribing treatment. In fact, I seldom, after looking over the yard and finding the disease, begin to prescribe treatment, for I feel that we are not yet ready for it. What is the use of treating when some neighbors might have diseased colonies? Take a wide circuit; then treat at once all colonies having disease. This has sometimes vexed the bee-keepers, for they want me to stay and show them what to do at once, but I tell them that I see no good in treating colonies while leaving another source of infection.

I try first to instruct the owner of the bees to be careful in his management. If, in my judgment, he is one who keeps the apiary clean, and if I can depend upon him I sit down and go over the "McEvoy" plan with him very carefully, asking him from time to time if he understands it. If he says that he does, I say: "Now, I am your student; tell me what to do. When you can tell me what you are going to do, I will trust it to you." In nearly all such cases they have treated it without my assistance, and cured it. I can not recommend anything better than the "McEvoy" plan.

Doctor Phillips. There is just one thing I should wish to add to that. The treatment of taking bees from the infected combs was originated in 1769 by Schirach, as nearly as I can find out, and if we are going back to give credit to the originator of this plan, Mr. McEvoy is not the man to get that credit.

Mr. G. W. York (Illinois). Was not the plan original with Mr. McEvoy?

Doctor Phillips. It was probably original with him, but it was advocated long before in many European works.

Mr. Smith. The ground has been thoroughly covered by Mr. France. Two years ago Mr. France said to me: Now, Smith, I have tried almost everything, but I find the "McEvoy" plan the best. My advice is to use the "McEvoy" treatment, as I have done." I have only had one case this year where I have had to make a second transfer, and I found that to be due to infection from a neighbor's colony that I did not get to treat the first time, but which subsequently was treated, and the bees were all right. I have no trouble, and I have great confidence in shaking. I don't alarm the bees. I shall give my method. In treating a diseased colony I use an extra hive, to which the bees are to be transferred, and an additional empty hive, in which I place the infested frames after the bees are shaken from them. The last mentioned is covered with a cloth to prevent other bees from robbing. First I move the old infested hive back, and in its place put a clean hive containing clean frames, with strips of foundation. The frames are lifted from the old hive, shaken in front of the new hive, and then covered up in the third hive, which is used to store infected frames. This is all done in the middle of the day. If there is no honey in the field, the colony should be fed well at night.

Mr. J. Q. Stone (Illinois). How do you treat the old hive?

Mr. Smith, I either burn out the hive, paint it with kerosene oil and have it burned out, or wash it in strong salt water.

Mr. Fred Muth (Ohio). When you shake the bees they carry over honey, do they not?

Mr. Smith. I set the hive right on the ground. I do not jar the frames hard enough to jar out the honey.

Mr. Muth. You shake them off during the middle of the day. Is it not better to go along toward evening?

Mr. Smith will never give Mr. Muth operation?

Mr. Smith. Mr. Muth feeds them right.

Mr. Smith. Mr. Muth is starving them.

Mr. Smith. Mr. Muth is coming from the

Mr. Muth. Bees have the

Dr. Phillip. Examination of shaken they

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Mr. Smith. If you wait till evening you will never get through.

Mr. Muth. Do you use smoke in that operation?

Mr. Smith. I use no smoke.

Mr. Muth. How long do you keep the bees on the strips of foundation; do you feed them right away?

Mr. Smith. Yes.

Mr. Muth. You don't believe in starving them at all?

Mr. Smith. No, because the bees coming from the fields are loaded with honey.

Mr. Muth. Do I understand that the bees have these bacteria all over them?

Dr. Phillips. Yes, they have the contamination on them. When they are shaken they of course have it all over them, and when they are shaken off they doubtless take the bacteria with them.

The McEvoy system is the radical treatment of shaking twice, which the majority of bee keepers do not use.

Mr. York. If I mistake not, Mr. McEvoy recommends the second shaking.

Dr. Phillips. He recommends the second shaking after the bees begin to drop from starvation.

Question. What do you do with the unhatched brood in the infected hive?

Mr. Smith. My recommendation is to destroy the whole thing.

EFFECT OF RE-QUEENING ON DISEASE

Mr. Dadant. Has removing the queens any value in treating the two diseases? Alexander, Simmins and others have recommended removing the queens. Is this of any value in either disease?

Doctor Phillips. As has been stated before to-day, I spent four weeks last spring with the inspectors of New York State in the field. Both American foul brood and European foul brood are found in that State, but practically the same method of treatment is advocated by the inspectors for both diseases. Colonies found to be diseased are shaken according to the method which has been described several times in this meeting.

In order to save any healthy brood which is found in colonies infected with disease, the sealed brood from several colonies, four to eight, is piled up in hive bodies above a weak colony which is diseased. In seven to ten days all the brood which is worth saving will have emerged and the weak colony will have been changed to one strong enough to treat. This colony is then treated by the

shaking method as were the others. There is no necessity of waiting more than ten days, for brood which was unsealed when the brood was first attacked will scarcely be fed sufficiently to emerge.

In addition to this treatment, the inspectors recommend the introduction of young, vigorous Italian queens from good stock. It has been shown repeatedly that Italian bees are less liable to disease than most of the black bees, especially of degenerate stock, as is so much of the black stock when no attention is paid to improvement. In a pamphlet issued in 1903 by the inspectors of New York, the introduction of Italian brood was recommended. This is not advocated as a cure, however, but merely as a means of protecting the colony against future infection.

Mr. France. I visited a yard last year where there were 22 infected colonies. The owner wished to save some new drawn-out combs that were on hives free from the disease. As an experiment we used foundation with half of the colonies and in the others we put the new combs. Eleven had to be treated again, while the others, right in the same yard, did not. You can kill the germs in the honey, but you have to boil it until it is as black as molasses to do it.

Mr. Louis Scholl (Texas). I do not know that I can say much about treatment in Texas. We do not rely on the shaking treatment at all. Whenever we have had foul brood we have tried something as radical as could be practiced—that is, the burning of the diseased colonies. There is one trouble that we have here in shaking the bees, and that is that if we treat the bees during the honey flow there is so much danger of shaking out the honey and starting the disease again in that way. The other thing with which we have to contend is robbing. During a honey flow there is a good deal of inside robbing almost all the time. Until we find something that is absolutely sure and absolutely a good thing, we shall resort to the burning of colonies whenever we find them infected. The way we use the fire treatment is to inspect the yards and then toward evening we dig a pit about 10 feet wide, according to the number of colonies to be treated, and build a brush fire. By the time we have that burning well we go to the colonies that are to be "treated" and use sulphur in a smoker

The entrance is smoked a little, and this kills all the bees. We go from one colony to another to kill the bees, to keep them from leaving the hives in handling; we know that no live bees can escape from those colonies. We remove the combs and burn them, then the bottom boards and covers are treated over the flames. The hive bodies are stacked on a single bottom board, and from a small can of kerosene we pour just a little oil from the top down the sides; by throwing in some dry grass or anything of that kind, which has been lighted first, the fire will start at the bottom and the hive bodies will act as a chimney. In that way we scorch the hive bodies for a few minutes. As soon as these have been scorched sufficiently we close up the top with a bottom board or cover and close the entrance of the hive with earth; then we leave them for a little while for what we call "steaming."

