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THE



# CANADIAN

# Honey Producer.

Its Reading Columns for the advancement of Honey Producers exclusively.

Vol. 3.

BRANTFORD, AUGUST, 1889.

No. 6.

## The Canadian Honey Producer,

PUBLISHED BY

E. L. GOOLD & Co.,

BRANTFORD, - - - - ONTARIO.

Published Monthly, 40 cents per year.

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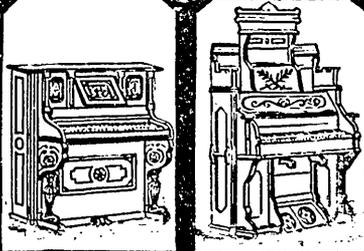
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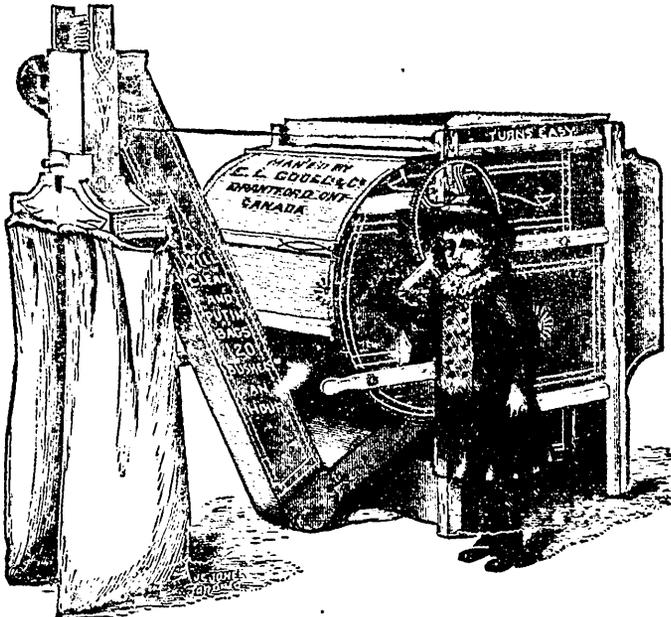
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## THE CANADIAN HONEY PRODUCER.

Vol. 3. August, 1889. No. 6

### OUR OWN APIARY.

June 26th.—Afterselling several colonies to save shipping, we had thirty-one colonies to prepare for shipment to Romney, Co. Kent. Owing to pressure of time we were unable to commence work until 3 p. m. Every frame was fastened down by means of a wire nail,  $1\frac{1}{4}$  inch, partially driven into each end of the top box projection, the lower story first, then the upper. Unless very strong, an empty half story was placed upon the brood chamber and a wire cloth covering over it. Ventilation was given by means of a portico entrance covered with wire cloth. Of course we should have preferred having the wood bottom board taken right off and it replaced by a wire covering with two cleats nailed under the chamber so that when the hive stood in proper position the wire screen would be  $\frac{7}{8}$  inch from the floor or ground, but we had no time for this.

Strong colonies had an upper story with four to six frames nailed at proper distance to allow bees to cluster on.

About four o'clock we were pleased to see a friend in need in the person of Mr. S. A. Dickie appear, and by the time it was perfectly dark all had been done but nailing the portico entrances to front of hives.

July 27-28.—At 6 o'clock all entrances had been nailed in place, and by 7 o'clock the bees loaded on a heavy dray and on the way to the car. Just here let us say in hauling bees one should unhitch horses just as quickly as possible after the waggon is in place; the object of this of course is, something may happen to cause the escape of bees, and if the horses are attached, serious results may follow. Again, if bees have or are escaping

when the waggon is at a stand still, these bees are more liable to trouble the horses than when on the move.—Arrangements had been made to load the car at once, and it was to be on the way by 11 o'clock. We must, in order to benefit our readers, give everything of value, let it count for or against us.

At the station we unhooked our horses after driving our waggon in front of car. Unfortunately the car had to be moved by the yard engine, and when returned was left standing some yards from the waggon. It was backed by hand, and the driver backed the corner of it against the car and broke one of the portico entrances to pieces. This caused a lively stampede and the smoker being on the waggon and no time to loose, the statement lately made that it takes a certain number of bee stings to kill a man was proven entirely false.

We may say we have moved hundreds of colonies of bees but never got the stinging we did between after dark yesterday and the time the bees were placed in the car, and never before had we a hive break open in moving.

By 2.15 p. m. we were in the car with the bees, both doors open, and on the way to Tilsonburg. The officials were very kind throughout and did everything in their power to hurry along the bees. At Tilsonburg Junction direct connection was made for St. Thomas, the latter place we reached about 5.30 p. m. and by 8 p. m. found ourselves upon the Michigan Central track.

The heat was intense and while the car was at a stand still (no air passing through as when on the move) the bees suffered much. No train could be caught until 2 a. m., 28th, at which time we left for Tilbury. When daylight came a number of very strong colonies had sufficient dead bees in the portico entrance to prevent ventilation, and we found it necessary to perform the very unpleasant operation of removing these, as the bees inside might perish. Tilbury was reached in about

six hours, a very good run for a freight train. We decided to leave everything else and take the bees through at once to Romney, a distance of ten miles, and went to look for two spring wagons. Fortunately we stumbled across a bee-keeper of the name of R. E. Smith, who is doubtless known to many. Through him two waggons were secured and after a short delay we were on the road.

