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Notes and Comments

By J. L. BYER

The Alexander Plan of Caring for Weak Colonies in the Early Spring.

This spring I have received several reports from bee-keepers who have tried the Alexander system of tiering up weak colonies over strong ones. While these reports have been somewhat contradictory, it is noticeable that where success is reported, the bees were pure Italians, and where failure attended the plan, in most cases the bees were blacks and hybrids. While I have not tried the system, I have an idea that Carniolans would be all right to use, as well as Italians, as I have always found the former race of bees very tractable and very ready to accept queens by any of the well-known introducing plans. No question but where there are a number of weak stocks, if the tiering-up method can be made to succeed, that many colonies can be saved that would otherwise perish. However, the plan is pretty much limited to cellar-winterers, as it is almost impossible to do this tiering-up with colonies packed for winter on the summer stands. To offset this disadvantage, I have an idea that outdoor winterers do not usually have as many weak colonies as do our brethren who winter in the cellar. While I may be mistaken in this matter, observation in our own immediate locality convinces me that it is true in the majority of cases. Personally, I rarely have **very weak** colonies, unless old, failing queens are in the hives, and in such cases, of course, such colonies will make no headway even if helped by being put over strong colonies. Even this year, when I have lost so heavily at two of my yards, all that are left are, with the exception of a half-dozen, quite strong, and these few weak ones are headed by old, failing queens.

Speaking of my winter losses reminds me of what advantage there is in having bees in different localities. In the two yards near home not only has the loss in bees been heavy, but the clover is badly damaged, and prospects are poor for a honey crop. At Altona, only eight miles away, the bees all wintered perfectly, and as the land there is more rolling and somewhat lighter than here at home, the clover wintered good, and at present, although backward, is in splendid condition. To be sure, "prospects" do not always mean honey, yet while we **sometimes** fail to get honey when we have clover, we **always** come short of a crop when we have no clover.

Clipping Queens in March.

Friend Holtermann tells in "Gleanings" about clipping queens, overhauling brood nests, etc., in March this

year, something unusual in his locality. This is a free country, and friend Holtermann has the right and liberty to overhaul brood-nests, clip queens, etc., in the middle of January if he wishes, but in our locality bad results of such unnecessarily early manipulations have so thoroughly convinced me of the fallacy of the same that I would not overhaul the brood-nests in March, even if paid 25 cents per colony for so doing. To my mind, about the only excuse for looking into colonies in the early spring is to see regarding amount of stores present, and the desired information can be easily obtained without lifting out a single frame. During the same warm spell in March that Mr. Holtermann refers to, while driving past a bee-keeper's place I was stopped for a chat and asked to tell why his queens were being "balled." On enquiry I found that he had been going through the colonies, seeing how many frames of brood each one had, and while looking at one stock headed by a queen bought last fall he noticed a bunch of bees on the bottom-board. As quickly as possible he smoked the bees and released the queen, and thought she would be all right, but half an hour later he found her in the grass in front of the hive. He had happened to see this queen balled, and I was not surprised to hear a few weeks later that a number of his bees had turned up queenless. While I am not insinuating that like results would follow friend Holtermann's manipulations, I do contend that they are entirely unnecessary and, with the average bee-keeper, extremely dangerous. Mr. Holtermann says that if bee-keepers would daub propolis over their fingers before catching queens to clip them, that no evil results would follow. That advice is not necessary in our locality—the stuff will get there without having to go to the trouble to "put it on." I have had my fingers so badly daubed that the queens' legs would adhere to such an extent that I was afraid they would be pulled off. D. W. Heise and some other apiarists I know follow the plan of greasing the fingers with vaseline or some other emollient to overcome the difficulty. To be sure, propolis does not adhere to one's fingers in March to the same extent as it will during hot days, when queen-clipping is usually done.

How Can Our Local Associations be of Most Benefit to the Bee-keepers?

The annual meeting of the York County Association was held in Markham on May 23rd, and was largely attended. The Association was fortunate in being favored with the presence of Mr. P. W. Hodgetts, Secretary of the Ontario Association, who addressed them on the above-named topic. Mr. Hodgetts spoke much along the same lines as when at Brantford, and assured his listeners that the Department of Agriculture were willing and anxious to help along the industry by any means in their power. Co-operation among the bee-keepers, especially regarding foul brood suppression, was very necessary, as without this it was very hard for even the Government to do anything very effectual. Mr. Hodgetts was in favor of field meetings to be held in some apiary, where demonstrations could be made relative to the practical side of bee-keeping. The idea seemed to meet with much favor on the part of those present, and Mr. Hodgetts was assured that if he would attend such meetings he would receive some "pointers." In the discussions that followed Mr. Hodgetts' address the foul brood question seemed to be uppermost in the minds of all present and before Mr. Hodgetts left on the afternoon train the following resolution was presented and carried unanimously:

"That, in the opinion of the bee-keepers of York County, in convention assembled, the attention of the Department of Agriculture should be called to the importance of adopting strict regulations in regard to the stamping out and preventing the spread of the disease known as 'foul brood.' In our opinion, it should be the imperative duty of the inspector, upon finding the disease in any locality, to make a thorough inspection of all colonies liable to be affected, and to take such means as will effectually prevent the spread of, and, if possible, eradicate, the disease; and, further, that our Secretary communicate to the Department the substance of this resolution."

Before Mr. Hodgetts left the hall a hearty vote of thanks was accorded him for his presence, excellent address and interest shown in the work.

The election of officers for the ensuing year resulted as follows,

President—Arthur Quantz, Langstaff, Ont.

Vice-President—John McGillivray, Elgin Mills.

Secretary—J. L. Byer, Mt. Joy.

The York Association is in quite a flourishing condition, having about 30 members, of whom 15 are also members of the Ontario Association.

SHOULD A BEE-KEEPER BE A SPECIALIST?

Should a bee-keeper be a specialist, or run bee-keeping as an adjunct to some other business? Yes and no. The matter depends upon two things, and there are several minor considerations involved. It depends upon the man first, and then upon the country in which he is located.

There are some men who are born specialists, and while their energies and thoughts are concentrated upon the one thing they are likely to be successful; but if they put too many irons in the fire they are likely to come to the ground, while, on the other hand, there are men with a genius for running several concerns. If, however, a man is located in good country, the best thing to add to bee-keeping is bees, and there is scope for all the energy any man may have in the running of out-apiaries, in the rearing of queens, and general mastery of the business, as also the question of marketing the products to best advantage. A man who is a specialist is thus more likely to make his bees pay, and pay well, where the one who makes it an adjunct to some other business would fail, because many details are sure to be overlooked, except in the case of a genius. But there is another question which enters largely into the matter; that is, country or locality. A man, as a specialist, may put all he knows into the work, and find himself suddenly met by several bad years in succession, or he may be located in a place where the honey-flow is uncertain; in such a case, once he grasps this fact, it is folish to depend on bee-keeping alone, unless his knowledge of the country is such that he can move his bees about from place to place, but this requires capital and is not always then a success, hence it is better to add some other business to bee-keeping. Now, what shall this be? Again the answer depends upon the man first—his tastes and inclinations and the country in which he is located, as to soil and adaptability or accessibility. The principal businesses one may add to bee-keeping are poultry-farming, dairying, vegetable and flower growing. Orchard work and general farming cannot well be

added, as because the busiest time in these are when the bees are also stirring and require the most attention. Poultry-farming lends itself to being worked in conjunction with bee-keeping better than anything, as the matter of attending to the fowls may be got over in the early morning and late in the evening, and odd hours during the day, as opportunity occurs, and if called away suddenly by the bees no great loss occurs. Dairying, the same objections may be urged as for the orchard or farming, but with less reason. The milking may be done early in the morning and towards evening, when the bees do not need so much attention; then, in a season when the bees are busy, labor may be employed and dispensed with at other times. Flower and vegetable farming may well be added to bees, as if the soil is suitable the work may be done amongst the bees, and so the bee-keeper is always at hand if anything unusual occurs. I do not think anything runs with bees so well as poultry-keeping. As for running the various trades and callings, something is sure to suffer. If you can add more bees to bees, unless your locality is bad, in which case to do so would only be filling the basket with eggs, and so make a greater smash.

Elliott J. Rien.

In Australian Bee-Keeper.

WHEN THE SPRING FEEDING OF BEES IS AN ADVANTAGE

(W. Z. Hutchison, Flint, Mich.)

It is possible to have a good flow of honey, and yet secure no surplus. If the bees are weak in the spring, and the white clover harvest is early and short, it simply puts the colonies in good trim; then, if basswood furnishes no honey, the season is practically a failure, when it need not have been had the bees been strong early in the season. How to have colonies strong in numbers at the opening of the harvest is well worthy of consideration.