Mr. Anderson. Is there any way of safely detecting American foul brood before the cells are broken, and how long is it after it is sealed before the cap is broken? That is a question I have been discussing at home, and I would like to know if there is a way that it can be detected. For instance, if you have not treated a colony successfully, or suppose American foul brood has been in your locality and you are waiting for it, can you catch it before all the larvæ are exposed?

If there are only two or three diseased cells in a colony, and if you cut those out, will the disease go any farther? I have read that if the cell cappings are broken and you take out those particular cells you will never see the disease again in that colony. I have heard an inspector say that he can tell the disease in his own apiary. He claims that there is a way to tell it before the capping is broken, and he says he can take away the disease then and it will not reappear. I know he can because he has proved it. He can tell where foul brood is before he can actually see it. He further says that the larvæ are killed, but do not show it for forty-two days afterwards. Now, I want to know if anyone else has found such to be the case.

Doctor Phillips. I think his record stands alone.

Mr. Anderson. I know this: If you cut this foul brood out before there is another exposure, you won't get it in

that colony unless it is carried from somewhere else. I have proved that.

Dr. Phillips. As far as the forty-two days' time is concerned, I have no faith in it, because in most cases inside of forty-two days the colony would be dead. I have seen that demonstrated.

Mr. Holekamp. I might ask how early can the disease be discovered?

Doctor Phillips. Not sooner than the ropiness of the larvæ becomes evident. I never saw a sample of diseased brood from Texas, but, assuming for the moment that the conditions in this state are similar to those in California, the method described in the east is not going to work in Texas. It will work where the disease is not virulent. The same thing holds true for European foul brood. Where it has existed for five years it is easily treated, and the Alexander treatment is sometimes successful, but it is not when the disease first appears in a locality. As you know, European foul brood started in New York and is spreading to the Vermont line. You will find a great difference in the type of disease in Schoharie County and on the Vermont line. The same thing seems to hold in a different way for the American foul brood. The disease is much more easy to combat in the east than in the west. I visited California this summer. Inspectors there have proved to their satisfaction that eastern methods are not satisfactory, and they told me that it is necessary to burn out the hives. Mr. Smith does not burn his hives, and the inspector in New York does not burn hives; they insist, however, that no honey and no wax cells remain in the hives and that the hives be clean. That does not prove satisfactory in California. We know that this one disease is a very different proposition under different climatic conditions, and in discussing treatment in bee journals writers forget or do not realize that the plans which they advocate may not do in different places. As Mr. Parker said in his paper, the eastern treatment will cure nine-tenths, but the other tenth has to be taken care of. The disease seems to be much more virulent in the western parts of the United States than in the eastern parts.

Mr. L. Scholl. Our conditions are the same here as in California, I am sure. We have tried some of the shaking treatments, but they were unsatisfactory. On account of the character of the disease

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here, we think we are on the safe side in using the burning method until we can find something better. While Mr. Smith and others gave their method of shaking the bees, I wish to put the question whether these treatments would work west of the Mississippi River, and that is why we have been practicing such radical measures here. My brother, who is here from the Agricultural and Mechanical College of Bryan, Tex., working for Professor Conradi, has been conducting experiments on this shaking treatment, and as soon as Mr. J. Q. Smith mentioned his method of shaking but once, I thought surely he is dealing with different conditions or it must have been an accident that he succeeded. My work has been mostly in the northern part of the state, but in one case I had some work in the central part. I thought I would try some experiments. We tried shaking once, but it would not work; the disease appeared just as badly as ever. We tried shaking twice; that worked better, so that shows that shaking once does not work here. I have tried many other experiments, and am still on the go, but this is the only point I want to bring out. Shaking once is not successful in Texas, and I don't think it ever will be. I don't see how Mr. Smith can be successful in treating, because the bees gorge themselves with honey. Down here, as soon as you open a hive the bees will run to the cells and, consequently, shaking once would not work; and, as my brother said, there is always some honey taken up and the bees carry it into the new hive.

Mr. Juneau. Mr. Smith's plan is satisfactory in Colorado. We shake our bees there, but we smoke them a little bit and we shake only when a honey flow is on. The honey will sometimes drip on the wings of the bees, but it is very seldom that foul brood starts again. I have been an inspector there for a number of years, and the general way is to shake the bees hard. We shake them a little bit differently. We put paper down and we shake when the honey flow is on and we save nearly all the brood—that is, the healthy brood—and let it stay twenty-one days. The reason for letting it stay so long is because there is honey around and the bees hatching out will use it. Not only do the inspectors instruct that shaking be practiced, but the state association has issued pamphlets, in which

this treatment is explained, to be given by the inspector to each man who has foul brood.

Mr. D. C. Milam (Uvalde County, Tex.). In our locality we are governed by conditions. If the conditions are not favorable for shaking, we burn the bees, frames, and all. If the conditions are favorable, shaking is all right. Last May I shook five colonies in one apiary for experiment, and week before last I went there and they were all right, but honey was not coming in fast.

I wish to speak of another thing. In this apiary I watched especially to see if there was any disease of the unsealed brood and I found none. Two years ago I found the disease both in the sealed and unsealed brood, and the question comes up: Have we both diseases, the European and the American foul brood? I began to hunt for another disease attacking sealed brood, and I found it that year; but I looked further, and in sixty-five colonies which I shook off last spring you could not find disease in any unsealed brood. Last fall a year ago I went to one apiary that had several colonies in which the sealed brood was diseased. I told the family what they could do. I said: "You will either have to fight this disease and take care of the colonies through the winter or you can burn them up." I will say they were not bee-keepers, and they said just to burn up everything. I agreed to this, but said that there were two colonies in the apiary that had only a few cells diseased, and I would experiment on them—that I would take them under my own management. I burned the rest, but I kept those two colonies until this spring. This spring they became weak and I set one colony on top of another. Last week I went back there, although I had examined them some time ago, and they had starved to death.

One shaking, I am sure, will do under favorable conditions, but if the bees are not gathering honey, I would not advise shaking.

MEDICATION.

Mr. Dadant. Has anyone ever tried feeding medicated syrup? The reason I ask the question is because some people succeed with drugs.

Mr. Smith. Mr. Reynolds was the first man in Illinois who imported Italian queens. He said that after foul brood

got into his bees and destroyed them he heard of a remedy that could be obtained at the drug stores, and the next time he transferred his bees he used this and he had good luck with them.