Now no one should allow his bees out of sight. A man may be a first class driver, yet if he does not understand the habits of the honey bee he may make a terrible blunder. Therefore we took the rear wagon and made the one in front keep close to us, thus having both under supervision. This was fortunate for the roads were very bad and the driver of the leading team in going through a hole pulled up sharply and broke the strap on one line, he was thrown back and the horses, frightened, made a plunge, throwing one hive completely out of the waggon, and for the moment we pictured nothing but a total wreck of horses, wagon, and bees. The driver jumped out and held on to the lines, but knowing that when the bees started stinging, nothing would hold the horses, we shouted for him to unhook, which he did. To our surprise the hive although turned completely upside down was externally unbroken and not a bee escaped, one in the waggon however, tilted half out was shifted slightly and a few bees were escaping. After remedying this we had no further mishap and upon reaching Romney every entrance was opened and cleaned out. The state of the road may be imagined when we say that it took four hours to drive ten miles, with spring waggons.

If combs are broken down they should be put in place at once, as the bees attach them to adjoining combs and attempt to repair which often makes it difficult to repair. In the entire lot, including six combs in the hive thrown out, we think there were

only 17 combs broken down and every colony was alive.

All uncapped brood was destroyed. This of course had to be expected, as when moving the nurse bees could not be expected to feed the larvæ. This is a difficulty always attendant upon moving bees any distance and a reason why bees should be purchased as near home as possible. Of course the loss of the brood does no injury aside from the loss of numbers as the bees clean out the brood at once in every instance.

We must give the railway company employees and officials every credit for their attention and kindness and it would be as well to repay this by the judicious use of a little honey. A quart jar or so of honey does much to prevent any friction which might occur, and if any unusual trouble is given it will be taken in the same kindly spirit as the honey may be offered.

Almost all necessary steps have been taken to secure a very hearty reception to the members of the International American Bee Association when convening in December next at Brantford.

The Exhibition held in London continues to give prizes upon Honey and Bee-Keepers' supplies which show it to be in this department enjoying a Rip-Van-Winkle sleep. This is to be regretted and although many will judge that it is enjoying the same state of repose in other departments, we hope this is not the case.

Upon the question of misrepresentations about honey and the like, brother Newman of the *American Bee Journal* is continually compelling the leading papers of the continent to withdraw statements made, and statements which if not refuted would be very injurious to the bee-keeping industry. We congratulate Mr. Newman and trust he may continue to perform this often *unpleasant* task without flinching.

The honey season to date, July 10th, has been remarkable neither for its success as such, or its failure. Of course localities vary considerably. The amount of honey secured has been affected by the strength of the colonies when the season opened. The number of colonies kept in a locality no doubt also influences the crop. On the whole a fair crop thus far has been secured. Linden will tell the tale.

*For The Canadian Honey Producer.*

## THE HONEY SEASON 1889.

### WORK IN THE APIARY.

G. W. DEMAREE.

The season of 1889 commenced earlier than usual, and the spring was the driest for many years, and some thought that no such a drought was ever seen in this part of the United States so early in the season. No rain to wet the ground fell from February to the middle of May. Since the latter date we have had a continuous wet spell, and there has not been a *whole* clear day in the past six weeks. Besides all this much of the time the weather is too cool for the bees to spend a whole day at work in the fields, or even a half a day, and some days have been too cool for anything.

Now with this picture you ask, how have your bees made a living! Well simply because there has been plenty of nectar-producing flowers, white, and alsike clover, and it has contrary to the rule, secreted nectar at all times when the bees could visit the fields. Bees in Kentucky have increased by natural swarming, perhaps 50 per cent, and my apiary has given a fair yield of honey taken with the extractor, good colonies have stored 100 lbs. of surplus when furnished with two upper stories of standard size filled with good ready drawn combs. I never knew bees to require so much room in the way of comb surface in which to handle the in-flowing nectar. I had plenty of the best of ready drawn combs and I kept on adding room as fast as the combs were filled with the thin nectar. This thinness of the nectar was the secret of the want of so much room. (Query.—If bees “digest,” assimilate-honey in their stomachs as Prof.

Cook has announced to the world, why the necessity of this extra room to spread out the thin nectar to hasten evaporation? echo answers, why.)

Notwithstanding, the nectar was unusually thin to come from the clover fields, when evaporated and sealed up it turned out honey of extra fine quality. Both light in color and finely flavored. Bee-keepers are injuring the reputation of honey taken from the combs, by reason of greedy haste to remove the honey from the hives before it is thoroughly evaporated, the best evidence of which is the sealing of the cells by the bees. During the wet weather about the middle of June I was compelled to extract the honey from a great many combs that were not sealed near the bottom bars. Being forced to do this in some cases to give the bees room to keep on storing the in-flowing nectar, I took the pains to first run the partly unsealed combs through the extractor before uncapping the sealed honey, this gave me two grades of honey from the same combs. As the two grades were kept separate it was easy to see the marked difference, and I felt amply paid for the extra time and labor, which is not a serious item when the results are considered. “Honey is honey,” yes, but the quality is not always the same. Good thick honey can always be sold, and the reputation of producing just that grade of honey is the very best capital the honey producer can possess. My honey (out of the comb) is selling readily at 12½ cents a pound, when the city markets quote at from 5 to 8 cents. Have your honey nice and thick and you will never lose a customer who has once made a purchase from you.

### QUEEN REARING.

Owing to rainy, changeable weather the queen rearing business has made poor progress up to the date June 20th. If these conditions have prevailed over a large part of this continent I presume those persons who advertise queens for “nothin’,” will turn their crankosity in some other direction, and the bee interest will be relieved of worthless queens sent out to every point of the compass, “cheap.”

It ought to be known to all beginners in bee culture that good, strong, well developed queens, normal in color and size cannot be reared for the prices some advertise them at,

On the queen depends every thing pertaining to profit in the apiary, therefore to buy "shoddy" bred queens, is worse than throwing away money, it is throwing away opportunity.