The foregoing was the opening paragraph in my article last month. I then said: "Aside from food in abundance, warmth is the one great thing needed to promote safe, early breeding." I then went on to show how to secure this needed warmth by protecting the hive with tarred felt. I will now take up the question of food.

Mr. E. D. Townsend uttered a great truth when he said that the foundation of a honey crop lies in "having a colony ventory of the stock on hand, and then govern their operations accordingly. With two or three good solid combs of honey back next to the sides of the hives, the bees don't seem to hesitate to go ahead and rear brood. I presume that sealed honey in the hive does not have the stimulating effect of liquid feed given a colony from a feeder; and, early in the season it is just as well not to have this stimulative effect. In this matter of early breeding, it is well to make haste slowly. The hives warmly packed and supplied with abundance of sealed stores, furnish all of the stimulation needed until after fruit bloom is over in this part of the country. If Mr. Townsend uttered a great truth when he said abundance of food previous to the harvest laid the foundation of a honey rich in stores for a period of six weeks previous to the main honey flow." The bees seem to be able to take an in-

crop, then Mr. A. Gill uttered another great truth when he said that the majority of bee-keepers begin feeding too early and quit too soon.

After the close of a honey harvest, or at the end of the season, a great many colonies have enough honey to carry them through to the opening of the coming season of the next year, and a great many do not have enough. Most colonies will have enough to carry them through the winter, but many will be lacking in stores for rearing bees in the spring, unless they are fed. Shall this feeding be done in the fall ,or in the spring? With only one apiary, and that at home, it seems as though it did not make any great difference. If there is any preference, I think it would be in favor of spring-feeding, on account of the stimulating effect. Where there are several apiaries, and widely scattered, it is almost impossible to visit them frequently and feed in such a manner as to bring about a stimulating effect similar to that from a honey flow. Cold weather may also prevent feeding in the spring until it is so late that some colonies starve, or slack up in breeding from a lack of stores. For these reasons I should favor the feeding of the bees in the fall until each colony had at least 25 pounds of stores, and this for cellar-wintering. This amount will certainly carry any colony through to the beginning of the next honey season. There will be some equalization of stores needed in the spring, as some colonies consume much more honey in winter than others consume.

In this locality, I am satisfied that much may be gained by feeding all colonies between fruit-bloom and the opening of the flow from clover. I have reference here to a home-apiary, or one that can be visited readily once in two or three days. In this part of Michigan there is a dearth of honey at this time that lasts from two to four weeks. Even if there is honey in the hive ,the bees slack up breeding; that, too, at just the time when they ought to be rearing the workers that will store the surplus from the coming clover harvest. It is not necessary to feed a large amount of syrup at this time. Five pounds to the colony ought to be plenty, unless the colonies are decidedly lacking in stores.

For feeders for this purpose, I know of nothing better than the Alexander feeder shown in the illustration. It is simply a piece of scantling with deep grooves dug in its upper surface by means of a cutter head or a wabbling saw. It is tacked to the back end of the bottom board, its upper surface back until its back edge is even with the back edge of the feeder. The feeder is then all covered by the hive, except about four inches that projects beyond the side of the hive. This projection allows the filling of the feeder from the outside without disturbing the hive. A block is then laid over the projecting end. This keeps out robber bees, or the storm. To keep the feeder snug up against the hive use a crate staple at each back corner of the hive, driving one prong into the feeder and the other into the hive. The illustration shows the feeder made of 2x4 scantling, but I am having 450 made this spring out of 2x6 scantling. The only object in making them wider is that they will hold more. They will then be more desirable for use in feeding large quantities in the fall. Before using the feeders I dip them in hot boiled linseed oil. This prevents their shrinking and swelling and checking.

To prepare the feed I use a ten-gallon can with a honey gate at the bottom. I fill it about two-thirds full of water and then stir in sugar until no more will dissolve. The can will then be about full. To carry the feed to the bees I use a sprinkling can with the rose removed. Go to a colony, remove the block, pour in the feed until the feeder is nearly full, replace the block, and go to the next hive. Simply for stimulative purposes, a pint of such syrup once in two or three days is sufficient.—"Bee-Keepers' Review."

FACTS ABOUT SWARMING OF BEES.

Among the different kinds of work done by the European Societies of Agriculturists is now and then a study of some subject connected with bee-keeping. A series of questions or experiments is submitted to the members, with the request to observe or experiment during the coming summer, and report. It is not obligatory on the members, so only those who can do take part. Sometimes, when the experiments requested involve a notable expense of time or money, prizes are offered to be given to those who have done the best work. Among the apiarists are found a good many who have for a number of years studied some subjects, or kept note of whatever happened in their apiaries. It is through some arrangements of that sort that the following information on the swarming question was obtained, principally through the efforts of Mr. Thibault, Secretary of the Societe du Bassin de la Meuse.

Time of Swarming.

In the country covered by the observations (northeastern part of France) the swarming commences on an average date on May 28 and ends on June 20. The extreme dates have been from May 17 to June 13 for the beginning, and from June 6 to July 4 for the ending.

Duration: An average of 2 days. It is understood that these dates refer to the northeast part of France. Other localities differ for different seasons. For instance, in Belgium Mr. Mercier gives for the swarming period from May 20 to June 30.

A full study of the swarming period observed during 20 years in an apiary of about 80 colonies is given. I will not reproduce it here in full. Out of the 20 years three were quite early, ten near the average, five late and two very irregular so far as the dates and duration of the swarming period are concerned.

Taking all the information obtained in consideration, the average number of first swarms is put down in the following proportions: One-fifth in May; ½ from June 1 to June 10; ¼ from June 10 to June 20; 1-10 after that date. Very few swarms come out before May 25, and very few after June 20, so the apiarist could go to the expense of close watching only between these dates.

Time of the Day.

The limits observed are 8:15 a.m. and 4 p.m. in the extreme cases. On the total number observed, 5 per cent issued before 10 a.m., 22 per cent between 10 and 12, 56 per cent between 12 and 2 p.m., 15 per cent between 2 and 3 p.m., and 2 per cent after 3 p.m.

The Weather.

Needless to say, that the bees will not swarm when it is raining. To what extent they may do it in cloudy but not actually rainy weather has unfortunately not been noted. The wind, when the weather is otherwise favorable, seems to have considerable influence. Evidently no swarm will issue on a stormy day. But in fair weather 82 per cent of the swarms issued during no wind, or a light wind, and only 18 per cent with a wind of medium strength or more.

As could be expected, the tempera-

ture has a paramount influence. Eighty-nine per cent of the swarms issued when the temperature was above 68 degrees Fahr. in the shade, and 11 per cent when below. One swarm issued at a temperature of 59 degrees, and the weather "nearly raining." That was the lowest observation.

It was also ascertained that by far the largest number of swarms issue when the barometer is high, but as the state of the weather as to being more or less cloudy or more or less warm was not observed in connection with it, the fact has but little value.

Position of the Hives.

Eighty-six per cent of the swarms issue when the sun shines on the entrance. It seems by that that the number of the swarms ought to be materially decreaesd when the hives are in a shaded place. It is also stated that a very large proportion of the swarms issue from hives turned otherwise. Unfortunately the number of hives turned either way was not recorded. As most of them art turned toward the south, or nearly so, most of the swarms come from such hives in at least the same proportion. It would have been interesting to ascertain this point fully and find out whether the direction has any influence at all, and if it has, whether it is due to a higher temperature or to the actual shining of the sun on the entrance, or perhaps something else.

Nature of the Bees.

The disposition to swarm varies excessively with the different races, and in the same race with the different varieties,and even the different individual colonies. Nothing definite could be deducted from the reports. It is stated that in France fully 99 per cent of the colonies are the common black bees.

In one of the apiaries reported (probably that of Mr. Thibault himself) everything is recorded in detail since 1883. A study of the swarming in that apiary brings out some interesting facts concerning the vitality of the different strains or varieties of bees. Suppose an apiary of 100 colonies to start with. These colonies and the swarms produced by them will swarm more or less every year. After 20 years, out of the 100 colonies 42 will have disappeared entirely, not only theselves, but the swarms that descended from them in succession. Eighteen will be represented by one colony each; 16 by two colonies each; eight by three colonies each; four by four colonies each; four by from five to nine colonies each; four by from 10 to 19; two by from 20 to 29; two by 30 or more. It is also shown by the tables given that the colonies having left the largest number of descendants are those which swarmed neither very early nor very late.

Age of the Queen.

