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# THE AMERICAN BEEKEEPER.



MONTHLY  
JOURNAL  
PUBLISHED FOR  
THE BENEFIT  
OF EVERYONE  
INTERESTED  
IN BEES AND  
MONEY



JANUARY

VOL. XVI

1906

NO. 1

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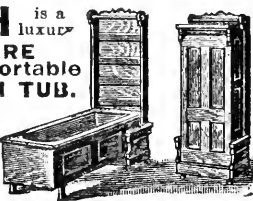
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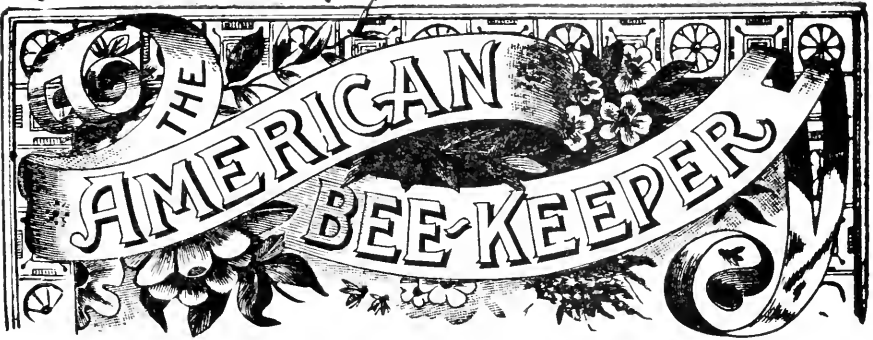


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Vol. XVI

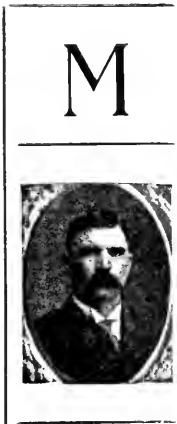
JANUARY, 1906.

No. 1

## ONE DOLLAR A POUND OFFERED.

Those Who Think They Can Profitably Feed Sugar in the Production of Comb Honey are Offered an Opportunity to Increase the Profits.

By THOS. CHANTRY.



R. EDITOR:

In looking over the November number of The Bee-keeper I notice a letter from our friend, E. F. Atwater, and a reply by A. C. Miller; also a letter from Dr. W. R. Claussen, all on the subject of sugar feeding.

While I think A. C. Miller a strictly honest and conscientious man, some of the statements he makes cannot be verified in our country. I heard so much of it that I instituted some experiments and have proof outside of my own statements. I have handled from 300 to 450 colonies in Dakota and Nebraska for several years and never fed any sugar except to keep bees from starving (and very little for that) only as an experiment.

I found that bees would let sugar syrup sour, untouched when honey could be had from the flowers; and when there was nothing afield they would take the syrup for breeding and store it in the brood-nest, but in no case could I get them to work in sections and finish them, even though I used drawn combs and unfinished sections.

I tried it enough and in various ways so that I know it can not be done in Iowa, Nebraska or the Dakotas at any profit to the bee-keeper, only as a means of having bees in good healthy condition, and strong for the honey flow.

After an early frost one fall we had a few weeks of very warm weather, but bees all over the country were getting nothing. Our bees were strong. I selected a colony in a seven-inch hive and weighed it and caged the queen to keep any food from being used for brood rearing, and put on a super, after weighing, and a feeder filled with syrup, half and half sugar and water late in the evening. Next morning it was all

gone and things looked prosperous within. Next night it was again filled and only a part used. Sections were filled a little, but none finished. Fifty pounds were given them, but not all taken in over two weeks, and no more progress in the supers, and not a section finished. I killed the queen of another large colony and shook them in a box 14x14x22 inside and hauled them four miles and at night let them run in and weighed on two more supers, and gave them 25 pounds of good ripe extracted honey, thinned a little, and work commenced to progress rapidly. Afterward a syrup made of one part pure thick honey, two parts dry sugar and two parts hot water was used throughout the experiment, and as supers were finished they were set over escapes and taken off and weighed and increase of weight was noted, and each week I was obliged to add another colony of bees, as before, until four were added.

One hundred and twenty-five pounds of dry granulated sugar was given; 125 pounds water and 62 and one-half pounds good ripe honey. The supers gained 94 pounds and the brood nest 20 pounds, making a total gain of 114 pounds.

The food was given in such a way that it was impossible to rob and there was no fighting or commotion, so that we know there was no robbing. The results were: It cost four swarms of bees 125 pounds of sugar and 62 and one-half pounds of thick honey to get 94 pounds of section honey and 20 pounds gain in the brood nest.