#### DOOLITTLE ON QUEEN REARING.

The new book written by G. M. Doolittle on queen rearing is beyond doubt the best work ever published on queen rearing. Barring the author's nonsensical discussion of "natural ways," this little book is full of practical facts and manipulations so plainly and simply told that the beginner may understand it at once, and the expert may gather much from its pages that will help him to make his work easier as well as to open up to his mind many new and useful ideas. It is proper to say here that Mr. Doolittle's ideas of "natures ways" are badly mixed. To make a proper distinction between "nature" and "art," is a thing beyond his grasp.

I have noticed ever since I began to use the zinc excluder that bees, especially if the mother bee is getting old, will store and rear queen cells above the excluders, if there is present any brood of the proper age from which to rear queens. They will nurse larvæ transferred to embryo cells, they will accept artificial cells into which larvæ has been transferred. Now the excluder is man's "art," and the excluder makes "conditions" artificial, and the provisioned and inhabited "foundation" cells is a nice work of man's "art."

"Taking the thing as a whole Mr. Doolittle in his valuable little book, has formulated the nicest system of 'artificial queen rearing,' I have ever had the pleasure of contemplating. I have the greatest sympathy and respect for Mr. Doolittle's Bible idea of "nature." It is not in this respect that I criticise his views, it is his failure to make a proper distinction between nature and the art of man that has drawn out this criticism. With the "smart Ellic" who scoffs at nature I have no controversy, his crankosity is too devilish to merit any other feeling than contempt. In conclusion I have to say that a twenty dollar "green back" would not induce me to part with this little book if I could not get another.

Christiansburg, Ky.

The *Bee-Keepers' Review* has been stirring up the subject of Shade, &c. Below will be given several articles on the subject which we consider of merit.

#### *The Bee-Keepers' Review.*

**Humanity Demands a Shade for Bees.—The Apiarist Needs it.—Best Supplied by Large Trees.**

JAMES A. GREEN.

I believe it to be not only unwise but almost inhuman to allow bees in thin walled hives to stand in the sun without any protection from its rays.

No one who has ever seen how bees will cluster on the outside of the hive at such times, keeping in the shade cast by any projecting part of the hive, can doubt that they suffer greatly from the heat at such times. It is certain that the work of the hives must be greatly interrupted when the combs are thus almost deserted by the bees. When the hives are unpainted or painted in dark colors we see plainly enough at times the necessity of shade in the shape of melted combs.

It is not from the heat generated by the bees themselves that we have to guard, nor from the heat of the atmosphere as a whole. When the thermometer stands at 100° in the shade the whole atmosphere is heated up to that point, not altogether by the sun's rays passing through it, but largely by heat given off by the earth, buildings and other solid bodies that have been warmed by these rays.

A piece of metal, for instance, or a board painted a dark color lying in the sun may become much hotter than 100° at such a time. Then the inside of a bee-hive standing in the sun, whether tenanted by bees or not, may be much warmer than would be indicated by a thermometer hanging in the shade close by.

The walls of a chaff hive being non-conducting, the heat absorbed by the outer walls does not readily reach the inside of the hive, so bees in chaff hives do not suffer so much from heat as those in thin walled hives.

Shade in the spring months is probably a detriment, and for a large part of the summer season unnecessary. For these and other reasons there are some decided advantages in the use of shade boards. If I were looking only to the welfare of the bees, I would shade

my hives with shade boards. *Alas* have considerable regard for my own comfort, though, I would prefer to have an apiary, or at least a part of it shaded by large (not too large) trees. These should not stand too close together and should be trimmed so that the limbs will not come too close to the ground.

These in connection with a few shade boards where required, will add very much to the comfort of both bees and bee-keepers.

My own apiary is shaded mostly by trees and grape vines. Grape vines answer excellently for shade. I like the looks of them. I like to take care of them, and I especially like the grapes they produce, but I do not believe that they pay in an apiary. Better have them somewhere where they will not require such careful training to keep them within bounds. Many other plants such as sunflowers, tomatoes, &c., may be used for shading hives, but in a large apiary, for business, I should recommend only trees and shade boards.

Dayton, Ill., June 6th, 1889.

*The Bee-Keepers' Review.*

### Quilts and Shade-Boards Unnecessary, and Why?

I long ago voted quilts a nuisance. The first quilts were made of too thicknesses of heavy cotton cloth and stuffed with cotton batting. In a few months use they became propolized to stiffness, and holes were eaten in them, making them disagreeable to handle, besides, shrinking so as to allow bees to come up through.

The next improvement was enameled cloth. This was so much of an improvement that I went in for it as a duck goes for water, and now after using this for a few years, I wish to discard that also, for the enamel soon tarnishes, the edges become frayed, and holes will come through. The cloth cannot be put down evenly and just as it was taken off. In consequence the wax builders waste much time filling in all interstices. If I wished to start a bees-wax factory I think that would be the best way to get the bees to provide the crude material.

Early in the season the enameled cloth is hardly thick enough to retain the heat, then grain bag, and rags of all kinds are resorted to, which in turn, become the resort of ants

and bugs. The enameled cloth is sure to catch more or less bees under it as it is put down, and as you pass from the hive you will hear a plaintive peep, peep, from bees so caught, and if you do not relieve them an accusing conscience will follow you.

Another point in favour of the bee-space cover is that we do not remove it in winter, and substitute chaff cushions, etc., and bees winter snugly under such a cover.

There may be an advantage for the cloth in peeping into one corner of a hive, or removing one frame, but I think it so small that all the disadvantages enumerated heretofore in the *Review* greatly counterbalance it. In handling hundreds of both kinds I find the bee-space honey-board and cover a great improvement.

In relation to shade boards I am trying to dispense with them altogether. Some people like to see stone heaps piled up on their hives, but I do not; bricks are handier, but why shade hives when there are but a few hours in a day, and only a few days in the year, when they really need it? And, when the temperature is so very hot, there is but little honey coming in; and, as I have recently stated in *Gleanings*, the bees may as well loaf on the shady side of the hive as to loaf inside. If there is honey in the flowers, has the heat made any difference with the bees in their work of gathering it? And to get the matter down to a fine point, taking the seasons as they average, are there ten days in our northern states that a shade board is really necessary?