Out of 301 swarms 130 were from colonies having swarmed the year before, and there had queens one year old; 61 from colonies having swarmed two years before 42; from colonies having swarmed three years before; 66 from colonies having swarmed from four to 12 years before. These cannot be taken into account. Evidently nearly all their queens had been superseded and therefore their age cannot be ascertained. Some may have swarmed unobserved.

It would seem by these figures that the age of the queens has but little to do with the swarming question. This was quite a puzzle to me. I would have thought that the colonies with queens but one year old would have swarmed considerably less than those with older queens. At least, that is certainly the case in my apiaries.

After considerable reflection on the subject I came to the conclusion that the discrepancy is due not exactly to the "locality," but to the hives used. In Europe most of the hives are yet the old-fashioned straw hives. The straw is all right enough, but the hives are usually entirely too small. Now when a colony is decidedly too crowded, and the space is lacking for brood and surplus, the colony will swarm if the conditions of weather and honey-flow are favorable, no matter how old or young the queen may be. And, after all, I do not know but that under such circumstances the colonies with young queens might swarm the most, since the young queens, being the best layers, would get the colonies crowded the soonest or the most.

The Drones.

Fifty-four per cent of the swarms observed came from colonies having a great many drones, and 46 per cent from colonies having but few. Mr. Thibault adds, however, that while it does not make much difference whether there are many or few drones, no colony will swarm when there are none at all. He also says that a queen which is not defective in some way or other will not lay any drone-eggs during the year she has been reared; that means a queen less than a full year old. He advocates as prevention of swarming re-queening just before the main honey-flow; that is, as far as that part of France is concerned.

Nearness to Water.

Owing to the fact that the bees need a considerable quantity of water to rear their brood in the spring, it was supposed that the proximity to a suitable place to get water would increase the amount of brood reared and the swarming would occur sooner. The reports fail to show any noticeable difference.

Size of the Hive.

On 722 hives observed during seven years, it has been found that out of 100 colonies lodged in straw hives of a capacity of nearly a cubic foot, 60 to 70 will swarm. Out of 100 lodged in one-storey movable-comb hives of a capacity of about two cubic feet, 25 to 30 will swarm. And, finally, out of 100 lodged in Dadant-Blatt hives, with enough supers to accommodate them fully, only five will swarm. Mr. Guillein reported that in his own apiary, with such hives, many years have passed without any swarm at all.

Amount of Honey.

In regard to the quantity of honey in the hive, 45 per cent of the swarms observed came out of colonies having less than 20 pounds of honey; 41 per cent from those having between 20 and 40 pounds. And what puzzles me most, only 14 per cent from colonies having 40 to 60 pounds of honey. I would have thought that the colonies having the most honey would be those crowding the queen the worst, and therefore the most liable to swarm. The size of the hives should have been noted, but was not, so that no certain conclusions can be deducted.

Empty Combs.

If the quantity of honey present in the hive has no influence in itself, that is, no direct influence on the swarming, it may have a great influence in restricting the amount of empty comb. Eighty swarms out of 100 issued from colonies where the amount of empty comb was insufficient for both the queen and the workers. Hence the advantage of large hives.

Concerning the straw hives, Mr. Thibault thinks the best mode of management is that which consists in adding just before the honey-flow another body under the old one. That is practically the equivalent of the Simmins method.

If I were working for extracted honey, I would certainly try putting the supers under rather than above the brood-nest. When working for comb honey it is different, because the sections would be badly travel-stained.

Honey-flow.

The first swarm of an apiary usually issues six or seven days after the main flow has begun. The dates may vary some years between four and 13 days, not counting colonies swarming on account of some exceptional conditions. It follows that the preparations for swarming are begun before the main flow occurs; at least in that part of France. It might not be so everywhere else, by any means.

In discussing this subject, Mr. Thibault recalls the well-known fact (in Europe) that there are but few swarms when the honey-flow is heavy and of long duration.—Adrian Getaz, in "American Bee Journal."

ARTIFICIAL SWARMING.

(By F. P. Adams.)

In the present article I wish to call attention to a few of the details of "shook" swarming that of prime importance if this method of handling bees is to be made a success.

When increase is desired part of the bees and queen are shaken out in front of a hive placed on the old stand and fitted with frames of foundation or drawn out combs. The old brood combs with some adhering bees are then placed upon a new stand, and the queen cells already started are allowed to remain. To prevent after swarming only one or two of the best cells are left, and from these the mother of the colony is produced.

This plan has several very severe faults, and if practiced for any length of time will result in a deterioration of the whole yard. Chief among the objections to it might be mentioned three that or of primary importance:

First. The shaken swarm on the old stand is not as strong in bees as it might be because part of the bees have been left with the brood.

Second. Much of the brood set on the new stand will perish, especially the younger portion of it, even if a considerable quantity of bees are left to look after it.

Third. The resulting queens are about the most worthless productions that it is possible for the bee-keeper to turn out.

A plan that will give all the bees to the shaken swarm, and dispose of the brood in such a way that it is all saved, and at the same time give opportunities for a considerable increase if desired, is outlined below.

First, set aside several colonies that are strong enough to enter supers readily if such should be given. These are to be used as nurse colonies for the brood taken from the shaken swarms, and when the season has advanced so that preparations for swarming have commenced in some colonies, take away all the brood from such, and replace with frames of foundation. During this operation smoke the bees well and see that they have filled up with honey. Clean all the bees off the brood combs and let them run in with the rest, and give them back their supers. This puts all the bees in with the shaken swarm. Go over the brood and destroy the queen cells that may have been started. Put queen excluders on the nurse colonies and divide this first lot of brood up among two or three in supers placed above

the queen excluders. By using judgment and not giving a colony at first more brood than it can attend to, the brood combs will all be looked after, and the nurse colony to which they have been given will increase in bees at a surprising rate. In a very short time the supers can be filled out with brood combs taken from other shaken swarms, and after these have been in the hive for a few days, whole supers of combs can be added at a time, until the hive is several stories high above the queen excluder. After these brood combs have been tiered up for a week or ten days they are in prime condition to divide up for nuclei. The uncapped brood will all be sealed over and cells from which the young bees have hatched out will be filled up with fresh honey, and the hive will be running over with young bees that will stay in a new location. To start the new colonies take from two to four combs with adhering bees, give them a ripe queen cell and place on the stand they are to occupy. Examine in ten to twelve days, and if eggs are present in the combs the young queen has hatched out and mated, give them more room as needed, and if any further shaking is done after the nuclei are made up the combs from such can be distributed among them, one or two to each, depending upon their strength and ability to look after the uncapped brood. This uncapped brood in the nuclei will indicate whether or not a queen is present. The bees will start queen cells upon it should she be missing. If such is the case then insert another cell. Should the honey flow drop off suddenly it would be as well to stimulate these nuclei with a little thin sugar syrup and by the fall they will be the best stocks in the yard.

In order to get ripe queen cells at the proper time there is no simpler or better way during the swarming season than by savng the cells from some of the best colonies that have swarmed. Instead of shaking these colonies let them swarm out and hive the swarm on a new stand. The brood and queen cells will then have the best of care, and in about six days after the swarm has issued cut out the best cells carefully and proceed to make up the nuclei as outlined above, giving one cell to each. This work must be done very carefully, no jarring the combs that the cells are on, or injuring them in any way. If one is acquainted with Doolittle's method of transferring larvae into prepared cups and giving them to a populous colony above a queen excluder, there is no better way to secure ripe cells at this time of the year. True, this method requires some study and experience, but it is time well spent by any bee-keeper, for not only are the queens obtained by it first-class in every respect, but it has the further advantage of hatching them out at exactly the time they are required.

"Bow Park," Brantford, June 1, '07

WINTER HIVE ENTRANCES.

---CLIPPING QUEENS' WINGS.

Thanks to Mr. Byer for evidence that entrances contracted for winter all on one side do not always prove disastrous.

And he is setting a record when he gets his bees to roar at night in maple sugar time. (A sleet had torn maple branches everywhere, and then it came warm.)