Mr. Dadant. After shaking them?

Mr. Smith. Yes, sir; and he ordered some of this drug from St. Louis just a short time ago. He said he was going to feed it to the bees next spring for fear they would develop the disease again.

Mr. Udo Toepperwein (Texas). It is a good idea to feed the bees sugar and naphthol beta.

Mr. Atchley. As Mr. Scholl has already stated, I don't believe treatment will eradicate foul brood in Texas. I have seen a few people who have experimented this season in shaking bees. We have never been able to determine results in shaking in one season. I have had the disease disappear in the summer and fall and the next year the colonies would be diseased again. Another point, in Texas bees are too cheap to treat. We can burn them and buy other colonies to replace them with less expense.

PICKLE BROOD

Mr. Smith. Is there anyone present whose bees have been suffering from pickle brood?

Mr. Dadant. Mine have, and I used oil of eucalyptus. I thought I had foul brood and I afterwards discovered that it was pickle brood. About every four days I fed some oil of eucalyptus and in three weeks there was no trace of the disease.

Doctor Phillips. Would not that disease have disappeared without the use of drugs?

Mr. Dadant. I doubt it. I asked another bee-keeper to try the same thing and the result was the same.

Dr. Phillips. We have no proof that pickle brood is at all infectious. Oil of eucalyptus is a disinfectant; therefore I was wondering what effect it had.

Mr. Holekamp. One of the members of the Missouri State Bee-keepers' Association, who was about twenty miles from St. Louis, asked me to come over and help with his bees. He said last spring that his bees were in a terrible condition: he was very busy and did not know what to do. A good many of the colonies were in bad condition. He put a tablespoonful of carbolic acid in a quart of water and sprinkled his bees with this. He

told me that they were all well except two colonies. He said he did not look at them. I looked at them and they were clean. He told me that he had colonies that had gathered in five days a super full of honey. He had about ten square miles of Spanish heather, but these colonies that had been affected did not make any surplus, so there must have been some disease.

Dr. Phillips. It might have been pickle brood. Pickle brood is sometimes pretty bad, but it will disappear.

EXPENSE OF TREATMENT.

Doctor Phillips. Is it so expensive to treat bees? How much does the colony lose by shaking during the honey flow?

Mr. Anderson. We lose a honey crop. Take all that brood away from a colony and all that remains is the live bees. For ten days there is no brood started to take the place of what has been removed.

Mr. Juneau. It is altogether different in our country (Colorado). We shake bees, and they act just like a new swarm. I have had as high as two or three swarms from those that have been shaken, if they were ordinarily good strong colonies, I believe it will do just as well to shake a colony during a honey flow as any time. It makes no difference.

Dr. Phillips. That is the point I was about to mention. I know that in Colorado they sometimes shake bees whether there is disease or not, because they claim the bees do better. You talk about shaking bees being a very expensive operation, but you do not need any brood during the honey flow, and the time makes a great difference.

Mr. York. There is one thing to be taken into consideration. Bees are worth less per colony in Texas and California than in the east. When you talk to a man here about burning thirty colonies it does not take all his bees.

Dr. Phillips. I do not know about Texas, but I do know that farther west an eradication of fifty colonies to many of the bee-keepers of the west is not a serious proposition. The western bee-keeper's normal increase is more than his loss, so it is not like the loss to a small bee-keeper.

Mr. Atchley. In Texas we hardly ever find an apiary in which every colony has the disease; therefore, when we burn the affected colonies we have enough left to rebuild the apiary.

Mr. Ranter of bee-keepers sometimes exists. It are born, n knows bee not indicat inspector. tors of whc only know also have keepers wh The succes first of all and know ditions. n ment and r dition whic every cond the treatme also of vital to use tact whom he is know from the first to proceed v to secure the Let me ad inspectors.

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Mr. Rankin. In considering this matter of bee disease and bee inspection one sometimes wonders if the ideal inspector exists. It would seem that bee inspectors are born, not made. The fact that a man knows bee disease and its treatment does not indicate that he is necessarily a good inspector. The most successful inspectors of whom I know are men who not only know bee disease thoroughly, but also have the ability to handle the bee-keepers whose bees they are inspecting. The successful bee inspector, then, must first of all be able to diagnose the disease and know it under all its varying conditions. Next, he must know its treatment and management under every condition which may arise; he must know every condition on which the success of the treatment depends. Then, last, but also of vital importance, he must be able to use tact in the handling of the men whom he is appointed to help. He must know from the appearance of a man and from the first words exchanged just how to proceed with that particular individual to secure the best results.

Let me add a word in defense of the inspectors. I know fourteen of those in California personally, and among them are some very exceptional men. They are not all equally successful, although I believe they all know bee diseases thoroughly, but, among the entire number I do not know a single man who is serving as bee inspector merely for the money he is receiving for the work. Let us give credit to whom credit is due. These men are doing good work, and it is through these men that the bee-keepers must look for the suppression of bee diseases under the present system. Give them your support and encouragement, but never under any consideration criticize them in public in a way which would interfere with the work on bee disease. The laws provide for the removal of an incompetent man, and if a man is not competent to serve as an inspector let him be removed and a man put in his place who is competent, but under no circumstances subject an inspector to the criticism of the bee-keepers of the community or of the bee-keeping press. This is unwise, for it gives the public a prejudice against inspection rather than against the individual inspector, while those few deserving of censure are perhaps unaffected.

BOILING HONEY FROM DISEASED COLONIES.

Mr. Muth. Mr. France has said that you can not kill the germs in honey until you boil and boil until the life is all out.

Mr. Rankin. All you have to do is to make a hot fire and the honey will boil. Of course you have got to boil it sufficiently long to kill the germs.

Mr. Muth. How large is the tank reservoir?

Mr. Rankin. Big enough to hold your combs; as Abraham Lincoln said of your legs, they must be long enough to reach the ground. The tank used by one bee-keeper is six feet square and four feet high, and you would be surprised to see the amount it will take care of.

Mr. Theis (Wis.). Are the frames destroyed then?

Mr. Rankin. Yes; we never use any secondhand frames.

Mr. J. A. Rouse (Mo). I would like to ask if that water does not get too thick?

Mr. Rankin. Not at all.

Mr. Rouse. How do you get rid of the honey? I tried that plan and found that honey and wax hung with the frames until they did not look like frames.

Mr. Atchley. Mr. Rankin's treatment is similar to ours except that we burn. The labor for digging ditches is very cheap. It would only cost us \$5 to get ten ditches, and in each ditch we can burn thirty or forty colonies. Our treatment is something like your California treatment, except that it is not so complicated and is less work.