This question of shade boards is of great interest to those having out apiaries where, during a portion of the time, no one is on hand to replace them if blown off, as they surely will be in many exposed positions.

The shade board is an expense and a nuisance. That's the individual and collective opinion of the

RAMBLER.

*The Bee-Keepers' Review.*

### What Shade Upon the Entrances May do in Winter.—Asparagus for Shade.

E. E. HASTY.

There is one point connected with this matter of sun and shade which is seldom mentioned, and that is the curious result of

unequal shading at entrances when bees take a flight in winter. In an apiary where all the hives face the east, turn one around so it will face the west and it is liable to get extra strong in bees *at the expense of the other hives*. The way this comes about seems to be as follows: Along about eleven o'clock bees come out for an airing from most of the hives. At that time the sun is shining into their doorways, and things are pleasant there; but a little later the entrances are shaded and rather chilly. Many of the bees linger out, and when they finally conclude that they must go in somewhere they make for the place where there is the warmest and liveliest doorway. This of course is the hive where the entrance is on the western side. Bees seldom guard their doors much in winter. Where one chooses to go in, there he goes in. I'm inclined to think that all hives should be faced to the south when fixed for winter. I am quite sure that any object which shades one entrance more than the adjacent one is liable to deplete that hive of its bees. The tendency to rush like school boys to the spot where the crowd is merriest seems very strong in winter. It has been spoken of as a great puzzle why two colonies as like as two peas, so often come out so very different in spring. This is one of the reasons—the bees of No. 1 desert to No. 2 on pleasant winter days. As weak colonies can seldom have such a merry crowd at their doors as strong colonies have, they are pretty sure to suffer relatively from this cause. In fact, when the attempt must be made to winter weak colonies out of doors, I think it would pay to carry them to a different spot twenty rods away from their strong neighbors.

My summer shade is asparagus; but I am not going to blow its trumpet very loudly. For the first few years it is vexatious because it won't stand up as it ought. Strong old stools of asparagus, however, will stand against anything short of a hurricane. The main trouble is that too many precious hours must be spent in sheering it to keep it decently in shape. If left to itself it will grow all over the hive and make manipulation almost impracticable.

There seems to be considerable room for further invention before we shall have the best form of non-living shade. Meantime I incline pretty strongly to such double walls

and roofs as shall need no shade at all. But even then, if the hives are to face the south, I should pity the little fellows so, roasting alive in their doorways, that I should be for giving them at least a few inches of cotton awning stretched on a wire.

Richards, Ohio, May 27th, 1889.

*Canadian Live Stock and Farm Journal.*  
**Care about Winter Stores and Other Matters.**

R. F. HOLTEGMANN, ROMNEY, ONT.

July brings us to the days when we expect our surplus, and before the last days have come many of us have passed the season when we can expect surplus to any extent. Those who have a large number of colonies are more apt to study just at what time a honey flow may be expected. I say may be expected, because we may not have it; and yet on the other hand, if there is no linden in a locality, or no clover, or no buckwheat, we are quite safe to intimate no flow need be expected from such a source. There is no surer way than that winter losses are often occasioned by bad summer management, and to winter successfully, preparation for winter must commence in summer. During the past winter the greater part of the loss of bees has been occasioned through want of stores; and this is true to a certain extent every winter. What then shall the remedy be? Drawing attention to a system of management which shall avoid the danger referred to. Another cause of winter loss is stores of inferior quality gathered late, the bees having taken from them the best stores, and the inferior being left to the bees. Again, the feeding of colonies with sugar syrup causes loss through robbing. Now all this can generally be avoided by having a few extra combs, say two to each colony. Allow the bees to fill these well, drawing out the combs so as to contain more honey than usual. When these combs are well filled, take them out of the hive and put them into a warm, dry place ready for use when preparing your bees for winter. Some you may find require no honey, others more than two; you can put them where required, and if not required, you can extract them. If you cannot get the extra combs, leave the sealed combs in the hive in the upper

story, or put them as dummies in the outer sides of the brood chamber, but not before the honey has been capped in the combs you are about to place there.

#### DUMMIES.

As some may not understand what is meant by the term dummies, I will briefly explain what I understand by the term. They are boards, or any substance of the size of frames, placed in the brood chamber to contract it and prevent the queen rearing brood extensively, at a time when young bees would be too late to take part in gathering a honey flow. The dummies are generally made of wood, but a comb of capped honey makes the very best dummy, as the bees prefer passing over the latter sooner than over the boards. I say, capped honey, because if not capped, the bees are very liable to carry the honey above, making room for the brood below, thus defeating one of the objects of having the comb.

#### FERTILE WORKERS.

Very recently a leading bee journal was picked up, in which a beginner asks why there is more than one egg in a cell. The reply given is, that probably the queen's capacity for egg-lay is greater than the capacity of the workers to care for the brood, hence the queen deposits more than one egg in a cell. I have probably noticed more than fifty times, colonies upon combs, the cells of which had more than one egg in a cell, and forty-five times out of fifty found that no queen at all existed, but that the queen had been lost and the bees had not succeeded in raising a young queen, and some of the workers had become fertile, and these will nearly always lay in the method described. It is needless to say such an egg will produce only drones, and the colony soon dwindles away. A young queen will sometimes lay more than one egg in a cell, but she soon gives up that plan. Therefore, if you notice cells with more than one egg in them, be on your guard.

#### ANTS ABOUT HIVES.

These little insects often become a terrible pest about an apiary. They will locate themselves above the quilt of a colony, where the warmth from the bees below will help to hatch their eggs, and they can get an abundant supply of sweets whenever desired. As

most of us will object to this kind of farming, although in the distant future it may become a profitable undertaking, the insects will be considered a nuisance. Shake them off the quilt and scatter them, and they, like the honey bee, appear to have no difficulty in finding their location; and any one may well be puzzled to tell what to do.