And the Byer method of clippi

queens is likely to prove very catching among spry-fingered operators who delight in doing something other folks can't do. (Curved surgical scissors, which can be had for about 60 cents a pair. And deftly whisk up the wing and clip it without touching the queen elsewhere.) "No use o' talikn'," the scent of human fingers does sometimes cause queens to be attacked and killed. Thus the improved way is a life-saver. One heavy objection to the usual way is that the queen at once throws a foot upon one of the blades in the effort to push it away, and loses a foot in the process. The Doolittle way with a keen pen-knife is vastly safer, as well as being a good way otherwise. Whether the Byer method is splendid or bad depends partly upon whether the queen is, or is not, going to notice the thing enough to "put her foot in it." I hope she will not; but it needs lots of watching—and lots of examination of queens afterward—to be sure of it. Very desirable to obviate the scent of fingers which the Doolittle way puts on. I don't clip. If I did I think I should use wire forceps—made of such fine wire as frames are wired with. Loop on each tip sized and shaped like a bean. This wire, when doubled and twisted, is just stiff enough to hold the queen, and just flexible enough that you can't pinch to injure her. Once in the forceps, you can focus her in your specs and proceed so deliberately that the danger of amputating feet and legs is minimized. Alas, she is so quick, and the human nerve telegraph so slow, that the foot may go in just as the blades close by any scissors method —unless, possibly, by the method which uses a West cage and pulls a wing through the wires before cutting.—Hasty's "Afterthought" in "American Bee Journal."

USES OF HONEY IN FOODS AND REMEDIES.

Translated by C. P. Dadant.

The Paris bee-paper, "L'apiculture Nouvelle," quotes the following from a small pamphlet by a French author, Mr. C. Moulin. The scientific men tell us that honey is an almost complete food, very beneficial to man's body and very easy to digest, because contrary to sugar, it does not need to be transformed in order to be assimilated; because like sugar, and without having any of the disadvantage of sugar, and under a small volume, it restores the strength of a fatigued man who still has to perform muscular labor before being able to take food and rest; because being slightly laxative and diuretic, it helps the functions of the intestines, and of the kidneys, and through this the elimination of used-up substances which are in the organs. This is important with sick people, in whom these functions are ofter inactive and are yet needed to eliminate the cause of disease.

So honey is much preferable to sugor to sweeten the herb-teas; a single spoonful of honey diluted in a cup of hot water constitutes what might be called a "tea-of-a-thousand-bloom," for the bees have visited even a greater number of them to harvest it. It is an excellent excipient for medicines,

and for this reason is much employed in pharmacy, especially for veterinary medicines.

It contains formic acid—a very antiseptic substance; that is to say, a substance which destroys many ferments and several sorts of microbes; for that reason it was formerly employed a great deal to cure eye-soreness, cuts, scratches, burns and small wounds, and the Romans employed it to embalm the dead, by putting in honey the bodies they wished to transport to a distance.

For the eyes I have devised a mixture of equal parts of rose-water and choice honey, which cured many persons suffering from cold draughts, bruises, irritation of the eye-lids or benign opthalmy; for recent wounds, scratches, cuts and burns of a light form. I have manufactured an ointment which I call the "apiarist's salve" by mixing thoroughly, over a bain-marie, one part of fresh propolis, two parts of white beeswax, and seven parts in honey. Applied with carbolated cotton wadding; this runs less than pure honey, covers the sore better, and better prevents the access of ferments, of microbes suspended in the air, or of the air itself, of which the oxygen is the great disentegrating agent in nature.

A physician of my friends, has stated to me that he has cured stubborn cases of constipation upon several of his clients by making them take, every evening, a large spoonful of honey, when going to bed, sometimes for several months together. That this has succeeded fully as well as sending them to Switzerland, to be cured with buttermilk, or to the South or to Italy to be cured by eating gr apes and figs, and that this honey-cure may be practiced in any season of the year.

Doctor Pauchet, of Arcachon, substitutes, to cod liver oil, the "butiromeil" composed of two parts fresh butter and one part of honey, mixed and whipped together, which makes a sort of cream and is used without repugnance by his patients, and produces upon them the same results, approximately, he says.

Doctor Boudard, physician in the Navy at Marseilles, has stated to me that he and several of his colleagues have relieved many persons afflicted with nervous debility, neurasthenia and other nervous affections that prevented them from sleeping, by advising them to eat but little at their evening meal, and take two or three tablespoonfuls of honey when retiring.

I must stop, for it would take two more pages to give briefly all that I have been told by doctors, or that I have read in scientific works on the benefits of honey for the health.

The most satisfactory and most useful preparation I have devised are syrup of honey, which are not so limpid as those found in commerce, but are much more salubrious. I made these by mixing a quart of water to 8 lbs. of honey, which I heat au bain-marie (over hot water) and skim. If I incorporate in the syrup from 50 to 100 drops of esence of eucalyptus syrup with which I cured rapidly a great number of persons suffering from colds, hoarseness, sore throat and the slight atacks of bronchitis by directing them to use half a pint of this syrup, which they must take in table spoonful doses with a tea made of basswood blossoms or orange leaves, according to the case; and I have relieved a number of others having chronic affections of the respiratory organs such as catarrh of insomnia.

If instead of essence of eucalyptus I use in the syrup of honey the same quantity of essence of mint, it becomes suitable, in doses of a teaspoonful in a cup of hot water to help weak stomachs, or prevent indigestion

in persons whose digestion is accidentally bad; if I use essence of aniseseed it becomes antiflatuent. If I use essence of pine-apple or of raspberries, etc., or, better yet, if I use instead of water to make the syrup, the same proportion of well-filtered juice of currants, raspberries, cherries, etc., I have a syrup which in hot weather makes a splendid preparation for seltzer or soda-water, or other mineral water.

I manufacture pastes similar to jujube-paste, which I also cut into small squares or lozenges. Melt in an enameled skillet over a bain-barie, 2 ounces of gelatin with 3 ounces of water. When by stirring you have brought the gelatin to the consistency of soft dough, still stirring briskly pour into it slowly about 14 ounces of honey which has been previously heated also au bain-marie; when the parts are thoroughly mixed, pour it into a paste mould, or into a flat dish which has been lubricated with choice olive oil. If before pouring out we incorporate, into the paste, essences of either eucalyptus, mint or anise-seed in the proportion of 50 drops per two lbs. it requires the same properties as the syrups, according to the essence used, and I sometimes color diversely both paste and syrups for the trade of confectioners and dealers.

If I incorporate into the paste from 8 to 12 ounces of cocoa, and a little vanilla, I call it "cocoa honey" and I pour it into chocolate moulds. It then resembles chocolate, by taste, appearance, and preserving qualities, and may be used in the same way, either as a dainty or with milk or water at the breakfast table. By simply mixing one part of sweet almonds, and a few ey and a little vanilla, we secure a paste which may be preserved for several months, in a jar, and may be used in a similar way. A mixture of one part of sweet almonds, and a few bitter almonds crushed, with two parts of honey, makes a delicate almond-cake paste.

I have succeeded, but modeartely, in making the honey-pastry, but I have secured somed elicious dishes, such as chestnuts and honey. I first remove the outer shell then bake them with steam or very little water, then removing the second peel and the diaphragm, I roll them in honey scented with vanilla, while hot, and then in this way I have a dish much resembling the highly-prized iced-chestnuts.

I dedicate this little essay to the kind and lovely women who are the natural nurses and usual housekeepers of the homes, and are very much more intelligent and much more expert than ourselves in the preparation of all these little dainties.

THE CANADIAN BEE JOURNAL.

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Editor, W. J. Craig.

JUNE, 1907.

THE EDITOR'S CORNER.

The blue pencil mark on the wrapper is just to remind you.

We have heard from most of the districts of the Province, and from points east and west, and the story is much the same all over. Occasionally we get a cheery word, but on the whole reports are far from good. Wintering was poor or bad, and the cold, late spring following has been simply disastrous. For the bees that came through in fair or middling condition, the fact of clover being nearly three weeks later than usual is going to be a redeeming feature of the season. The situation has improved immensely the first week in June; warmth even now would work wonders.

Mr. Frank P. Adams, at the Brant County meeting, June 25th, told us of his good success with the Alexander system of building up weak colonies by placing them on the top of small ones also of the gain by stimulative feeding. Mr. Adams uses the Alexander feeder described elsewhere in this issue. We can readily believe that this is a season when a little "coddling" would pay.

Foul brood inspection in the Province is now being carried out according to the new system arranged by the Department of Agriculture and approved by the Ontario Bee-keepers' Association at its last annual meeting, viz., the Province divided into six districts or divisions and an inspector for each. The following are the appointments and territories:

Division No. 1—Matthew B. Holmes, Athens. Lennox and Addington, Frontenac and east.

Division No. 2.—J. L. Byer, Mount Joy. Victoria, Peterboro, Northumberland, Durham, Prince Edward, Hastings and Ontario.

Division No. 3.—H. G. Sibbald, Claude. York, Peel, Simcoe, Dufferin and Halton.

Division No. 4.—J. Alpaugh, Dobbington. Wellington, Waterloo, Perth, Huron, Bruce, Grey.