Where did all the water and so much weight of the sugar and honey go? The honey in sections was pronounced very good by everyone who ate it.

I claim, like Prof. Cook and many others, that the bees made it into honey—pure honey. Anyway, it cost more than twice what we got for it; so I say to anyone in this part of the country, if you take sections and foundation and get them filled by the bees at a

time when others are getting nothing, by feeding sugar syrup or a mixture, or glucose, or any other way, and at the market price of honey get one cent of profit for your pains, I will give \$100 for 100 pounds of it.

Another experiment: We always have a starving time here between fruit bloom and sweet clover. I put glucose into a feeder in a super of two colonies and sugar syrup in the rest. I came again in thirteen days and found the glucose colonies both dead and syrup untouched, while everyone having sugar syrup was breeding finely.

In this country we have no foul brood law, and I would give bees honey only in combs from colonies I knew to be healthy. I would not risk honey that had been extracted from a promiscuous lot or buy it to feed.

Now, don't understand me to disagree with Mr. Miller, as to the value of honey over sugar. My experiments would surely show that honey is cheaper at double the price, but it is too dangerous.

As for the small amount of honey that might be carried into the sections next year: The people who eat it will never make a protest; only those who want to be over zealous.

Dr. W. R. Claussen has never made a "stake" in profits on feeding sugar and selling the sugar thus made into honey. No, nor anyone else, for it cannot be done at the present prices of sugar and honey.

I read all the bee papers and have yet to see where anyone has ever recommended feeding sugar syrup for profit after having tried it, and I am sure I never will, and am, furthermore, certain that no consumer eating such honey will ever object to it as far as food value is concerned. Of course, it will not have a basswood flavor or that of white clover or California sage, but it will have a honey taste and a honey value as food, and cost the producer

double what honey from natural sources will cost.

On page 219 of the November Bee-Keeper Bro. Miller makes a statement: "I have seen sugar feeding successfully carried out and have seen in the aggregate thousands of pounds of honey thus produced." If it was comb honey it was surely good, and a good food; but I am sure that such honey was produced at a loss, if cost of sugar and vitality of bees were considered.

I think I have said enough to show Dr. Claussen that there is an "earthly reason" why we may "not have bumper crops of sugar syrup nicely stored in well sealed combs," and if he still believes that he or any other person can do it, let him try to get my \$100 before he starts in on a large scale.

Remarks such as Dr. Claussen uses, inferring that sugar feeding to produce honey to sell can be done at a profit is what does more harm than does all advice to feed as a necessity.

I have met several bee-keepers who state that some of their competitors feed sugar to increase their crop (which might be true in that he kept his bees breeding and strong for the flow, rather than starved down weaklings) and to prove that it can be done he will tell how greedily his bees took syrup, etc., but I am ready with my \$100 to get him to try it. I do not hesitate to tell any bee-keeper I ever met: "You never fed sugar syrup when other bees were getting nothing and had 100 sections of honey filled and sealed without the sugar costing you more than the honey will bring." Say nothing of the labor and loss of vitality.

I suppose that every bee-keeper has fed his bees as did Dr. Claussen when he has the filled combs of honey and also evened up the stores the same way in the spring, but when his bees are all out and must be fed or die he has no honey and he had better feed sugar syrup than to buy honey and feed with

it and risk foul brood or some other trouble.

Sioux City, Ia., Nov. 27, 1905.

### MR. ATWATER QUOTES.

By A. C. Miller.

A MERRY FELLOW is E. F. Atwater, who will have his joke despite the other fellow's feelings. It seems that I exposed some of the mud on one of his idols and cast some reflections on others, and it grieved him, so forsooth he must needs try to poke a bit of fun at me, wherefore he writes as follows:

"I want to call the attention of your readers to the following, written by A. C. Miller, in American Bee-Keeper, April 1902, page 59:

"It may not be considered to be economical management to give colonies much more honey for winter than will suffice them till fruit bloom. Perhaps it is not in some places, but it certainly is the best plan here, and colonies so supplied are ready for the supers first and produce as fine a grade of white comb honey as may be desired. The dark honey, which may be in the combs below, never seems to be carried into the supers, so that feature is no bug-bear."

Just because I then said that the dark honey never seems to be carried above, he deems it inconsistent for me to now say that sugar syrup fed to the bees gets transferred from the brood nest to the supers.

Oh, E. F., hast thou so long blindly worshipped at the shrine of Used-to-Be-Hence-Always-Must, that thou canst not realize that it is possible to progress?