Mr. Rankin. That is another phase of the proposition. Conditions are different in that also. In California you can not hire a man to do the work for less than \$80 per month.

Dr. Phillips. We have gone over the subject of treatment thoroughly, and I think all persons here have arrived at about the same conclusion; that is, that it will not do for a man who has a few colonies in one part of the United States to write to our bee journals and tell us all what to do. We want to know what he is talking about. The vast majority of the men who write to-day know nothing about the varying conditions. What will work in one little county in the east will not work in the west, and vice versa, the methods of the west will not work in

the east. Suppose that Mr. Scholl should sit down here and tell everybody in the United States to burn their bees.

Treatment depends upon the locality. Locality is an important factor, but what we have to do is to find out in what respect the locality is different, whether it is in climatic conditions or in the conditions of the honey flow. We are in just as much ignorance when we attribute difference to "locality" as if we did not recognize any difference. We must get down to the point where we know the individual factors involved. I anticipate that when some of the discussions that have been carried on this afternoon are read, they will open the eyes of some people that think they have had some experience with disease. We have men from the east and west who have different conditions to contend with. That is one reason why I have been in favor of an inspectors' meeting. Here we get on a common ground. Conditions from different parts of the country are discussed in a way that you can not obtain practically in any other way.

I have copies here of the laws relating to foul-food inspection now in force. Some of these are deficient and others have valuable points which ought to be brought out. It seems that the best thing to do is to put a copy in the hands of every man who is an inspector, with a list of questions taking up the points which are covered by the laws, and ask each one to express an opinion concerning them. Then all that expert testimony should be collected and put on record, so that the people interested in future changes of legislation may read it. If there is anyone here that would suggest how this subject should be handled, I would like to hear from him.

After some discussion, it was finally decided that the Bureau of Entomology be asked to prepare a list of questions to be sent to all the inspectors.

HONEY AND TAR COUGH CURE.—Put 1 tablespoonful liquid tar into a shallow tin dish, and place it in boiling water until the tar is hot. To this add a pint of extracted honey, and stir well for half an hour, adding to it a level teaspoonful pulverized borax. Keep well corked in a bottle. Dose: 1 teaspoonful every one, two, or three hours, according to severity of cough.

SELECTION

Remarkable results have been achieved in modern farming by means of selection. Live stock and farm and garden products have all shared in these results. Horses, cattle, sheep, and pigs have their desirable characteristics developed to a high degree, and their undesirable ones eliminated. Cereals, roots, vegetables, fruits and flowers have been likewise improved. Fowls in all their multitudinous varieties have been evolved—some for flesh, some for eggs, and some for beauty, from a few ancestral types. Every improvement has resulted in the object endowed with is becoming more profitable to the producer.

To what extent have bees been improved by selection? It is to be feared that no very definite information is available on this point. Certainly no efforts in this direction, commensurate with the value of bees from an industrial standpoint, have been made. Bees are of more intrinsic importance than guinea pigs, yet it would be safe to say that more time and energy have been given to the latter, than to improving the honey-producing capacities of the former.

In setting out to improve bees, the first requirement of the breeder is a clear and well defined idea of the end to be attained. He must keep in his mind's eye the ideal stock, and a little reflection will make clear that this is one that must possess a combination of characteristics, any of which singly might be developed to a high degree with comparatively little trouble. But to develop all in combination to a high state of excellence is a feat requiring the exercise of

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skill and perseverance far above the ordinary. The characteristics most to be desired are working qualities, vigor of constitution and resistance to disease, prolificness, absence of swarming tendency, gentleness, rapidity of flight, abdominal development, and beauty.

Every bee-keeper is well aware of the immense importance of good working qualities. Even in small apiaries the careful observer can note marked differences in this respect. Stocks of apparently equal strength give, with similar treatment, very different results, and the differences can be attributed to no other cause than unequal endowments to the will to work.

The importance of the power of resisting disease can hardly be overrated. If this could be developed to a high degree, one of the chief terrors of bee-keepers would be scotched. That some stocks possess greater resistance than others, and that the quality can be transmitted and perpetuated, can easily be established.

The value of prolificness is evident to even the novice, and it is a quality in which stocks show perhaps the most marked differences. The yield from the "best" hive—from the hive boiling over with bees—and that from a poor or moderate one, mostly if not always, shows a wide margin for improvement.

If working qualities and prolificness met with the attention from breeders and bee-keepers generally that they deserve, there would be less said about "best" hives, and the attainment of the ideal of a hundredweight from every hive would be brought appreciably nearer.

The elimination, or considerable

reduction of the swarming tendency would add much to the bee-keeper's comfort and peace of mind, and to his profits. It may be argued that it is impossible to breed away a natural instinct. But those who would so argue have only to study what has been done by selection. Unquestionably the reproductive instinct is strong in all animate nature, but if swarming is the result of this instinct in bees, "broodiness" is the result of it in poultry, yet "broodiness" in many breeds has been almost entirely bred away.

Gentleness adds much to the comfort of the manipulator, and saves much valuable time that would otherwise have to be spent in subduing where markedly vicious qualities asserted themselves. If the development of it went hand in hand with the elimination of the robbing tendency much good would be done.

Rapidity of flight is a quality that cannot be overlooked, as there is no doubt that it tends to increase the yield to an extent worthy of recognition. This is especially the case where any considerable distance has to be traversed : source of supply.

The abdomen contains the honey sac, and in the case of the queen, the ovaries; consequently, that it should be well developed is a matter of importance.

Beauty is not in itself a valuable characteristic, but every bee-keeper is, or ought to be a lover of the beautiful, and if his bees can be made more pleasing to the eye as well as better honey producers, he ought to strive after the more perfect combination.

(Continued on Page 315.)

INTERESTING GERMAN ITEMS

Translated by JACOB HABERER, Zurich, Ont.

"Deutcher Imkerbund."

The German, Austrian and Hungarian bee-keepers recently held their fifty-second convention at Frankfort, Germany, in connection with which was also held an exhibition of honey, bees, bee supplies and bee literature. At this convention the two largest German bee-keepers associations, the Reichsverein and the Centralverein, were united under the name of "Deutscher Imkerbund," (Bee-keepers Union,) with a membership of 100,000, and there are about 50,000 more who are likely to rally under the same flag. The following officers were appointed: Rev. Sydow-Klannin, chairman; Rev. Ludwig, Herbsleben, vice-chairman; Teacher Newman, manager; Rev. Hoffman, treasurer; Teacher Seeliger, secretary; (all teachers and preachers). A resolution was passed to erect a monument in memory of Dyierzon.—Leipziger Bienenzeitung.

Bee Stings.