I just lift up the quilt by its four corners, carry the ants upon the quilt quickly to the fire, and shake eggs, queen ants, drone ants, soldier ants and worker ants, into the fire. This done three or four times thins the ants out of an apiary pretty well.

A. E. Manum, *Gleanings*, recommends setting the hive upon tar paper. This, no doubt, would prove effectual, but as the bees are very sensitive, probably as sensitive to odor as the ants, the bees might be more inclined to swarm away from the hive and be irritated by the smell. Again, in times of robbing, it might prevent the ready detection of robber bees. However, the tar paper idea may prove valuable in other ways, keeping ants out of sugar barrels and such like; but remember, I have never tried it, although I have found it very effectual in keeping mice out of clamps by lining the clamp with tar paper. They do not care about gnawing through the material.

#### BEE POISON.

The *American Bee Journal*, in its issue of June 8th, asks a question in reference to the poison from the sting of bees upon the human system. The majority feel confident that the effect of the poison is only temporary, and a few are under the impression that some peculiarities of the system may leave bad results upon the system, and in very rare instances even death. It would appear from observation that this is correct. A healthy system does not appear to suffer for any time from the sting of a bee.

*The Australasian Bee Journal.*

#### UPWARD VENTILATION.

We have always advocated hitherto the adoption of porous mats and contracted entrances for wintering, but since assisting the Rev. Father Madan in carrying out his experiments in hive ventilation our views have, in this respect, been very much modified.

As our readers are aware, experiments have been conducted to test the internal temperature of a hive, both hermetically sealed and with porous mats, and, as can be seen by referring to the table of temperatures given from time to time in this journal, there was very little difference, seeming to show that upward ventilation was of little importance. Another circumstance observed since being located in Auckland goes a long way towards convincing us that upward ventilation is not so necessary as we had before thought, and that is the manner in which the bees hermetically seal themselves in by propolisising the exposed portions of the mat and any little crevice between that and the edges of the hive. We have never before seen so much propolis gathered as in this neighborhood. At Matamata it was only occasionally we saw any at all, and at the Thames very little was used by the bees, and in no case that we can recollect did we ever see the mats propolisised to any extent. Consequently, there was nothing to lead us to believe that the necessity of upward ventilation was contrary to the economy of the hive. Here, in Auckland, however, it is very different. A clean mat is no sooner put on the hive than the bees commence to propolisise every portion that they can get at, and in every case their endeavors appear to be to prevent the slightest upward ventilation. To give some little idea of the amount made use of by the bees in the hives here, Mr. Poole took from a chink about two inches long, situated at the junction of the upper and lower hive, a lump of pure propolis weighing over two ounces.

With these facts before us we can come to no other conclusion than that upward ventilation, at least in cold weather, is of doubtful value. If it is correct that the bees, if left to themselves, would carry out all the ventilation of the hive by means of the entrance, then it is reasonable to suppose that it should be left wider in winter than has been generally advocated. In America the wintering question is one of very great importance, and many leading bee-keepers there have advocated from time to time the stoppage of upward ventilation and the enlargement of the entrances. The question was recently discussed in the columns of *Gleanings*, when sixteen prominent bee-keepers gave

their opinions as follows:—Ten advocated impervious quilts or mats, four of these simply used the flat covers of the hive, which, being wood and covered with propolis, are impervious; woven mats were advocated by four only, and the remaining two gave uncertain replies. Enamel cloth appears to be the chief material used for impervious mats, but it is generally recommended that a warm chaff cushion should be used above it to prevent the condensation of moisture on the under side. In order to further satisfy ourselves on the point we have at present about twelve of our colonies covered with enamel cloth with some porous mats above, and the entrances enlarged to about seven inches in width. Others, again, have the ordinary porous mats only above the frames while the entrances are contracted to about three and a half inches. We expect by this means to finally satisfy ourselves which system is the best. If any of our readers have had any experience of both methods we should be glad of their opinion as to which they consider the most suitable.

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*American Bee Journal*

### Bees not a Nuisance.

Last week we gave in brief the decision of the Supreme Court of Arkansas in the celebrated bee lawsuit of the City of Arkadelphia vs Z. A. Clark. We expected to be able to give the decision of the Judge in full, this week, but in this we are disappointed. We have made several applications for a copy of it, but so far have not succeeded in procuring it. We will give it to our readers as soon as it comes to hand.

At present it is enough to know that the National Bee-Keepers' Union has succeeded in making itself felt, and has obtained the first decision on the question of whether bee-keeping can be lawfully construed as a nuisance or not.

The highest Court in the State, on an appeal from the decision of the Circuit Court in favor of the bees, has again decided that the pursuit of bee-keeping is legitimate and honorable, that bees are not a nuisance!

We now warn all the "ignorant" and "prejudiced" to keep their hands off—and inform them that bee-keepers have right

guaranteed by the Constitution of the United States, that all are bound to respect.

The decision of that Supreme Court is a document that will become of great use as a precedent. It will be a guide for the rulings of Judges—for the information of Juries—and for the regulation of those who may dare to interfere with respectable pursuit by law or otherwise?

The National Bee-Keepers' Union, in this one instance alone, has been of great benefit to bee-culture, even though it has received but very poor encouragement and support from bee-keepers in general!

Its legitimate work, however, is but just begun, but if it is to continue in the good work, it must be supported both by the financial as well as moral influence of all the apirists of America.

The General Manager has labored incessantly, without the hope of reward, except such as comes from a consciousness of having done his full duty. Reader, have you discharged your full duty in this matter?