Pray, must an author once having expressed an opinion always stick to it? Is that the effect of following thy idols, kind sir? If so, may the fates forefend us from their teachings.

At times thou exhibitest the saving grace of wanting to know a man's rea-

sons for the faith that is in him. So let it be and listen. The so-called dark honey of hereabouts is most always on the golden shade and of bland flavor when well ripened, hence when mixed in moderate quantities with light honey its presence is not suspected. Dark and strong however, like that from buckwheat, make their presence known. The occurrence of such honey and the experiments of the gentleman of whom I spoke in the last issue drew attention to the probability of error in my earlier conclusions. Such error was proved by subsequent experiments and observation. What more would you have?

In closing let me give you a bit of advice. Don't take my say so, go see for yourself. And, don't take the other fellow's say so just because somebody has called him a big chief; they may have an object in so doing; go see for yourself.

Providence, R. I., Nov. 6, 1905.

#### THE HONEY PRODUCERS LEAGUE.

##### An Explanation and a Reply to N. B. K. A Member.

By Dr. C. C. Miller.

ON PAGE 196 of the American Bee-Keeper appears an article written by "N. B. K. A. Member," which does not speak in the highest terms of the work of "The Honey Producers' League." It seems to be in part the work of an imagination not in the best state of repair, but one item mentioned presents ground for real objection. It is that clause of the constitution which says: "This constitution may be amended by a two-thirds vote of the membership at any regular election, provided such proposed amendment be first submitted to the executive board and approved by it."

That looks bad. It is bad. Worse than that, I am the chief culprit in the case, and the main purpose of my writing now is to say so. When it came to the matter of amendments to be sub-

mitted to a vote, it occurred to me that it was a matter of considerable expense to have printed and sent out questions to be voted upon, and that there ought to be some sort of check against unnecessary expense, and that something more than the whim of an individual should decide what should or should not be sent out. My idea was not that the executive board should use its influence in deciding any question one way or the other, but that it should have the power to say whether it was in order or worth while to send the question out. There was opposition to my idea, and as I now remember no one but myself was urgent about it, but after more or less changing of phraseology it was passed. The thing came on the spur of the moment, or at least without any previous thought, and it is plainly apparent that as worded it does not express my idea, and instead of saying "such proposed amendment be first submitted to the executive board and approved by it," there should have been some such wording as this: "submitted to the executive board and its submission to the members approved." I cannot now say whether I was too stupid or too tired to see how lame was the wording, but there it is, and I can only say that I am the one mainly to blame and throw myself on the mercy of the court.

With regard to the enterprise in general, I will only take space to say that I believe it to be a sincere and honest effort to do just what is expressed on the face of it; that the members have put money into it without the hope of any resulting benefit other than will be shared by bee-keepers in general; and that if "N. B. K. A. Member" will take the trouble to inform himself more fully, he will regret his unkind suspicions and be honest enough to say so.

Marengo, Ill., Dec. 6, 1905.

"The Manum swarm catcher is much better with a burlap bag than with wire cloth and either way it is uncertain in its results."—ALLEN LATHAM.

## ARTIFICIAL HONEYCOMB.

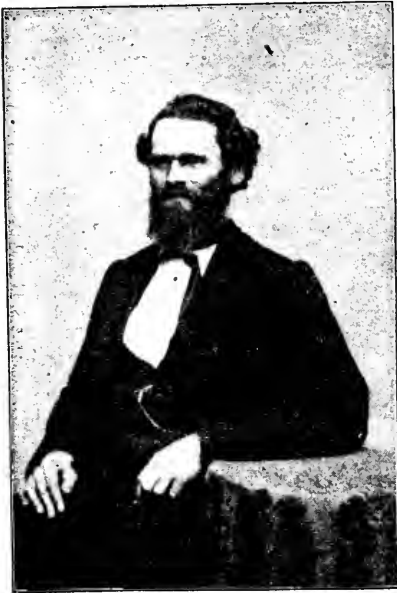
That Which is To-Day Considered an Impossibility Was Accomplished  
Over Thirty Years Ago.

By ARTHUR C. MILLER.

IT HAS LONG been strenuously asserted that no such thing as artificial comb has or can be made, and these assertions are continued notwithstanding

ander Shaw about 1870 or 1872, and was worked over and developed by him up to about 1876 or later. In 1874 he filed application for patents on tools and product. In 1876 both tools and comb were exhibited at the Centennial Exposition in Philadelphia. Most of the combs made were six by six inches and intended for use in surplus honey boxes, but Mr. Fickett, who attended to the apiary end of the experiments assures me that the bees used the combs freely for brood as well as for honey.