Division No. 5.—J. Armstrong, Cheapside. Norfolk, Brant, Oxford, Elgin, Kent, Essex, Lambton.

Division No. 6.—William McEvoy, Woodburn, Wentworth, Lincoln, Welland, Haldimand, Middlesex.

Secretary Hodgetts, in announcing the appointments, says:

"I might say that most of the inspectors have been at work, and are sending in weekly reports of the conditions in which they find the apiaries. While there seems to be considerable foul brood in certain sections, still I have every reason to believe that before the close of the season a great step in advance will have been taken in reference to the treatment of this disease. We hope that the bee-keepers all over the Province will notify us at once whenever they have suspicions of foul brood, so that the Department may co-operate with them."

In referring to the reports on bee-keeping, Mr. Hodgetts informs us that he is going to take this matter up in the Department and see what can be done. The Department has already issued a circular to bee-keepers, and is keeping informed on bee-keeping conditions in the Province, and will no doubt investigate the cause of the past season's losses.

NORFOLK COUNTY BEE-KEEPERS' ASSOCIATION.

The spring meeting of this Asosciation, held in the apiary of Mr. W. W. Simmons, at Ronson, May 28th, was a decided success. Quite a large number of bee-keepers and others interested in bee culture were present. A party from Simcoe and outside points arriving on the noon train were hospitably entertained by the Simmons family, and a very enjoyable time was spent. Afterwards the company assembled in the bee-yard, where Mr. James Armstrong, the apiary inspector for the district, conducted an examination of the colonies, and a general discussion on management took place, and was practically illustrated. Mr. Simmons' bees, though suffering considerably from spring dwindling, were free from disease. Quite a large percentage of the apiaries in this district are more or less affected by foul brood, and the subject dealt with by Mr. Armstrong was interesting to all present. A resolution was passed by the Association pledging to assist the Inspector in every way possible to eradicate the disease. All were warned against the practice of setting out combs with honey or cappings for the bees to clean out, also against feeding honey back to the bees in any form, and against the interchange of combs from one hive to another.

Members reported a great amount of spring dwindling, and principally among bees wintered indoors. Those who wintered outdoors and had their bees properly protected lost practically none, and their bees are in fine condition.

At the close of the meeting a very hearty vote of thanks was passed to Mr. and Mrs. Simmons for their kindness.

L. Beaupre, Sec.

WINTER STORES.

It is written "His son learned obedience by the things which he suffered." As we have suffered heavy losses in bees the last winter, we should learn obedience to the laws of Nature. However, it might be years before a like condition occurs again.

Knowing E. W. Alexander of New York had experience with buckwheat stores, I wrote him, and he replied as follows:

"In regard to honey as winter food for bees, the opinion seems to be gaining fast among our most successful bee-keepers that a syrup made of granulated sugar is a far better winter food than any grade of honey we have. I have never myself tried it to much of an extent, but what I have seen of its use in large apiaries, and very many reports from those who use it as a winter food, I am led to believe it is the coming food for winter. Some seasons our buckwheat honey takes our bees through the winter in good condition, but I don't think it is ever quite as good as clover honey, even at its best. There is some pollen gets mixed with it in the flowers, which has a tendency to give the bees dysentery. In this location our bees frequently get some honey-dew at the close of the harvest, which causes them to die just as you speak of yours having done. They don't die in the combs, as bees do when they starve to death, but with bodies extended they drop down and die on the bottom board. We have about concluded to extract nearly all the honey from our hives in the fall, and then give them sufficient sugar syrup to last them until spring. The additional expense would not be much, and I am sure we would have healthier colonies when carried from their winter quarters."

My own experience has been similar

to that of Mr. J. L. Byers this spring. I found the yards where most clover was gathered came through much better than where the stores were all buckwheat, you might say. McEvoy deserves a leather medal for advising Adams to feed sugar syrup early in September, and so wintered all his 250 colonies.

I am in a quandary, first, what I am to do with 200 very heavy combs of buckwheat honey at the backs of 100 dead hives, in Jones frames, also what to do with the 300 combs half full. The best I know now is to place them at the back end of light hives next fall and into new swarms this summer, and to extract the half-filled combs and sell the honey in some very far-off market, or to the "particularly sweet tobacco" men. Perhaps I might feed it to my cow and horse, who are dangerously fond of it. My old cow tipped over ten or twelve supers full of extracting combs (left for the bees to lick out), and ate clean up over 100 good comb for the sake of the honey in them, last November, when I was at the Toronto bee convention. Second, if bees should gather largely of "bug juice" this season, how to manage fall feeding. Three plans suggest themselves to me, viz., to feed every hive, light and heavy, ten or fifteen pounds of sugar syrup made from white granulated sugar, or, second, take out three or four combs near the centre of the hive if all are heavy, replacing them with empty or light worker combs and then feeding, or, third, if I should get some clover honey to simply save out a number of heavy sealed combs of it, a couple to be placed flat on top of light hives, with an inch hole in the middle and sticks one-quarter inch square between.

I don't know if bees fed syrup will place it just where they would use it first, and also whether they would use it in preference to buckwheat or honey dew stores till first of April.

I see the Halton and Peel bee-men report at their last convention better success than we had in wintering. For instance, I lost 40 out of 95 in the home yard, and about as bad in the two outyards. Neighbors Henry, 18 out of 20; Graham, 28 out of 40, and Webster, 38 out of 40.

Might say that I had my first swarm 29th of May this spring.

R. F. Whiteside.

Little Britain, Ont.

[Friend Whiteside, don't know that your text is very applicable to your subject, but we all have had quite an experience, whatever may accrue from it. One thing is certain, there is going to be more sugar syrup fed for wintering stores in future, though, if one has it, there is nothing to equal the good, well-ripened clover honey. The temptation, of course, is to turn all the light honey to surplus.

Sorry for the old cow. Has she had indigestion since?—Ed.]

No man is beaten until he admits it.

In every avenue of life great opportunities are constantly confronting us. Who are ready for them? Who will fill the positions? It is the prepared men, those who are equal to the places, who generally get them.—"Success Magazine."

A man ought to look upon his career as a great artist looks upon his masterpiece, as an out-picturing of his best self, upon which he looks with infinite pride and a satisfaction which nothing else can give. Yet many people are so loosely connected with their vocation that they are easily separated from it.—"Success Magazine."

The Beginner's Page

Department Conducted by E. G. HAND

The month of May just past has been perhaps the most backward for the bees, as well as for everything else, on record. It contained fewer good days—days in which the bees could fly and gather honey and pollen, than usually occur in the month of April. Only bees that had abundance of honey in their hives early in the spring have been able to pull through, unless feeding was resorted to to keep them supplied and to keep the queens laying. Snow has fallen several times during the month, there being half an inch or so on the morning of the 28th. Even at the best of times the cool nights prevented the secretion of nectar in the dandelions and other early flowers that persisted in blooming in spite of the weather.

The beginner who succeeded in having his bees come through the past winter and spring in good condition may rest assured that the conditions existing in the hive last fall have stood the most severe test successfully, and if he knows just what those conditions were, and can have them the same every year, he should never be troubled with winter and spring losses to any extent. But the same conditions do not always produce the same results, and "beginners' luck" often makes the novice's hat too small for him. It is almost safe to say, however, that none of the younger class of bee-keepers has come through the past month with the idea still clinging to him that bee-keeping is all "beer and skittles," and the earlier in his experience the beginner learns this fact the better it is for him.

But that is in the past—or should be by this time, if we are to have any honey season at all this summer, and what is no doubt worrying the beginner now is, when to put his super on and a few other things like that. The average beginner seems to have an idea that, as soon as a hive appears to be full of bees, they are ready for a super, or top storey. This, however, is not always correct. Let us see: The super is for receiving the surplus honey, that is, the honey gathered by the bees over and above what they require to feed themselves, and the brood in the hive, and to produce wax (for the production of wax by the bees necessitates the consumption of a large amount of honey). Now, the mere fact that the bees appear to be carrying in a lot of honey is no sign that they need additional room to store. Perhaps they are not carrying nearly so much as would appear to an inexperienced person to be the case, and until clover is well in bloom, it is seldom, very seldom, that the bees gather honey faster than they use it, for they use it wonderfully fast at this time of the year. There are cases where a hive becomes so crowded with bees before the rush of the white honey harvest commences that it is necessary, or advisable, to add upper storey to prevent too much crowding which induces swarming. In these cases if the bee-keeper has any dark-colored combs, a hive body filled with these is placed over the colony and the queen allowed to occupy them with brood until the time arrives for putting on the white combs or the section supers to receive the main honey flow, which as mentioned above, comes chiefly from

clover and basswood over most of Ontario. When the rush of honey begins, this upper storey of combs is removed, and any containing brood may be given to colonies which lack one or two combs of having their hives fully occupied with brood of their own. The bees must, of course, be shaken or brushed (brushing is better for combs containing brood) into or in front of the hive from which the combs are taken. If, before lifting the upper storey off a few good whiffs of smoke are sent down between the combs, the queen, along with many of the bees, will be very likely to run below and so be out of danger of injury in handling the frames. Allow about a minute for the bees to run down after the smoking before lifting off the upper combs.