Calmness is the best protection against bee stings. A veil or bee cap should always be used, and gloves but seldom. Only with bare hands will one get used to the necessary quietness. Open the hive when the workers are in the field. Wash your hands before you handle them, taking care not to bring along any strange or bad smells. The color of clothes also has some influence. Wear light colored cloth. Be careful with fertile worker colonies, they sometimes sting very badly. But after all it is not a misfortune to get stung, as the bee

poison will make healthy blood. I feel the good influence every spring. It is also said that the advanced age of bee-keepers is partly a consequence of bee stings and the use of honey. The cure of gout by bee stings is well known and has worked wonders already.

Dr. Keull, of Gustrow, says: Bee poison in small doses, injected, has a very good effect in cases of consumption, chronic kidney disease and cancer; many cases of this kind have been cured by formic acid. It is true that sickness or even death may be caused by bee stings, but that is very seldom. It is well that bees have this weapon, otherwise they would often have hard times. In the land of unlimited possibilities, America they are trying to raise a stingless bee, but this would not be a good thing for the bee industry.—Frankfoos, in Rheinesche Bienenzeitung

Picking out the Queen.

The simplest and surest way to pick the queen out of a swarm is to take in a swarm; a frame made of queen-excluding metal, is fitted inside so that it will nicely slide up and down; in each inside bottom corner, a block about half an inch square is fastened so that the screen will not go down fully to the bottom. When the swarm is in, shake the box; the frame, which should have a handle or two knobs on top, is then placed on the bees, the weight of it will force the bees through the perforated metal; the frame will now rest on the block at the bottom. Two holes should be made in the side of the box above the screen, to receive the pins or nails to hold the frame

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its place. Now turn the box up- side down and shake out the bees. The queen and drones will be behind the frame, with only a few bees, when it will prove an easy task to pick out the queen.—Rhein- esche Bienenzeitung.

To Introduce a Queen.

A quick and sure way to intro- duce a queen is to put one in a cage towards evening; keep the cage in your pants pocket for about half- an-hour; take a piece of saltpeter paper about two inches square, roll it up and put it in a little wire pipe; light it and place under the colony, close to the entrance, for a few minutes; run in your queen between the combs, then open the fly-hole. Remember only a small piece of paper is necessary, just so that they get the smell of the salt- peter. You may also use a little saltpeter in your smoker just as well.—Leipziger Bienenzeitung.

Colonies Galore.

According to the statistics of 1900, Russia and Siberia had 5,106, 22 colonies of bees; North America 1,109,625; Germany, 2,605,350; France, 1,586,715; Austria, 658, 35; Hungary, 559,636; Switzer- land, 240,000.—Praktischer Weg- weiser.

Opinions Differ.

German bee-keepers' opinion of American Golden Bees: They have a nice dress, but are not much good; far behind their own bees as the workers.

SELECTION

(Continued from Page 313.)

Whether or not any great im- provement will be made in bees by selection depends almost entirely

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JOHN NEWTON

Thamesford, Ontario, Can.

upon the rank and file of bee-keep- ers themselves. Improvement by selection is a work to which must be brought qualities of no ordinary character—observation, judgment, perseverance, discrimination, pati- ence, enthusiasm. The possessor of these can turn them to good ac- count in almost any walk of life, and unless he can hope for a reward as a breeder of high class queens at least equal to those he could otherwise obtain, he will not devote himself to the work. His reward will depend on the demand for queens, and the demand will depend on the extent to which bee-keepers are alive to the importance of in- troducing new and improved blood to their apiaries. If every bee- keeper obtained yearly even one queen from a breeder of repute, the work of selection would pro- gress more rapidly, to the advan- tage of all.—T. J. Crowe, in Irish Bee Journal.

CELLAR WINTERING

BY E. W. ALEXANDER

It seems rather strange to me that Mr. Bingham, on p. 407, March 15th issue, should question the importance of perfect quiet in bee-cellars during the long cold months of the northern winters. I think our experiences must be taking diverging lines. For a long time I have thought that this subject of perfect quiet was one upon which we could all agree, but it seems there is a difference of opinion even here.

Now, before entering into an argument I will admit that there are certain times when the conditions are such that a disturbance among the bees is not in the least harmful. For instance, the disturbing influence of the sun on a warm balmy day in early November, even though it causes every bee in the colony to take a fly, can not be considered detrimental; but if on a cool cloudy day we open the hive with a snap and a jar, using smoke to enable us to replace the light combs with combs of honey, then certainly we have sown the seed of winter losses and spring dwindling. And, while it might not do much harm to enter their cellar and quietly remove the dead bees from the floor, I do think it would be a great mistake to take off the bottom boards and top with a sudden jar, and then carry the hive-bodies to another part of the cellar, using smoke to keep the bees in, causing them gorge themselves with honey. Then carefully sliding a dish holding a pound of warm honey under the cluster of a colony, and withdrawing from the cellar as soon as possible, might disturb them but little, as but comparatively

few bees would engage in taking up the honey. But if you remove some of the centre combs and pour the honey into them, returning these wet combs to their hive, causing all the bees to fill themselves with honey, and to scatter through the hive, then again there would be cause for future restlessness and loss.

The injurious effect of disturbing bees in winter depends to a great extent upon how often and to what an extent it is practiced. When we wintered our bees in the cellar of our dwelling-house, with four rollicking children playing over them, it was no uncommon thing for many colonies to be badly affected with dysentery in February and March. Then it was, "Hobson's choice" to leave them in the cellar and see them waste away and die, or set them out for a fly and have the most of them die after they were put back, for the bees never again quieted down into a compact cluster, but continued restless and uneasy until they were set out to stay.

In regard to the effect of a continued jarring noise over a cellar of bees, as in the case of The A. I. Root Co.'s bee-cellar under the machine-shop, I would say that I have always believed that this disturbance was very closely related to the necessity of so many mid-winter flights.

As to giving bees a sleighride of fifty or sixty miles in mid-winter, I am quite sure that there are not many that would care to have their bees handled in that way for much less than their actual value. I have brought home on a sleigh bees that I bought in the winter, and then put them in a cellar; but with-

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out a single exception I had to set them out early in the spring in order to save them. Bees handled in that way never will stand five months or more of confinement. I have never thought that it did any particular harm to enter a beecellar occasionally for a few minutes, if as little noise is made as possible.

But when from any cause a disturbance is made in winter to the extent that the cluster is broken up and the bees get frightened, filling themselves with honey, then because of the unnatural condition they are injured very much and only a chance to fly will restore them to a normal state.

We have to-day, March 23, 750 colonies in our cellar, and the bees are so still with the thermometer at 45° that, when I entered this morning with a lamp, it was almost impossible to hear the least noise, and there seems to be less than 4 quarts of dead bees in the cellar, and not a spot of dysentery on any hive.