Mr. Shaw was a superintendent in a

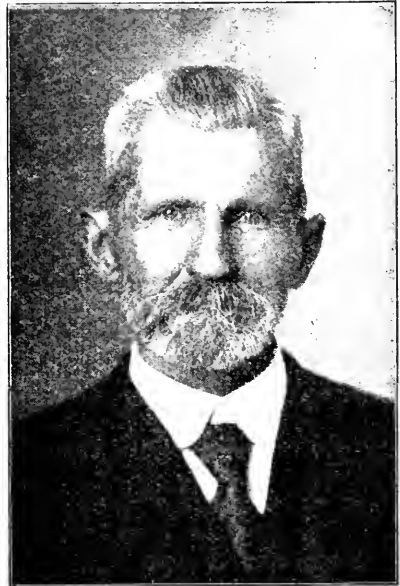


PHILANDER SHAW.

the common knowledge of the Weed patents.

To be sure, his process is too expensive for commercial purposes, but that does not alter the fact that artificial comb has been and can be made. But artificial comb was made and used over thirty years ago, and through the courtesy and liberality of Mr. E. L. Fickett I am now the possessor of samples of such comb made about 1874, and of the tools for making it.

The process was invented by Mr. Phil-



E. L. FICKETT.

shoe factory, agent for machines used in the business and an inventor of many appliances, one of note being a device used in the manufacture of shoes, an-

other a hot air engine, and another for the pressing of wood into forms imitating carving. Mr. Shaw died in Boston in 1879, aged 69 years.

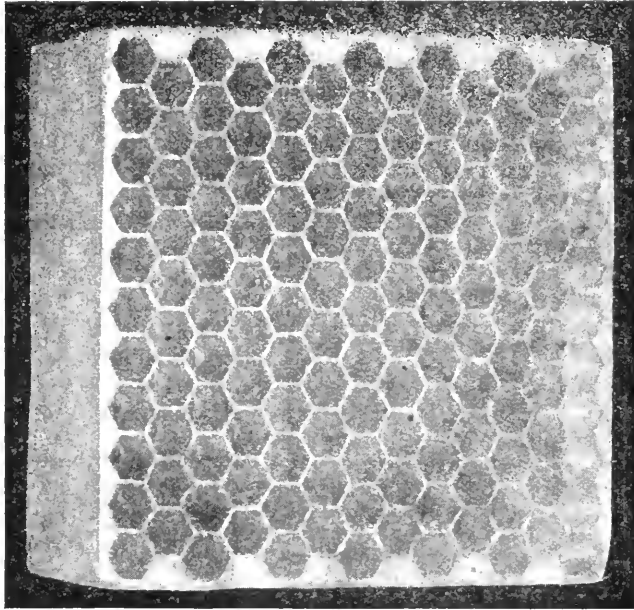
His invention of artificial comb was ahead of the times and failed to be of profit to him. To-day it would be appreciated and there is a possibility of its being put on the market the coming season.

Mr. Fickett, to whom the fraternity is indebted for keeping this invention alive, was born in Auburn, Maine, in 1835, moved to Massachusetts in 1853, and began bee-keeping in 1860 and has continued at it ever since.

Mr. Fickett early made a specialty of raising queens and supplied them to Mr. King, then running the Bee-Keepers' Magazine.

Mr. Fickett was the originator of the fruit-jar-feeder and describes its use in one of the New York bee papers about 1870. Despite his years, he is active and wide awake to all the details of modern apiculture. He is a pleasant

from photographs; that of Mr. Shaw having been taken some years before his death, while Mr. Fickett recently had his portrait taken expressly for the American Bee-Keeper. The other illustrations were taken from samples



ARTIFICIAL COMB MADE IN 1874.

furnished by Mr. Fickett and now in the possession of the writer.

Providence, R. I., December 11, 1905.

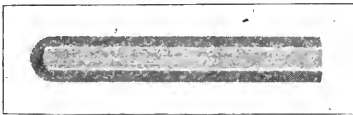
#### LATHAMISMS.

"Moisture is the cause of the death of 99 per cent of the bees lost in winter."

"Bees in winter will be found clustered on the sunny side of the hive."

"Black or dark red is the best color for a double walled or chaff hive, but it should be shaded in the summer."

"Study the age to which the bees of your different colonies live. The long lived ones are the most profitable."—ALLEN LATHAM, at the December meet of the Massachusetts Apicultural Ass'n.



MOLD FOR MAKING COMBS.

and affable man and full of information on bee culture past and present.

The accompanying illustrations are

## FOUNDATION VS. COMBS.

Bee-Keepers of France Make Comparative Tests.