How are you to know when honey is coming in faster than the bees are using it? When clover is nicely blooming and you see the bees coming in with heavy loads so heavy that they often have trouble in navigating, and fall short of the entrance of the hive when returning to it, take a peep in the top of the hive. If you see, between the top bars of the frames, that the bees are whitening the edges of the combs with new wax, and depositing little flakes of white wax on the sides of the topbars, as if they were looking for a place to build more comb, it is a sign the supply of honey is greater than the demand, and the time has arrived for the storing of surplus honey if there is to be any worth storing. When you see these conditions remove the cover and the cloth under it, if there is one, which there should be. If running for extracted honey put on a queen excluder and on that place your super of combs or full sheets of foundation. Put on your cloth and cover and there you are. When running for comb honey, a queen excluder is not generally used, as a queen will not lay eggs in the small combs in the sections, except in very rare instances. When the white honey flow begins, any colony which has not yet filled its hive with brood and honey may be contracted by having the combs which are not occupied removed and replaced with "dummies" or blocks of wood the size and shape of a comb. This prevents the bees from expanding their living room sideways and forces them into the supers. If the combs below are left in their places, the bees will fill them principally with honey, before going into the supers. This principle of contracting the brood chamber to hasten the storing of honey in the super is all right when one wishes to see how much money he can secure from his bees, without regard to how much feeding he will have to do in the fall to get his hives up to the winter weight. The writer prefers not to be greedy any more, but to let the outside lower combs be filled solid with the best honey there is, which is none too good for the bees in their long winter confinement. Buckwheat honey may be all right for winter stores where no honey dew is stored along with it, but that's not in Victoria county, as some bee-keepers have learned to their sorrow during the past two winters.

It seems early to be talking about getting ready for winter, but if you are going to be a sucecssful bee-keeper there is one thing you must keep in your mind in all your season's work and that is, that there is a winter coming. Don't think that because honey is rolling in in June that it is going to keep on rolling until the fall. If you do, you will render yourself liable to disappointment. Clover lasts about six weeks, as a rule. Basswood follows it (sometimes) and lasts from two to ten days. When basswood is done the white honey flow is past.

Fenelon Falls, Ont.

The Outlook.

District No. 1.

Re District No. 1, so far as I can arn, the bees wintered very well, but e beastly cold weather in April and ay knocked them pretty nearly clean t. No apple blossom yet (May 30). ums just opening. Dandelions plenty. over came through in fine shape, but e severe winter killing of '05 an '06 aves it yet considerably behind pre- ous years. For the bees that will be dy for the clover prospects are good r a crop.

W. J. BROWN,

Prescott Co.

* * *

District No. 2.

The spring here has been about as d as it could be; you can have an ea what it is like when there is no n of fruit bloom yet, excepting wild ms and cherries, which are just ming out; still, my bees are nearly in fine shape. Have been using lexander" feeders on my light col- ies in my home yard and my out rds were all very heavy in stores en they were set out which accounts their condition now.

Clover never looked better. If we uld only get the warm weather now.

A. A. FERRIER.

Renfrew Co.

* * *

District No. 3.

This is the kind of spring weather at will make us here, in Eastern On- io, more appreciative, while it may ve a salutary effect on the bee- eper in that particular, the very cold d backward weather is certainly ving a bad effect on our bees. Our n loss in colonies will nearly equal per cent., other bee-keepers in the counties reporting even much heavier losses. This 31st day of May finds discouraging weather still, fruit bloom not yet open (except plum). However, "we'll wait till the clouds roll by." We are not likely to see this duplicated for the next fifty years, so let us be cheerful.

M. B. HOLMES.

Leeds Co.

* * *

District No. 4.

Prospects here not very good, heavy losses generally; bees away behind; weather so very cold up to the present and prevailing cold winds bees were lost in flying out about as fast as they were bred. My own bees came through the winter very well, but have lost since about 30 out of 165. However, have a very good stock still and building up very nicely now, so may secure a fair crop yet. Fruit bloom is very late, just coming out. Clover came through very well, but is late, too, and I think we can get the bees in shape for it.

R. LOWEY,

Prince Edward Co.

* * *

District No. 6.

My bees have held their own much better than I expected. If weather keeps fine will be able to get them ready for clover by June 20. I think there has been fully 25 per cent. loss in this section.

WILLIAM COUSE.

eel Co.

* * *

District No. 7.

Bees wintered fairly well, but the unseasonable cold weather during April and May has been a back-set to many of the weaker colonies, causing spring

dwindling. If weather would turn favorable the prospects on the whole are not so bad. Clover seems to be in good shape.

J. H. SWITZER,

Dufferin Co.

* * *

District No. 10.

Bees in this district wintered fairly well ,although two instances are reported of from 50 to 75 per cent. loss in cellar wintering, from unknown causes. The winter was favorable, either for those wintered outside or in.

The first flight, however, was in latter part of March and the weather was most favorable for some three or four days. From the beginning of April, however ,till the 23rd, there was all kinds of weather, and it was even as late as the 27th before some colonies were removed from the cellar. Spring dwindling was a common occurrence and very few colonies held their own. Brood-rearing practically ceased with those wintered outside for some three weeks in April. I should estimate that not over 50 per cent. of those put into winter quarters are in a condition to gather surplus this year.

G. A. DEADMAN.

Huron Co.

* * *

District No. 12.

The bees in this district, so far as I can learn, have suffered severely during the past cold winter, and the present unfavorable spring. The loss will be 30 per cent. at least, some bee-keepers losing nearly all they had. The clover fared better than the bees and with favorable weather the forage promises to be fair.

DENIS NOLAN.

Simcoe Co.

* * *

Quebec.

Regret to say conditions are not very favorable for a honey crop, nowhere nearly what we usually get in this province. The bees were put out early in many cases and the cool weather of May has reduced them very mu The loss in colonies is considera With favorable weather from now conditions would quickly change, we might still have a fair season. B should be well cared for from now and this would help in a measure make up for the lateness of the sea

F. W. JONES

Mississiquoi, Que.

I regret to inform you that the s son is very bad here, always cold. So days it rains, and we had no more t one fine day a little warm every w in May. It must be very bad on poor little pets, and I wonder how t will come through the struggle. I a bee-keeper since fifteen years, never had such cold bad weather late as May 30. **Jacques Verret**

Quebec, Que.

* * *

Nova Scotia.

Conditions in Nova Scotia are v variable. With myself it is yet rat early to speculate. Last spring fully as backward as this one with here, fed up to middle of June, notwithstanding I got an average 100 lbs. to the colony.

The bees wintered well, but have built up because of the cold; they tually were not able to get to the fie They gathered pollen four days ear than last year, however.

J. J. M'KA

Pictou Co.

* * *

New Brunswick.

Owing to the long winter bees w fully a month later getting out t usual, which caused very heavy wi losses, and almost a total loss in ho dew districts. The spring has been usually late and cold, and colonies h not built up. Prospects are there be very little honey in New Brunsw this year.

E. L. COLPITT

Westmoreland Co.

Manitoba.

My bees wintered in first-class con-tion. My loss was one per cent. ney were in the cellar six months. r being so long confined I think it markable.

W. E. COOLEY.

Shoal Lake.

* * *

Prince Edward Island.

Bees wintered exceedingly well, considering the long winter. Were put on their summer stands about April 25th. Weather has been very unfavorable since, causing considerable loss. Colonies are building up very slowly. Winter and spring losses will amount to about 15 per cent.

W. E. PICKERING.

Queen's Co., P.E.I.

BROOD COMBS AT THE BEGINNING OF THE HARVEST

"How are the bees prospering, Mr. nith "

eem to be doing fairly well, Mr. Doo-tle. Some of my hives have frames them which are already nearly solid th brood."

"You mean that now and then a col-y has one or two frames near the ntre of the brood-nest in which the od comes out nearly to the bars of frames where the brood is the fur-st extended near these bars."