I have given many years of study to learn how to keep bees through a five-months' winter in that way, and I must say that if there is any one thing connected with cellar wintering that has more to do with success than any other aside from good food, it is perfect quiet. When we take a hive from the cellar with only about a pint of live bees, and see about four or five quarts of dead bees around it, we can hardly say that that colony lived through the winter; but when they can be placed on their summer stands after 160 days' confinement, apparently as strong as they were Nov. 1, then we can say we know something about wintering. This has been done, is being done, and

can be done when they are kept quiet. But it will be a long time before it can be accomplished where they are subjected to harsh disturbance during the long northern winters —Gleanings in Bee Culture.

OUT-DOOR PROTECTION IN WINTER.

November is the month to fix the bees for the winter, and those colonies that are to be wintered out doors had better be protected at once.

Some bee-keepers make outer cases of boards with a space of two inches between it and the hive, and fill in with planer shavings, dead leaves or other material; in most localities this succeeds very well.

Last year the writer tried a new plan for winter protection and it proved a big success, as every one of the eighty-five colonies so treated came through in good shape. The same arrangement will be used the present winter.

In the first place, the hive lids were removed and stored till spring, and in their places were used plain flat covers that fitted flush with the outside edges of the hive.

Then several thicknesses of newspaper were folded and tied around the hive, extending down to within two inches of the bottom of the hive; over all this a telescope case was placed, and, in this shape, every colony wintered perfectly.

By using the plain board cover over the top of the hive, it left a bee space for the bees to go from one comb to another, and as the hive is warmest at the top, they did so very comfortably.

Where bee-keeping is carried on extensively, especially in the northern states it is the custom of most bee-keepers to winter their colonies indoors.

For this purpose some use the ordinary house cellar, darkening the same and carefully watching the temperature; while others have built special cellars for the purpose, where as many as 1,000 colonies are kept in one place.

In in-door wintering, it is very important to see that the temperature is kept as nearly between 45° and 60° but the nearer 45° the better; but a slight variation from the above figures, for a brief period, will do no special harm.

If at any time the cellar becomes too warm, it should be cooled off at night by leaving the door open, but be careful to close it again before daybreak.

If during an exceptionally cold spell the cellar should become too cold, a little heat from an oil stove will not be amiss; but, generally speaking, it will not be necessary to do either, provided the cellar is properly ventilated.

In-door and out-door wintering each have their advantages, and the bee-keeper must be largely governed in the method he adopts by his local conditions.

A colony wintered out doors will require much more feed than one in doors, and for this reason alone many winter in doors. On the other hand, those wintered out doors have the opportunity of taking a cleansing flight when a nice bright day comes on.

Where only a few colonies are kept we would advise out-door wintering, with ample protection in the way of packing; but where

the colonies run up into the hundreds, cellar wintering is preferable, if the climatic conditions demand it.

In New York state the bees are placed in the cellar along about the middle of November, or upon the approach of settled cold weather.

FOOT NOTES

Bee-keeping is an ennobling vocation and has been rightly called "The Poetry of Agriculture."

There are millions of pounds of honey going to waste every year in sections of the country, because there are no bees to gather it.

Don't bother with bees in cold weather after they have been put away for the winter, as it tends to make them restless and does no good whatever.

If your colonies have not been fed and are short of stores, they should be given frames of sealed honey at once, as they will not take up syrup fed them in cold weather.—Farm Journal.

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THE VALUE OF POLLEN

With regard to the importance of pollen to bee-keepers, it was as well that they should remind themselves of what pollen consisted. Was it not the essence of the plant or tree and its fruit? The roots, the bark, the branches, and the leaves were only auxiliaries to the flower that bore the pollen. This fact demonstrated its importance. The fertilising dust of the flowers, as they were accustomed to briefly call pollen, was, as most present were aware, the ovules with a cellulose covering, something like the covering of an egg, the shell. A better name for this dust was pollen-grains, the size of which varied from $\frac{1}{2000}$ th to $\frac{1}{20000}$ th part of an inch. Of course, to see these grains separately a pocket lens was necessary, or better still, a microscope with a $\frac{1}{4}$ -in. or $\frac{1}{2}$ -in. objective would be of great assistance in studying the shape and size of these grains. The microscope provided the means of identifying the source and purity of the honey. The bee-keeper from any sample of honey he took was able to trace the origin of such produce by recognizing the pollen-grains, which, differ in size and shape and colour according to the plant from which they are obtained; thus he was enabled to say from what source his honey was derived. Again, as regarded the adulteration of honey, the apiarist could take a sample of that known to be pure honey and compute the number of grains he found within a certain area: this could be compared with another sample supposed to be diluted with glucose, whereupon the difference in the number of grains would be apparent, and that would form a clue to what extent adulteration had taken place. But, after all, the most important point in connection with pollen lay in the fact that it was a bee-food, and that was what he wished to lay special stress on. The very "fitting out" of the bee for the easy collection of pollen showed that the same was necessary for its welfare. The hairs on its body, the arrangement of them, the receptacle for bringing it home, all pointed to the importance of it in the hive, so that it became clear to the bee-keeper that he should see that his bees had sufficient pollen; for pollen to the bee was what bread and meat was to man, or, to put it more concretely, it was as oatmeal to the Scotsman. It built up the frame and renewed the tissues, thus making the bee strong and

better able to resist foul brood, as well as carry out the work for which it was destined. Pollen was also used in the cappings for covering the brood. He had noticed this year a great quantity of brood in an advanced pupa state which had not been sealed over properly, and he attributed this in a great measure to lack of pollen. It was well known that sealing was often left over till late, when the conditions of heat were favorable, but he had never seen it postponed so long as it had been this year.

Another consideration was in connection with driven bees. In many cases driven bees were put into winter quarters without any thought of pollen for them. They were placed on combs or on sheets of foundation, and fed with syrup, but the necessity for pollen was generally overlooked or forgotten. Now here was a use for the pollen-clogged combs. If these were reserved from summer or late autumn, or taken from the hives when driven bees were expected, they could be turned to a useful purpose. Driven bees could not gather sufficient pollen for their own needs, because the season was usually far advanced. Pea-flower was the best substitute for pollen. This might be given by dredging it into cells dry, or by mixing it with a little syrup, or by placing it in another comb on the cluster. It could also be given to the bees as a sort of paste on the top of the hive in a feeder.—**MR. HAYES** in *British Bee Journal*.

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Beginner's Page

ABOUT WINTERING

The question as to whether it is better for the beginner to winter his bees on their summer stands or in the cellar, is one that cannot very well be answered in a general way, for what was best for one might not be so for another. A great deal depends on what part of the country the apiary may be in, on the location in which it is situated, and on the cellar in which it is proposed to place the bees. A pretty safe rule for the business is to study the wintering methods of some successful bee-keepers in his own neighborhood, and adopt their system until he is old enough to find a better way for himself—and it will be long before he is old enough to find a better way other than by the slow and steady method of careful experimenting on a small scale; for the beginner, or even the erstwhile beginner, who undertakes to play with the wintering problem on a large scale will almost surely wake up some fine spring morning "stung."