By ADRIAN GETAZ.

SOMETIME ago, I stated that one kind of work done by the European bee-keepers' associations was to institute experiments on the doubtful points of bee-keeping. This is a work that could well be undertaken here also. It is not compulsory in Europe, only those who are willing take part. Sometimes prizes are offered to those who will make the best reports. This is especially the case when the desired experiments require some expense. Sometimes a series of questions is simply asked. At other times some experiments have to be conducted on certain prescribed lines.

The Society of the Department de la Meuse is the most successful in work of that kind. Last year I gave an account of a series of questions asked and answered concerning swarming. I also stated that another series of experiments had been instituted, or rather asked for, by the Society, concerning the use of ready built comb, foundation in full sheets, or starters in the supers. To understand this it must be remembered that those of the European bee-keepers who use modern hives work for extracted honey. But they do not always give a set of built combs. Sometimes it is only foundation or starters. Most commonly it is a few combs and the rest mere starters. The starters in the majority of cases are only a very little strip left when the comb was cut out the year before. The preference for extracted honey is easily understood when one knows that there the extracted sells at the same price as the comb honey. As the price of the wax is proportionately very high, the question to solve is which pays the better, to keep the emptied

combs until next year or to melt them. Will the wax thus obtained pay better than the excess of surplus which would be obtained the following year by using built combs?

Such was the program. The contestants were requested to compare the results obtained by colonies having: First, built combs; second, full sheets of foundation; third, starters. Furthermore, each series was to be divided into two—one portion having single-walled hives and the other double-walled, with packing between.

Only two bee-keepers responded, Mr. Chas. Guillemin and Mr. Brunerie. Concerning the double walls, Mr. Guillemin's experiment is not conclusive. The colonies in double-walled hives gave a little less surplus than the single-walled ones. But they had, we might say, bad luck. One swarmed, another did not work well until quite late and three of them laid out in front of the hives a part of the time. Concerning the advantages of built combs, the colonies having them gave a surplus of about 130 lbs. each; those with full sheets of foundation about 100, and those with starters about 80. The season in that locality was exceptionally good. The amount of wax produced to complete the combs by the colonies having foundation or starters was from two and one-half to four pounds per colony. The weight of the foundation given is included. The cappings were probably also included, though nothing is said about them.

Mr. Brunerie did not comply entirely with the conditions required. He simply used the hives he had, so the influence of double walls is not considered in his report. On the other hand, he

had already been experimenting on the question of built combs vs. foundation and merely continued his previous experiments. So his report covers four years with quite a number of colonies. The results obtained are completely different from those given by Mr. Guillemain. In Mr. Brunerie's locality there is no difference at all between the surplus produced by the colonies having built combs and that from colonies having received only foundation in full sheets or starters, so the combs or foundation given are a complete loss. He attributes these results to the nature of the honey flow in his locality. There are two flows, each lasting four or five weeks. The first occurs in May and June, the second in July and August. During the first flow the average daily increase shown by the colonies on scales is about one and one-half pounds while the extreme maximum observed was six pounds. During the second flow the average is only about ten ounces. With such a light flow, the bees can build all the combs needed as fast as the nectar comes in to fill them.

And now I'll ask to be excused if I "butt in" and add some comments of my own: In the first place, I am quite surprised at the results obtained by Mr. Brunerie. I should have expected some difference in favor of the built combs even in a locality like his.

In regard to Mr. Guillemain's experiments, concerning the double-walled hives, two things are to be taken into account. His single-walled hives have a double cover with a packing of oat-chaff. This is the most important part of a protected hive, as the loss of heat takes place principally through the cover. If his covers had been a single thickness, the results would have been quite different and probably very unfavorable to comb building. It may be said that such or similar covers are in use altogether in Europe. A mere board for cover is not thought of there.

His double-walled hives did not have sufficient ventilation. He admits that himself, but does not seem to realize that by giving a much larger entrance he could have prevented much of the trouble and yet retained all the advantage of a warmer hive during the night, which is an important item in wax producing and comb building. He concludes his report by saying that he will continue these experiments for at least a few years.

Knoxville, Tenn., Dec. 8, 1905.

### QUEEN-FINDING METHODS

#### An Interesting Article Elicited by a German Questioner.

By Geo. W. Adams.

Dresden, N. Germany, Oct. 8, 1905.

Mr. S. G. Kilgore states in the *American Bee Journal*, page 678, when requeening his apiary and in placing the new queen in a cage on top of the frames of the colony, at the end of two days, when opening the hive the old queen will generally be found clinging to this occupied cage, for she will always hunt up a rival queen to give battle, etc.