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*The Australasian Bee Journal.*

### "Something about Exotic Honey Bees."

T. J. MULVANY.

In the February issue of a German bee journal published in Hanover (called *Bienenwirtschaftliches Centralblatt*) there appears an article with the above heading, written by Professor Hess, of which I will here take the liberty to give a condensed translation, as a supplement to the notes I have already collected on the subject of "Bees and Honey in the Tropics." The Professor begins by alluding to the fact that, besides the honey-bee to which his readers are accustomed, there are numerous varieties of bees which gather honey (and he might have added, some of which store it more or less in such a way that it may occasionally be made useful to man,) and expresses the opinion that any person who would write the natural history of all honey-bees in the world would doubtless afford us much interesting, and probably some practically useful information. In this opinion, I quite agree, but it is scarcely likely that any

naturalist will be in a position for a long time to come to undertake such a complete work, which would require tedious and difficult investigations in many parts of the world as yet but little known, in order to supply the necessary scientific data. In the meantime we must be content to collect as much information as we can (often imperfect and even doubtful,) which has been furnished in the books of travellers who have touched on the subject. The Professor, evidently taking the same view, proceeds to mention facts stated by some recent travellers in tropical countries.

First as to the Kalahara desert in South Africa (which is semi-tropical, and which I have already had occasion to mention as alluded to in Livingstone's travels,) he says:—

"As Farini reports, in his 'Description of a Journey through the Kalahari Desert,' the honey-bees found there seem to adapt themselves completely to the local conditions. They built their nests in the holes of rabbit burrows, in hollow trees, and in fissures of of rock; but they also content themselves with hanging their combs in the open air from branches of trees, or projecting points of rock.

"The manner in which the Bushmen seek out these nests is peculiar. As the desert is nearly destitute of water the bees find it very difficult to procure it, and assemble immediately where any is offered to them.

Making use of this fact the bushmen fill a fragment of an ostrich egg-shell with water and deposit it in an open place. In a short time a bee, scenting out the water, hastens to the spot, settles on the edge of the shell, and stills its thirst. Then she flies away to inform her companions of the great discovery. Soon the whole edge of the shell is covered with bees. The Bushman now cautiously holds up the egg shell, and as the bees fly away one by one he follows in the direction they take, and in that way arrives at the nest. He devours the bright white combs, not only for the sake of the honey contained in them, but also for the fat bee larvæ, which he considers a special delicacy. He also prepared a sort of beer from the honey by letting it ferment with the boiled juice of the water-melon."

The bee referred to by this traveller is, I presume, the ordinary African variety, *Apis Adansonii* of Latrille, and it is something new to find that it will build in holes in the ground in the absence of hollow trees or rocky cliffs. But the writer gives no description of the bee itself, and it is quite possible that it may be the small stingless bee met with by Livingstone in the Bakota country, a few degrees north of the desert; or there may be bees of both sorts at Kalahari, and possibly only one sort may build in the ground. The habit does not appear to belong to any varieties of the *Apis Mellifica* elsewhere. The manner of hunting for the nests is a modification of the ordinary bee-hunter's practice, based in this instance upon the greediness of the insect for water in that parched district. It is to be remarked that there are evidently no honey-guide birds in the Kalahari, such as are found in the more tropical regions of Africa; and also that the Bushmen seem to be behind the natives of the more central districts who provide a rude sort of artificial hive for the bees to build in. They are, however sufficiently wide awake to have discovered the mode of making a fermented drink from the honey.

Turning to Mexico, the Professor says:—

“G. Knoop, in the journal *Die Natur*, reports upon a sort of ants called *comjenes*, which hang their bee-hive-like dwellings from the branches of trees in the forests of Mexico. These dwellings are completely closed, the entrance being through a covered gallery formed along the branch and down the stem of the tree. In these structures of the *comjenes*, however, small honey-bees are found to dwell. They make an opening in the building at about half its height, and make their nest in the centre of it. The honey they deposit in large hollow spaces, but for the brood they build regular cells. With regard to the bees themselves, Herr Knopp says: ‘This sort of bee is about the size of our house fly, but of rather compressed build. The head is black, the body brown, but there are also found some which are entirely black. They have no sting, but are, nevertheless, difficult to manage, for as soon as one cuts open the *comjenes*’ nest in order to take the beautiful, clear, light colored, and liquid honey, the insects pounce

with such fury upon man and beast that it is impossible to guard against them, and if the swarm is large, one must absolutely take to flight. In an instant the head is covered with the little animals, which settle themselves in the hair and bite and pinch as well as they can. They creep into and settle themselves in the eyes, ears, nostrils, in the clothing about the neck, in the sleeves, trouser legs, in short in every place where they can reach the skin. Their legs are generally clammy with honey so that they can scarcely be removed alive, especially out of the hair. Such an attack is so unpleasant that, in the case of large swarms, we have always found it necessary to retire, in order, after a few hours’ time, to return and take the honey with greater ease.’

“In the mode of building, the black and brown bees were alike; in the quality and flavor of the honey, however, there was a considerable difference, with which the Indians were well acquainted.”

The editor of the *Hanover Journal* supposes these bees to belong to *Apis tregona*; but I think the description given tallies so completely with that of the *Melipona fusciculata* found by Bates in the valley of the Amazon River, as with those mentioned in the next extract, that there can be little doubt they belong to the latter genus. I presume also, that as in the case of the *Apis amalthæa*, mentioned further on, these bees do not dwell along with the ants, but take possession of their deserted nests.

The next place mentioned is Surinam (Paramaribo) in Dutch Guiana—a district lying north of the water-shed of the River Amazon—and it will be seen that the bees here met with are evidently of the same genera (*Melipona* and *Englossa*) so fully described by Bates as quoted at page 109 of this journal, though one species is mentioned as being nearly three-quarters of an inch long, while the largest found in the valley of the Amazon did not exceed half an inch in length. The following is the extract given from U. Kappeler’s work upon Surinam, published in 1887.