As a general thing, cellar wintering is the most satisfactory method in most parts of the country where there is comparatively steady cold weather for four months or more. In the most southerly parts of Ontario and other such climates where there is a certain amount of weather in which the bees can fly sprinkled through the winter months, outdoor wintering is more generally satisfactory, but it is worthy of note that nearly all the specialists and other extensive and successful apiarists in the northern States and Canada, who wintered outside ten

or fifteen years ago, are now becoming more and more in favor of cellar wintering as more generally successful and economical than the outdoor method.

A dry, dark, quiet cellar, where the temperature stands at about forty-five degrees, with as little variation as possible, will winter a good healthy colony with plenty of good honey practically every time. Such a colony can generally be wintered nearly as well on its summer stand in a double-walled packed hive, and where a reasonably good cellar is not to be had, outside wintering can be made very successful, but the work of preparation is more, and more honey is necessary to keep the bees in health and warmth. To a person with only a few hives, the extra work would not be a drawback, but where many are to be wintered it amounts to quite an item.

Colonies to be wintered outside should be located in a spot sheltered as much as possible from the prevailing winds, and yet not placed so that the March sun will strike them too strongly and entice the bees out when the air is too cold. A good tight outer case, allowing four inches for packing on each side and end of the hive and about a foot on top, is necessary. The wooden cover of the hive is removed before placing on the top packing, the packing going directly on the cloth over the frames, or being enclosed in a cushion for more convenience in removing for inspection in spring. A "bridge" must also be placed between the hive and case, over the entrance, to prevent the packing from blocking the entrance of the hive, which must be open to the outside at all times to

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allow the bees to pass in and out when necessary, and to supply air.

Unless the bottom board is one of the reversible kind, a rim of four pieces of inch lumber about two inches wide, should be made and placed between the hive and the bottom board to raise the hive up from the bottom board and allow about two inches under the frames, so that bees which die during the winter may fall clear of the combs and not lodge between them and make trouble. If the entrance is cut out of the lower edge of one end of the hive body, this rim is made the same all around, but if, as is the case of a properly made hive, the entrance is in the bottom board, one of the end pieces in the rim should be set down sufficiently to close the entrance at the upper edge of the rim. This is done so that the dead bees may drop past the entrance in the winter, and not block it up as they would if it were on a level with the bottom of the hive. Several small strips of wood should be laid crosswise of the frames on the top bars, under the cloth, to hold the cloth up from the top bars so that the bees may be able to pass over the tops of the frames in the winter. This is important.

For packing material, dry leaves make a clean, dry, warm and in every way satisfactory packing. Dry sawdust, planer shavings or chaff will also give good result. Packing material, especially sawdust and chaff, should not be pressed too tight around the hives. Leaves, being lighter and looser, will stand a little more pressure. The winter case should be deep enough to allow a few inches between the roof and the top packing,

and a few small holes bored close under the eaves in the highest part of the walls will aid in keeping the interior dry.—E. G. Hand, Fenelon Falls.

TO BEES IN WINTER QUARTERS

[This poem, by the late Rev. W. F. Clarke of Guelph, appeared in the "Bees and Honey" page of the "Rural Canadian" 1886.]

Good-night! a long good-night, my bees!
I've packed you snug and warm,
So you can stand an Arctic freeze
Or Hyperborean storm.

You're two feet high above the ground,
Beyond the reach of mice;
I hope you'll winter safe and sound,
And keep your quarters nice.

I'll not come scraping with a wire,
To keep the entrance free;
You're fixed—how can you but admire?—
As in a hollow tree.

Nature's inimitable plan
Well ventilates your hive,
Better than all the schemes of man
For keeping bees alive.

The season's arduous toil well done,
Your larder full of sweet,
Enjoy the calm repose you've won,
And rest your wings and feet.

If you should find the household dull
Without some babies in it,
Rear them, for you can pollen cull
Indoors, at any minute.

Take things as easy as you can,
For you are growing old,
And spend your days, like mortal man,
As a short tale that's told.

Lifetimes are measured, not by days,
But by becoming deeds;
And they deserve the highest praise,
Who leave behind them seeds

To grow, to blossom, to bear fruit.
In months and years to come;
As generations follow suit,
And raise the busy hum

Of honest industry, among
The gardens, woods, and fields;
The toil that ripples into song,
And constant sweetness yields!

TO SPICE APPLES, PEARS OR PEACHES
—One quart of best vinegar, 1 quart of honey, ½ ounce each of cloves and stick cinnamon Boil all together 15 minutes, then put in the fruit, and cook tender. Put in a stone jar with enough of the syrup to cover the fruit. It will keep as long as wanted.

Letters to the Editor

ADULTERATION OF HONEY

My attention has been drawn to the report from the Inland Revenue Department of 1903, that a sample of my honey purchased at Boissevain, Man., was pronounced adulterated with cane sugar. Up to this time I had not received this bulletin, or would have looked into this matter before. I am at a loss to know how this adulteration has come about. I have never purchased honey from any one whom I could think for a moment would be guilty of this, and I can state very positively that I did not, nor have I any knowledge who did, do it. I have my suspicions that if adulterated it was done after reaching its destination, as the sample was pronounced a dark yellow. I do not think I ever shipped honey corresponding to this description. I regret that I did not know about this before, as it is too late to trace it now. Not only this, but when the subject of adulterated honey was brought up at our convention, I could have made this explanation then. As a member and a director of the O. B. K. A., I feel that I owe this explanation to the Association. When I have to descend to adulteration of honey for a livelihood I will step down and out. I can make a thousand affidavits that I know nothing about this, if necessary. We are particular not only to supply a pure article, but a first class one; also we hope not only to increase our own trade, but to help bee-

keepers generally thereby. I feed sugar when bees are short of stores, but am always very careful not to have any go in the supers, which with my system of management is not hard to do. I am very glad that goods must now be as labeled. Wholesalers who bottle honey will not feel safe to put up anything but pure goods, and the demand should be increased.

Thanking you, Mr. Editor, for this space allowed me, I am

Yours sincerely,

G. A. DEADMAN.

CONVENTIONS OF COUNTY ASSOCIATIONS

BRANT

Annual meeting of the above on Saturday afternoon, November 2nd, at 2 o'clock in Court House, Brantford, W. J. Craig, Secretary.

NORFOLK

Meeting of the Norfolk County Association in Simcoe Thursday, October 31st. Morning and afternoon sessions, morning session beginning at 9.30 o'clock. Lee Beaupre, Secretary.