If this is the case, the old queen only needs to be taken away from the cage and all customary hunting all over the hive to find the old queen could be saved.

Kindly let me know through the columns of the *American Bee-Keeper* what you think of this simple way to find the queen, and if you or any of your friends have had similar experiences. With best thanks in advance, yours very truly,

William Hesse.

**T**HROUGH THE COURTESY of Editor Miller I have read the inquiry of Mr. Hesse, of Dresden, Germany, as to the practical possibilities of queen finding as described by S. J. Kilgore, page 678 of the *American Bee Journal*. Now if I have learned anything from bee-keeping it has been not to be dogmatic, never to say a thing cannot be because I have never seen it, for as to Madam Apis, "Age cannot wither or custom stale her infinite variety,"—she seems to delight in setting at naught the calculations of the most careful apiarist.

In this matter of finding the old queen clinging to or near the cage of a new queen placed upon the top of the frames,



I have had so much negative experience that I could more readily believe that she was not allowed to approach the cage than that she would as a rule be found near it.

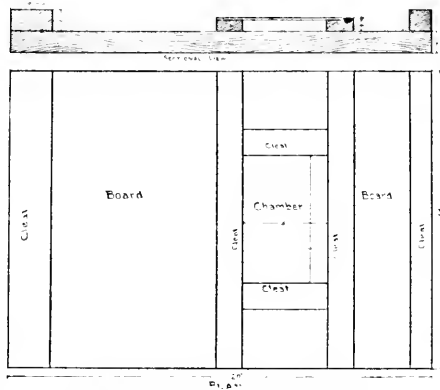
I say this, at the same time having no doubt of the perfect honesty and sincerity of Mr. Kilgore. I wish he may prove to be right and myself entirely in the wrong, for such an easy method of queen finding would not only be extremely useful in my apiary, but place my "Adams introducing board" among the most useful appliances of the yard.

It was possibly because of this trifling "invention" of mine, and because of my custom of putting a caged queen into any hive that came handy at any time and for as long as I cared to keep her there, that this matter was brought to my notice.

Many years ago when requeening a good many colonies of black bees, and sometimes having to keep rather valuable queens on hand during cold weather or when other business kept me from my bees, I evolved this plan of a chamber four inches by six inches, and two inches deep above the frames and a little to the rear of the centre of the hive (as being the warmest spot) with ability by reversal of bringing it nearer the front. This chamber, although of 48 cubic inches capacity, has never been used for comb-building, but so far has invariably been left free for my use, and has been very handy for preservation of subjects for dissection, any caged bees being fed and tended as if they belonged to the colony. For cold weather I prefer the chamber to be 2x1 however. The fact that it is covered by glass, allowing inspection with no disturbance is of value, the glass being darkened by a bit of cloth being laid over it.

The construction of my introducing board is like this: I use an 8-frame hive—Hoffman frames—and so my board is 14x20, half-inch stock, cleated

across the ends to prevent warping with cleats one inch thick and of sufficient width, through this "cover" (for it exactly covers the hive, allowing the real cover to shut down over the above mentioned cleats, on which the cover rests). I cut a square hole a little to the rear of the centre, and around this hole nail cleats three-quarters of an inch thick, on these lay a piece of glass, drop a piece of cloth or very thin wood over the glass to shut out the light, which brings the cover of the whole up nearly to a level with the end cleats, put the real cover over all, and there you have an observation or warm sto-



ADAMS' INTRODUCING BOARD.

rage chamber; or, as I term it, the Adams Introducing Board. Try it!

But to get back to my subject: In all the years I have used it I have never seen the free queen approach the prisoner, or enter this chamber of which, of course, the tops of the brood frames make the bottom.

I think this fully answers the question of Mr. Hesse, and if he or any other person wishes to repeat my experiments they can easily make up the little device which I have described and find so convenient.

Rowley, Mass.

Tales from Beeville—Stings.

A soft answer may turn away wrath—but not that of an angry bees.

## PARTHENOGENESIS IN ANTS AND BEES.

By **Burton N. Gates, Clark University.**

(The relation of fertilization of the egg to the sex of the progeny in Hymenoptera.)

**T**HE PROGENY of a queen bee are well known to consist of three casts; males or drones developed from an unfertilized egg; queens and workers, developed from eggs of the same ovary, but fertilized. This theory in bees is a half-century old, but in ants no definite proof of the same was reported until the work of Miss Adele M. Fields, whose paper (1) just published gives conclusive evidence in several genera of ants that the Dzierzon theory for bees, is true for ants. Since ants have closely allied hymenoptera to apis, the investigations are of importance, in proof of the origin of male bees.