"Yes, I guess that would express it tter, I find that the queen lays her gs somewhat on a circular plan ra-r than in the square form of the me, and the eggs the furthest out this circle of brood in each frame mes very near, or so that the cells ntaining them touch the wood of the d-bars and the top and bottom bars one or two frames in some of my st colonies. Is that good for the e part of May "

"Very good, indeed."

"I thought it good; and if I can have e whole number of frames in the ves, on all but two or three, filled some of these are when the honey rvest commences, I think I shall se-re a good yield of comb honey."

"Aren't you a little modest in your shes "

"I did not think so. This is about as good as I ever have frames filled with brood at the beginning of the honey-flow. Can you do better "

"I try to. I fear your hives may be too large if you do not get your combs nearer full of brood at the beginning of the honey harvest from white clover about the middle of June."

"Perhaps you may be right, for a successful bee-keeper told me at our last New York convention that he reduced the size of his hives a few years ago, after which it was no uncommon thing to have the combs in his hives with the brood touching the bars on all edges of the combs."

"In this that bee-keeper gave you one of the greatest reasons for his success, although he might not have known that he was doing so."

"Perhaps not; for his main claim for his success was that the hive which he used was a good one."

"Just so. And I claim that the main reason for its being a good hive and the main reason for his success with that hive is and was because he could thus secure the brood in the frames. Few seem to realize that, unless the hive is so filled with brood at the commencement of the honey harvest that it comes out to the frame bars in the most of the combs, there is not so good an assurance of a good crop of section honey, no matter how profusely the

flowers may bloom, nor how abundant the secretion of nectar in those flowers.'

"I can hardly understand that. Please explain."

"With plenty of unoccupied comb in any hive at the commencement of the honey harvest, goes the assurance of plenty of honey in the sections; for plenty of honey in the sections ,and much unoccupied comb in the brood-chamber, to the same hive, do not go together."

"Why not "

"Because, to give the best results the combs remaining in the brood-chamber at the commencement of the honey harvest must be literally filled with brood, otherwise the bees will commence storing their first honey in the empty combs in the brood-chamber, instead of the sections, then keep crowding down the queen till, at the end of the season, we shall have little honey in the sections, with few bees in the hive for winter. But with the combs full of brood, the first storing is done in the sections, and, having commenced work herein, the bees continue (not thinking of crowding out the queen at all), with little honey being put in the brood chamber, till near the close of the season, when the queen slacks in brooding of her own accord."

"But with me I have only the corners of the frames without brood, and perhaps two-thirds of the two or three outside combs, at the commencement of the harvest, and I had always supposed this was very good indeed."

"This is not so bad as more empty comb would be, but it is proportionately bad, and tends toward a decreased yield of section honey. If you had 100 colonies of bees, and this state of affairs detracted 10 pounds from the yield of each colony on an average, your loss for just one season would be 1,000 pounds of honey. And this would not be for one year only, but for every year you continue so to use your hiv
And as you would probably do nea
as much work, taking the whole sea
together, with your bees losing t
1000 pounds, as you would secure
it would amount to quite an item
you in the course of 25 years."

"Well, how can I remedy the mat
without procuring all new hives?"

"This is the way I do: I get, out
inch lumber, enough boards of t
same size of my frames so that I c
have an average of two of these
each hive I have colonies of bees
To these boards are nailed top-ba
to my frames, so that each board c
be hung in the hive, the same as
frame can, and which will take t
place of any frame I wish to remo
at any time. These boards I usual
call dummies, though they are oft
called division-boards. At the co
mencement of the honey harvest I le
over every hive having bees in the
and set apart all colonies which see
strong enough to work in sections
all, for that purpose. The average
such set-apart colonies which ha
their combs full of brood clear out
the bars of the frames will be abo
one-third of the whole, then there w
be about one-third of what is left th
will have one frame in the hive wi
no brood in it. This frame is tak
away, and one of the boards hung
its place. Another third will ha
brood in only eight of the ten Lan
stroth frames I use i na hive, and th
two frames having no brood in the
are taken away and two of the dum
mies put in their place. The oth
third will usually not be as good
these last, owing to poor winterin
poor queens, etc., and these may ha
brood 'n only seven combs, or an o
casional one may have only six fram
containing brood. But, no matter wh
the the number ,all frames, not havi
brood in them at the extreme begi
ning of the harvest are taken aw

d dummies put in their places
s way each colony is prepared to
rk in the sections in accord with
e number of frames occupied with
ood, and will give results in about
e same proportion as to the brood
y have."

"Suppose you find a colony with ood in only five combs. What then?"

"That depends very largely upon at my wants are, and what their ndition as to queen, etc. If I can t use them to better advantage, and e queen is young and vigorous, and s been kept back through lack of es from poor wintering or something o fthe kind then I run such for section honey, using their five frames of brood and five dummies. I would far rather allow a colony to go into the honey harvest with only five combs filled with brood and five division boards, than to have the same colony with five frames with brood and five empty combs, or have these five combs of brood scattered all about the hives in the ten combs. Herein is something the apiarists of this country do not put enough thought and study upon, to say nothing of their every-day practice.—"Conversations with Doolittle," in "Gleanings."

TILIZING THE SWARMING ENERGY WITHOUT INCREASE

n the spring I keep right straight ead, building the colonies up as rong as possible, without turning ide to clip queens, tear down cells shake swarms. Of course, where one ony is weak, but had a good queen, d another colong is so strong as to in advance of the season, I some- nes exchange combs of brood, but ere the colonies go into winter with ung, vigorous queens there is seldom uch of this to do. Yet there is con- derable atention required to get all e combs solidly filled with brood. er abundance of stores of honey in e brood nest, a solid comb of pollen, an old and mouldy comb that the es are tearing down, may be in such sition as to retard the depositing of gs by the queen.

The first swarm which issues is hail- with delight; and with many colon- s of equal strength there will be more on to follow. Upon the proper treat- ent of these swarms, and the old col- ies from which the swarms issue, de- nds a large share of our success.

The requisite amount of surplus re- ceptacles and clustering space should be on the hives, and the swarms should be placed back where they come from If the swarm isues, say. at eight or nine o'clock in the forenoon, I shake the bees from the limb into an empty hive-body having the entrance closed and a screen over the entire top to give plenty of ventilation while the bees are confined in it. The caged bees should be set in a shady place. After being in this box for an hour or so or long enough to become clustered, I can usually raise the screen without many bees taking wing, and cage the old queen. Take the queen away entirely. This will make them very uneasy. Late in the afternoon or after they have been in this uneasy state for five or six hours' I raise one edge of the screen slightly to allow the bees to get out slowly and return to their old hive of their own accord, but queenless. After this short season of confinement and queenlessness they will resume work with the energy of a natural swarm, and that is the kind of work we want. If the old queen is re-

turned with them they will sulk and swarm again, and the queen would not lay enough eggs to amount to anything if she were preserved.

Getting Second Swarms of Enormous Size

Seven days later the issuing of second swarms may be expected. I begin a record of the swarming colonies so as to distinguish between the first and second swarms. Second swarms are allowed to issue as unrestricted as firsts. Their energy is also wanted. Second swarms are of large size as they comprise all the bees which issued with the first swarm and those which hatched during the intervening seven days. If the swarms having old laying queens issue and both kinds cluster together it facilitates the work, as the bees will soon ball strange queens. And all queens will be strange. The queens can easily be picked out of balls and caged or destroyed. Though we will have a somewhat merry time a considerable part of the day, still we can devote our time quite steadily to other work, as it requires only an hour or so to take care of ten or twenty swarms.

Second swarms are caught in screened hive-bodies the same as first swarms. They will bring out virgin queens. These mixed swarms are released the same as before, except that a wood-zinc queen excluder is substitited in place of the screen to retain any remaining queen should there be one which I did not find by search. The bees usuallly get back into their respective hives the same evening or early the next morning and go to work as industriously as if nothing had happened.

After the second swarm is all out, and while the bees are looking for a suitable bush to cluster on, I go to the hive and destroy every queen cell. Four or five days without a queen, or any larvae from which to rear one, divests them of all desire to swarm. Then introduce a young laying queen or ... sert a ripe queen cell, and the col... is in condition to proceed to the ... of the harvest.

Old Queens of Little Worth After Th... Colonies Have Swarmed.