MIDDLESEX

The fall meeting of the Middlesex Bee-Keepers' Association will be held in the City Hall, London, Saturday, November 2nd. Morning and afternoon sessions. An interesting time is expected. F. J. Miller, President; E. T. Brainard, Secretary.

DR. KNEIPP'S HONEY-SALVE.—This is recommended as an excellent dressing for sores and boils. Take equal parts of honey and flour, add a little water, and stir thoroughly. Don't make too thin. Then apply as usual.

Want a

Advertisement at the rate of 3 additional words in advance, as the rate sheet from side of the paper times ad. is to us not later than

MORE HONEY!
Clover or Basswood. If you have any, please send me a sample. I will pay the price and insure your help. If you are a neighbor, who is a Deadman, Brass

WANTED—To purchase refuse from P. Adams, Brantford

FOR SALE—Five acres, in first class soil, the lot at \$3.00 per acre. Address: Brantford, Ont.

FOR SALE—Three acres, also 60 colonies of bees, all appliances. 60 lbs of clover honey. Season. Oxford County, Canadian Bee Journal

HOTEL A

ALBION HOTEL—\$1.50 per day. Proprietress.

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The contents of The Canadian Bee Journal are chosen with a view to the interests of the beekeepers. The fables and tales of adventure and heroism in the story of the life of the bee are always abundant in the pages of the journal. Full illustrations are added to the text. The Canadian Bee Journal for 1908 will be published with sample copies of the new subscribers will be added 50 cents for the subscription) will be published in the issues of 1907, besides the new Four-Leaf and full color.

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at Berkeley Street,

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Advertisements for this column will be received at the rate of 35 cents for 25 words, each additional word one cent. Payments strictly in advance, as the amounts are too small to permit of book-keeping. Write copy of add on a separate sheet from any other matter and on one side of the paper only. Say plainly how many times ad. is to be inserted. Matter must reach us not later than the 23rd of each month

WANTED

MORE HONEY—I am wanting more No. 1 Clover or Basswood Honey, Comb or Extracted. If you have any, state quantity and price. Write me anyway. I am doing my best to improve the prices and increase the demand, and want your help. If no honey to spare, tell your neighbor, who may not see this ad. G. A. Deadman, Brussels Ont.

WANTED—To purchase old combs, or slumgum refuse from solar wax extractors. Frank P. Adams, Brantford, Ont.

FOR SALE

FOR SALE—Fifty hives of Bees in light frame hives, in first class shape, new hives. Will sell the lot at \$3.00 per hive. This ad will not be repeated. Address at once, David Logan, Wiltonville, Ont.

FOR SALE—Three acres of Fruit and Garden land; also 60 colonies of Carnio-Italian Bees and all appliances. Good locality.

60 lbs of clover honey per colony taken off last season. Oxford County. Address "Bees" care of Canadian Bee Journal, Brantford, Canada.

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ALBION HOTEL—TORONTO—Rates \$1.00 and \$1.50 per day. MRS. JOHN HOLDENNESS, Proprietress.

The Best Paper for Family Reading

The contents of THE YOUTH'S COMPANION are chosen with a view to the interest of all tastes and ages. The father, as well as the son, enjoys the tales of adventure; the mother renews her girlhood in the stories for girls, while the paper always abounds in stories, long and short, which may be read aloud in the most varied family group to the keen pleasure of all.

Full Illustrated Announcement of THE COMPANION for 1908 will be sent to any address free with sample copies of the paper.

New subscribers who at once send \$1.75 for 1908 (adding 50 cents for extra postage on Canadian subscriptions) will receive free all the remaining issues of 1907, besides the gift of THE COMPANION'S Four-Leaf Hanging Calendar for 1908 in full color.

THE YOUTH'S COMPANION,
4 Berkeley Street, BOSTON, MASS.

HONEY CAKES

Honey cakes, if properly made, may be said also to be according to everybody's taste, and are something more useful than pure honey itself, for strange enough, there are some persons who are unable to bear the taste of honey in its natural form, whilst I have not seen any one who would not relish honey-cakes; I know even some to whom the doctor has forbidden the use of sweets, and on whom honey-cakes produce a good effect.

From personal experience I am of the opinion that honey-cakes would advantageously take the place of many drugs, and are much to be recommended to the sick persons who suffer from a weak stomach, or who have but little appetite, for being so slight, and at the same time so highly substantial, they are easily digested without fatiguing the patient. One never gets weary of eating them day after day, as is often the case with pure honey. These advantages are enough to wish that the way of making them should be known in every bee-keeper's home. Honey-cakes should not be eaten hurriedly, but allowed a sufficient time to ooze away, so to say, in the mouth. When newly made they are very light and dry. Some will find them too dry, but they will improve with age, and, if left in the open will quickly absorb moisture which will make them soft.

Now, the following is the way to proceed in making them: I generally take forty or fifty pounds of honey at a time, and as much flour, so that they may last for many months, but for the sake of beginners I must give lower figures.

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Take then three pounds honey, three pounds flour, half ounce powdered ammonia, a small teaspoonful of ground cinnamon, half teaspoonful of ground cloves, and six ounces of orange peel cut very small. The three last-mentioned ingredients are not essential, but they improve the taste. Ammonia is necessary. To those who would object to it, I may explain that it does not remain in the cake, but evaporates during the baking process, its function being to raise the dough.

Directions.—Pour the honey in a copper or enameled pan, and set on a stove or quick fire. When it boils, draw it aside and remove the scum. Then pour the honey into the vessel in which the paste is to be made; leave it to cool; then add flour and mix up well. This is the remote preparation, and the paste may be left in that condition for weeks and months without fear of deterioration. The proximate preparation is made on the day on which the cake is baked, and consists in adding the other ingredi-

ents when the paste is worked thoroughly up again. The ammonia must first be placed in a cup, pour on it a few drops of cold water and stir it well, so as to form a thick paste, then mix it up with the rest. Then take a piece of paste, roll it out into a cake not over quarter inch thick, and cut up into convenient sizes as desired. This done, put the cakes on a flat tin (which must be greased beforehand) and bake from twelve to fifteen minutes in a hot oven.



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ARE bred to produce a hardy race of bees that will withstand our cold northern winters and late, uncertain springs. They have stood the test. Their bees are quiet and easily handled, uniting readily. It is a pleasure to handle them. They are hustlers after honey. Why not place some in your yard this summer? Beekeepers who have tested a few of the Bow Park Queens in former years are now requeening their apiaries from this strain. I have more than doubled my queen mating nuclei this season and am doing my best to get out orders promptly.



F. P. ADAMS,
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Bow Park
Brantford, Can.

Untested, each \$1.00	Six, \$5.00	Twelve, \$ 9.00
Tested, each \$1.50	Six, \$8.00	Twelve, \$15.00

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