A brief outline of the rise of our present conception in bees may be of interest in this connection. All dates from old Onkel Swammerdam—1637-1686. He determined the queen to be the mother of the colony—a most pronounced discovery. But in his explanation of how her eggs were fertilized, he erred. He observed the strong characteristic odor of the males, and said that this, intensified by the large numbers of drones present in the hive, impregnated the queen. John De Braw, writing in 1777 on the sex and propagation of bees, suggested that fecundation of the egg occurred after they were laid. A few years later, Huber showed by ingenious experiments, the errors of the earlier investigators. He proved the meeting in the air of the queen and drone, within a few days from her emergence from the cell, to be an act of copulation. But he did not

discover the relation of the spermatazoa transmitted in this union by the drone. These things were first being understood in 1853 when Dzierzon gave conclusive proof of the drone resulting from an unfertilized egg. But with ants, closely allied hymenoptera, such evidence has been wanting until Miss Fielde's observations were made. And just here, her observations on ants are of importance in relation to bees; her work lends strength and support, and confirms our investigations on bees.

Briefly, her observations are these:

Miss Fielde took extreme precaution in establishing her nests for observation, and procured ant groups of "indubitably virgin workers." "The eggs deposited in these nests were certainly unimpregnated." Her experiments show without exception, that from virgin workers "no other than male young had been produced."

Similarly with a virgin queen, (*Cremastogaster lineolata*), constantly observed for more than two years (in this period 63 males were produced) it was found to be producing male offspring only.

Miss Fielde modestly concludes, that "some virgin workers (all of which she has had opportunity to observe) lay eggs and that many ant eggs which have had no contact with spermatazoa produce males." Thus Dzierzon's theory for bees may be extended to the Formicidae.

Knowledge of this fundamental law explains many an occurrence in the bee yard. It accounts for a laying worker depositing male eggs only. It accounts for an old queen filling the hive with drones. In this case, the queen having exhausted the sperms supplied by the drone at mating—although according to Cheshire she had from four to twelve or according to Leukort, even twenty-four million spermatazoa transmitted to her—became a "drone-layer."

Similarly an injured or diseased queen, whose ducts are not able to transmit

NOTE—(1) Fielde, Miss Adele M. Observations on the Progeny of Virgin Ants. Biological Bulletin of Marine Laboratory, Woods Hall, Mass., Nov. 1905. Vol. IX. No. 6; p. 255-360.

the sperms to the eggs, are "drone-layers." These few and many more occurrences in our hives are explainable in knowledge of this theory which Miss Fielde has just now emphasized.

Worcester, Mass., Nov. 28, 1905.

#### NO USE FOR CAUCASIANS.

#### One of America's Foremost Honey Producers Weeding Out the Blood of the "Noble Race" for 22 Years.

By J. B. HALL.

**EDITOR AMERICAN BEE-KEEPER:**  
You wished me to report my experience with Caucasian bees. I comply for the benefit of those of my apiarian brothers who have not already tried them. As I have no axe to grind, (not having for sale any bee-keeper's supplies or bees, but honey only,) I say this for their benefit, not my own.

I would say that I received, on May 24, 1884, two colonies of Caucasian bees from Julius Hoffman, of Canajoharie, New York. He reports that he received them through the Russian consul to the U. S. My experience with them was they were the gentlest bees that I ever possessed, and the best winterers if given honey gathered by other bees to winter on.

Their characteristics: A very small, dark bee, thickly covered with down and having three distinct gold bands on the first three segments of the abdomen; said bands being about the breadth of a hair. Another peculiarity was in the number of queen cells started and matured. We have counted perfect queens thrown out at the front of a hive to the number of one hundred and twelve, and these not as with other bees, thrown out at one time, but in about seven days. Another peculiar characteristic they have is that of capping their honey with concave, instead of convex caps, so that the ribs or side-walls of the cells show distinctly on the face of the comb—an undesirable feature in the production of comb honey.

In view of the fact that I keep bees for the production of honey, as I suppose all apiarists do, I have no use for such blood in my apiaries, and have been weeding it out for the last twenty-two years. For the admirer of the pretty, gentle bee, I have found that a cross of these queens with Italian drones produces a very handsome bee indeed. But with us, "handsome is as handsome does."

Woodstock, Ont., Can., Nov. 25 1905.

#### MORE CAUCASIAN EXPERIENCE.

Canajoharie, N. Y., Dec. 21, 1905.

**EDITOR AMERICAN BEE-KEEPER:—**

I am sorry not to have been able to answer yours of December 2nd any sooner.