Extra hives and supers are not ne... ed. We have only old colonies, all f... of bees and all at work in the sup... all the time, except for a few hou... and that few hours of idleness a ... advantage. There are eleven days d... ing which the swarmed colonies m... remain queenless. There can be ... system with which the queen must ... slacken her egg-laying speed for se... eral days. If the colonies are caus... to rear an equivalent of eight we... filled combs of brood before swarmi... the fertility of the queen is so m... exhausted that she is of little accou... for the rest of the season. Hived w... a swarm she is only able to maint... a colony sufficient to utilize a bro... chamber. True, work progresses bris... when the swarm is first hived, but t... is the energy of the bees, not of t... queen. This work of the bees is ... more account in the hive from wh... they came than anywhere else. T... advancement becomes less and less ... the old bees of the swarm die of ... age. Some old queens when first hi... will get up a considerable amount ... brood, but that is what I choose to ... a dying effort, later there will be l... brood and the colony will hardly ... worth wintering. We might as w... try a good second crop of peas on ... vines ,or make hens lay in August, ... try to get a prifitable colony wit... queen which has once reached ... height of her laying capacity. If ... does much after hiving, it is nearly ... ways because her laying was restric... before swarming.

If the honey harvest lasts ... months or more, or comes late, a... the buckwheat localities of New Y...

may give time to increase the colonies and get all in good shape for the harvest. But even in such locations it will require only a short time until the number of colonies reaches the extreme that the locations will support.

When increase by hiving swarms is desired, the queens of first swarms are caged and the cage left with the confined bees, and the queen-excluder is put on in place of the screen as previously. If the queen still retains good laying ability the bees will stay, but if the queen is not of much account most of the bees will return to the parent hive. Such swarms are not worthy the use of a hive. If they stay, leave them until they begin to construct several pieces of comb. Then put in the frames of starters or foundation, but compel the bees to use the excluder as a hive entrance for two or three days more ,or they may play the trick of coming out and going to the woods.

That the lower storey may be entirely occupied with brood, a half storey is left over the chambers to hold the stores of honey. At the beginning of the harvest these are extracted, and, on account of their containing a quantity of old honey, the product is somewhat off color.—The Bee-keepers Review.

Prize List—Honey and Apiarian Products—Canadian National Exhibition at Toronto, August 26th to September 7th, 1907

	1st.	2nd.	3rd.	4th.
1. Best and most attractive display of 50 lbs of extracted granulated Clover Honey, in glass, 25 points for quality, 75 points for display	$5	$4	$2	$1
2. Best and most attractive display of 50 lbs of extracted granulated Linden Honey, in glass, 25 points for quality, 75 points for display	5	4	2	1
3. Best display (Clover, Linden, Buckwheat or Thistle) of 300 lbs of liquid extracted Honey, of which not less than 150 lbs must be in glass, quality to count 80 points, display 20 points	18	12	8	5
4. Best 300 lbs (Clover, Linden, Buckwheat or Thistle) of Comb Honey, in sections, quality to count 100 points, display 20; total, 120 points	20	15	10	6
5. Best 24 sections of Comb Honey (any variety), quality to be considered, that is to say, clean sections and best filled	6	4	3	2
6. Best 100 lbs of extracted liquid Linden Honey, in glass	7	5	3	2
7. Best 100 lbs of extracted liquid Clover Honey, in glass	7	5	3	2
8. Best 100 lbs of extracted liquid, or any other variety	7	5	3	2
9. Best display of 100 lbs of extracted liquid Honey, any kind, display to count 80 points	7	5	3	..
10. Best 20 lbs of extracted liquid Clover Honey, in glass	4	3	2	1
11. Best 20 lbs of extracted liquid Linden Honey, in glass	4	3	2	1
12. Best 20 lbs of extracted liquid Buskwheat Honey, in glass	4	3	2	1

13. Best display of 200 lbs. Comb and extracted honey suitable for a grocer's window or counter, space to be occupied not to exceed 6 feet square by 4 feet high	10	7	4
15. Best 10 lbs Beeswax, soft, bright yellow wax to be given the preference	4	3	2
16. Best exhibit of Italian Bees, with queen in single comb observatory hive	7	5	3
17. Best exhibit of Carniolan, with queen, in single comb observatory hive	7	5	3
18. Best exhibit of Caucasian Bees, with queen, in single comb observatory hive	7	5	3
19. Best and most practical new invention for the Apiarist, never shown before at an Exhibition of this Association	6	4	3
20. To the exhibitor making the largest, best, most interesting, attractive and instructive display in this department, including a limited amount of supplies and implements of interest to the general public	25	18	10

The Exhibits in this Department will be exhibited in the new Agricultural Hall.

All honey exhibited for competition must be the product of bees owned by the exhibitor, with the exception of Secs. 9, 19 and 20.

The prizes are awarded only for the quantity of honey specified in the various sections.

Exhibitors must not change their exhibits after the judges have given their awards.

Exhibitors selling honey during the Exhibition will not be allowed to make any removal from their regular exhibit, but may have a special supply at hand from which the honey sold may be taken.

In the solicitation of customers no unseemly noise will be permitted.

A breach of these rules will forfeit any prizes that may be awarded.

All exhibits in this department to be in place and arranged on Monday August 26th.

Exhibits in this Department will be judged by points.

Entries close Saturday, August 10th. Fee, 25 cents each entry. Manager and Secretary, J. O. Orr, City Hall, Toronto.

Prize List---Honey Department---Western Fair.

Weights must be as stated below or prize money will be withheld. There must be more than three exhibits in each section or first money will be withheld. The arrangement of Exhibits will count 5%

Sec.		1st.	2nd.	3rd
1	The finest and most tastefully arranged exhibit of Comb and Extracted Honey, Bees' Wax, the product of one exhibitor, put up in most marketable shape; not less than 400 pounds	$16	$12	$8
2	Comb Honey, 200 pounds, in sections, put up in most marketable shape, and so that sections may be handled for examination in judging.....	10	7	5

3	Liquid Extracted Honey, 200 pounds, put up in most marketable shape	7	5	3

Prizes in each, sections to 13—$3, $2, 50c.

4 Comb Honey, 20 pounds, in sections, in best marketable shape.
5 Liquid Extracted Clover Honey, 40 pounds, in glass packages.
6 Liquid Extracted Honey, not Clover, 40 lbs in glass packages
7 Extracted Granulated Honey, 20 lbs, in glass packages.
8 Bees' Wax, 10 lbs.
9 Honey Vinegar, half-gallon, in quart glass packages.
10 Maple Syrup, half-gallon, in quart glass packages.
11 Comb Foundation for Surplus Honey, by manufacturer.
12 Comb Foundation for Brood Chamber, by manufacturer.
13 Display of Queens, put in shape to be readily seen by visitors.
14 Queen Cage, admitted to mails by postal law.....Diploma
15 Assortment of glass packages for retailing extracted honey.....Diploma
16 New and most practical invention for use of apiarists.....Diploma
17 Display of Honey-bearing Plants, named and labeled.....Diploma
18 Display of Apiarian Supplies.....Silver Medal

Entries Close Thursday, Sept. 5th.

The Ham & Nott Company, Limited

Business Notice

BEE-KEEPERS' SUPPLIES

Beeswax very plentiful, we presume, from the large number of colonies that perished during last winter and spring. The tendency of the market is downward. We are now paying 28c cash and 30c in exchange for goods, f.o.b. here.

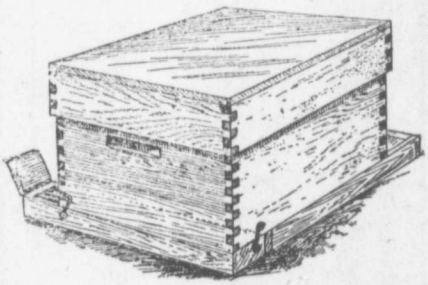
Customers sending bees-wax to be made up or sold would confer a great favor if they would be careful to put their name and address in an envelope, inside the parcel or package, also say whether the shipment has been prepaid. We have no end of trouble sometimes locating small lots, when the owner has neglected to do this.

In consequence of the reduction of the price of bees-wax, we have taken off the 3c per pound advance over the catalogue, that we announced earlier in the season. This will apply on wholesale and retail prices.

We have just received a large consignment of enamelled pails, 5 and 10 pound sizes. They are a handsome and attractive package in three colors: red, black and gold, and especially designed for honey, with full directions for its care, liquifying, etc. Bee-keepers requiring retail packages should write for a sample 5-lb., 8c postage paid.

The Ham & Nott Co., Limited.

Brantford, Ont., June 1st.



THE ALEXANDER FEEDER

These feeders referred to by Mr. W. Z. Hutchinson and other writers in this issue are certainly the most convenient for feeding small quantities for the purpose of stimulating the bees to brood-rearing, and, by using a large-size, as Mr. Hutchinson has been doing, may be all right for feeding stores. The invention originated with and is used by Mr. Alexander, of New York, hence its name. The Ham & Nott Company are stocking the Alexander Feeders this season for their customers.