“Of bees alone which gather honey there are seven varieties known to me, of which

the smallest is scarcely 4 millimetres ( $\frac{1}{3}$  inch) long. The largest sort is something smaller than the *Apis mellifica*, about 18 millimetres (7-10 inch) long, and has no sting. It lives in hollow trees and in the neighborhood of savannas, where flowering palms and other plants afford a rich forage during the whole year; the combs, which contain the brood are not of wax, but of a brittle woody substance. The honey, however, is stored in bladder-like hollows joined together in tolerably large masses. These consist of black, pitch-like wax, which smells like the wax of the European honey-bee, but does not admit of being bleached. It is used by the Indians only for torches. A large bees' nest may contain two to three pounds of this wax, and 4 litres (French quarts) of good, clear, sometimes a little sourish honey. In order to obtain the honey the tree is cut down and the nest mercilessly destroyed. Although the bees do not sting they defend their property desperately, settle themselves in hair, crawl up the clothes and bite away valiantly.

"Another sort is the *Apis amulthea*, black with yellowish wings, and not over 9 millimetres ( $\frac{1}{3}$  inch) long. It builds also in hollow trees, but more often in deserted ants' nests. Their honey is also stored in bladder-like hollows of black wax, and is excellent in taste. Another sort of the same size is yellow, with green eyes, probably *Apis pallida*, and builds in the same manner. Both of these varieties, which are much more frequently met with than the first mentioned larger sort, make their appearance immediately whenever fresh meat is exposed. They are as greedy about it as the wasps, devour it, and carry it to their nests. Nevertheless, they have always an agreeable aromatic smell, and in their nests one finds no remains which indicate an animal origin.

"A Splendid golden-green bee, 12 millimetres ( $\frac{1}{2}$  inch) long, gives me great annoyance. It builds in the door and chests locks, with which it creeps through the key hole, and by degrees fills the whole lock with an agreeably smelling pitch-like wax, so that one is obliged to take the lock asunder, burn out the wax, and oil it afresh."

and light colored, while in the latter it is small and of a brilliant black. Experiments

The following statement with reference to the stingless bees of Brazil (which, I presume, must mean the *Melipona* and *Englossa* of the Amazon valley) is curious, and would seem to require some further investigation, and a more detailed description of the peculiar formation of the insects, before it can be adopted as a well ascertained scientific fact :

"Among the stingless bees of Brazil, Von Thering has made the interesting discovery that the pollen collectors and the wax builders exhibit two quite different forms. The wax builders are never found outside the hive. The seals of wax are exuded by them not between the plates of the abdominal rings but between those of the back. They are easily distinguished from the pollen collectors by the hinder part of their body being large in breeding showed that the animals exhibit the different forms as soon as hatched, and not as the result of a subsequent transformation."

Coming nearer home for us, the Professor adds the following passage with reference to Australia, but without giving the sources of the information :

"The natives of Australia have a peculiar method of finding the bees' nests. The catch a bee, fasten to it a small piece of white feather, and let it fly again. The feather renders the bee visible for a great distance, and they follow it in a quick run without losing sight of it, and thus generally arrive at the position of the nest.

"In Queensland the stocks of wild bees are procured in the following manner :—As soon as a bee nest is found in a hollow tree, a piece of sacking is nailed over the opening. Then, by tapping along the stem, the position of the nest is ascertained, the stem sawn through above the same, and a piece of sacking nailed over the top of the stump. After removing the sacking from the entrance, the bees are left a few days to quiet down. On a cool and calm night the entrance is again closed with sacking, the stump sawed through below the nest, and loaded on to a waggon. After being brought to its destination, the upper sack is removed and replaced by a cover, and the entrance opened again. One often sees an entire row of such

primitive bee hives in the apiary of the Australian bee-keeper."

It is to be hoped that this description refers to a former state of things in Queensland, and no longer illustrates the condition of bee-keeping in that colony. The writer seems to be under the impression that the wild bees referred to are indigenous to Australia, and rank among the "exotic bees" which form the subject of his paper, like those previously described in South America. There is certainly a small native bee in some parts of Australia (see *Australasian Bee Manual*, page 39) but we have no satisfactory knowledge as yet how or where it builds, or if it stores honey in such a way as to be worth robbing, and the wild stocks mentioned by professor Hess are, no doubt, the swarms of the imported European *Apis mellifica*.

### Answers to Queries for August.

No. 76. Does the care observed in handling bees influence the temper of the bees throughout the apiary?

Yes sir! I always leave the cross colonies until the last.—Robt. H. Shipman, Cannington, Ont.

It has much to do with it, a gentle colony can be made cross by rough handling. Some are so ugly that they cannot be made gentle by tenderness or care in manipulating, or in fact in any way, or by any method of handling.—J. E. Pond, North Attleboro'.

Yes.—Dr. C. C. Miller, Maringo, Ill.

The handling of bees has a great deal to do with their temper, if you handle them roughly and hurt any of them and arouse them the whole colony will get up their backs and commence to sting, and the smell of the poison when they sting will make matters ten times worse. Again if handled when honey is scarce and robber bees begin to come around, that will arouse them to sting anything that comes in the way.—Dr. Duncan, Embro, Ont.

Yes.—A. B. Mason, Auburndale, Ohio.

I think it does, for when many bees are killed by careless handling, bees are made cross.—Dr. Tinker, Ohio.

I think it has a great deal to do with the temper of the colony which you are manipul-

ing. For the rest I cannot say.—Will M. Barnum, Angellica, N. Y.

Certainly.—A. D. Allan, Tamworth, Ont.

Any care or want of care that permits bees to steal honey, though it be but little, will have such influence, care that does not permit that, will not.—R. L. Taylor, Lapeer, Mich.

It certainly does.—Frank A. Eaton, Bluffton, Ohio.

Yes if you handle a colony roughly and kill a number of bees and get the poison on you it will have an effect when you open the next hive.—W. Couse, Streetsville, Ont.

It certainly does.—C. W. Post, Murray, Ont.

Certainly, very much so.—Ed.

No 77. Do you think anything could be accomplished by selection in breeding towards successful wintering?

Yes, some strains of bees are hardier and longer lived than others.—Robt. H. Shipman.

This is an untried problem, and one that would require years to test, in order to enable one to insure any advance in that direction.—J. E. Pond.

I should think so.—Dr. C. C. Miller.

I don't think it makes any difference what kind of bees you have, providing they are not too old when put into winter quarters.—Dr. Duncan.

Certainly.—A. B. Mason.

Yes. I am very certain of it.—Dr. Tinker.

Yes, in fact, I am almost *positive* upon the subject.—Will M. Barnum.

I think so, I have observed that the progeny of some queens winter better than others.—A. D. Allan.

Yes, restless, irritable bees are more likely to breed in winter, a frequent secondary cause of winter losses. Cool, collected, self-possessed bees are less likely to breed and consequently winter much better, and through selection these traits of character may be intensified on the one hand and weeded out on the other.—S. T. Pettit, Belmont, Ont.

Very little I think. Nature has been doing all that could be done, so that we have now only such bees as have an unbroken line of winter-surviving ancestry that runs away

back through the ages to the first pair of bees.—R. L. Taylor.

I do not.—Frank A. Eaton.

Yes. I have noticed that irritable bees would not winter as well as the quiet breed. W. Couse.

I don't think that there could be as much gained in breeding for successful wintering as there could be gained in furnishing the bees a proper and *well ventilated* repository or properly constructed chaff or sawdust hives with abundance of good sealed honey—C. W. Post.

Not for the general bee-keeper.—Ed.

No. 78. (Referring to query 74.) How would you do it if you could?

See answer to 74.—J. E. Pond.

Raise the queens and drones from colonies which wintered best.—Dr. C. C. Miller.

(a and b) See answer to 72. (c) prepare for winter during the last of September or first of October, in this locality, by giving plenty of good honey or sugar syrup with little or no bee-bread, and winter in a good cellar or a good special repository.—A. B. Mason.

I would suggest that our bee publications be continued and that every item of value discovered by any bee-keeper should find its way into these publications.—Dr. Tinker.

Through county, state, and national organization. The state and national associations to be composed of delegates.—Will M. Barnum.

By writing the lengthy articles.—R. L. Taylor.

I would employ public lecturers to puff the profession. Of course this will be hard upon the supply business, but then bee-keepers must not be too severely criticised for looking after their own interest, all classes claim that privilege and why not we?—S. T. Pettit.

By leaving it if it was there, there may be other ways of advancing the bee-keepers interests, but it would require an article.—Ed.

*The American Apiculturist* says, hives may be painted at any time in the year without injury to the bees. If the weather is so warm that the bees can fly, not much paint should be put near the entrance.

## Queries for September.

No. 79. Do bees relocate themselves upon being set out after being in a winter repository? Are you positive about your reply from your own observation?

No. 80. Do you think it advisable for Bee-Keepers generally to purchase virgin queens instead of untested or tested? Give reason for answer.

No. 81. How long should the drone cell be capped before I can start to raise queen cells?

In Kentucky, sugar maple rarely ever fails to yield nectar. It is a profuse bloomer, but opens its flowers so early in the spring, that rains, and otherwise unfavorable weather is likely to be in the way of the bees.

*The American Bee Journal* says, water is necessary for bees when rearing brood, for diluting the honey, or when liquefying it after being granulated. That found in the combs may have resulted from condensation, the bees may have placed it there for future use, or it may have resulted from leafy hives—at all events when there, it is convenient for use as desired. The bees often visit pump-troughs, and are eager for water, showing that it is a necessity for them, and when found in the combs it is suggestive of being stored there by the bees, even though the proof is wanting.

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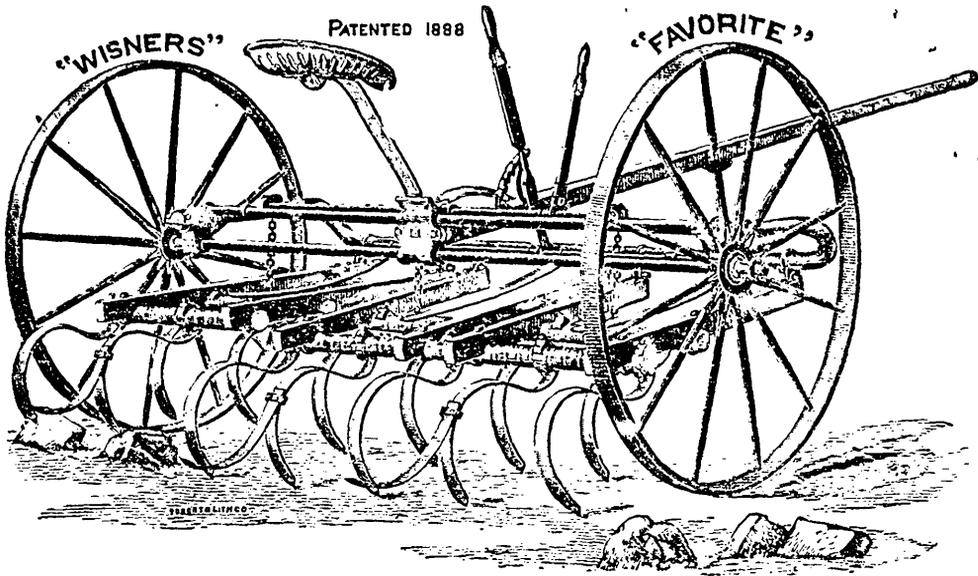
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