In regard to the Caucasian bees I will say: I imported them in 1880, consisting of two nucleus colonies. I ordered them from a party in St. Petersburg, Russia. They were sent direct from the Caucasus mountains to St. Petersburg and from there in the original package to Germany and after a fly, were brought over here to my place by a cousin of mine. Most of the bees were dead but the queens alive.

My experience with them is this: The two queens varied some in looks, one showing narrow yellow stripes resembling the Italians, and one having silver-gray hair covering. Their progeny proved to be very gentle, and the queens very prolific. The Caucasians, however, did little or no work on buckwheat, but produced the finest grade of white comb honey.

When preparing for swarming they would raise from 75 to 100 queen cells in bunches, the cells being of a very small size. This fact, and not being good workers on buckwheat, made them undesirable for me, as I am located in a buckwheat section.

The Caucasians, however, are a very good bee for clover sections.

Very truly yours,  
JULIUS HOFFMAN.

## THE ROYAL COCOON.

Notions, Old and New, About Queen-Cells.

By ALLEN LATHAM.

WHY DOES the royal larva spin a cocoon over only a portion of the cell-wall? Some of the old masters averred that the upper portion of the cell was left providentially for the easy stinging of the occupant by a rival. Such a reason is not tenable, since it is manifestly impossible for the sting to penetrate even the waxen wall of the cell. Even after a rival queen has torn a hole in a cell she rarely, if ever, stings the occupant—leaving the destruction of the immature queen to the workers. It is well known that worker-bees will not tolerate an injured queen cell.

Several times during the past season I mended queen-cells which had become injured. On one occasion a valued cell was torn completely off the comb, and the nymph left exposed in the cocoon-portion. I selected an old, vacated cell, cut it down, fitted it roughly to the injured cell, sealed the ragged line with melted wax, and replaced the cell in the hive. The queen from that cell is now in one of my colonies.

Knowing thus that cells could be successfully repaired, I tried repairing a cell which had been torn open by a virgin rival. A piece of foundation was laid over the opening and melted into place with a hot wire. The queen from this cell had not been stung; she is today alive and well.

Since I have shown that the generally accepted answer to the question which heads this article is false, it falls upon me to furnish another answer.

The cocoon is imperfect simply as a matter of convenience and safety to the larva spinning it. The cell in which she lives is overlarge, and if she once gets turned about in this cell she finds

it extremely difficult to regain the normal position. In consequence of this condition she spins a cocoon about that portion only of the cell which she can conveniently and safely reach without letting go from above. This answer has not been tested for its correctness to my complete satisfaction, but as a guess it is logical and has not been founded upon the throw of a die. In connection with this is seen why the larva does not spin the cocoon to the extreme apex of the cell, spinning down only so far as she can conveniently reach.

### THE CELL OPENING.

We often see the expression, "cell with decreased opening for the queen to lay in," suggesting that the opening is small to cause the queen to deposit a female egg. It is hard to wean bee-keepers of the idea that the size of the cell-opening aids the queen in determining the sex of the egg, hence this false idea about queen cells. There are two reasons for this small opening in the queen cell.

First, the worker uses the rim of this opening as a scaffolding upon which to rest as she polishes the interior of the cell, or does other work therein. Secondly, the opening is small to minimize the change of air and hence loss of moisture and heat from the cell, in other words, to keep the cell under uniform conditions internally.

At the time the egg is deposited the cell is nearly spherical, the edges of the opening being distinctly inturned. After the egg hatches the cell is elongated, but the opening remains of essentially the same size, and the edges continue to be inturned. While the nurse-

bees are packing food about the larva they rest their legs and wings on this edge. If one considers for a moment how difficult it would be to sustain oneself inside a large kettle, suspended open side down, he may appreciate the difficulty the worker-bee would have in carrying on the duties about the queen-cell, with its highly polished interior, without the aid of the turned in edge.

Though the diameter of the cell diminishes as the cell is prolonged, there is always more or less of the edge left rough and slightly turned in, and the opening is seldom larger than that of the worker-cell. At the proper time the opening is closed by carrying on the edge till the rather evident apex is formed.

#### WHY THE QUEEN-CELL IS VERTICAL.

Do I dare venture here? What has been offered heretofore in this article is backed up with evidence gained from close observation, but we now strike a subject which is scarcely open to dem-

onstration. It would probably be easy to show that originally, in the primitive ages of the honey-bee, when the queens and workers were one—all cells were vertical like those of the hornet, and that the queen-cells of to-day are simply a survival of that primitive stage. To explain why the queen cell has retained this verticality is another matter.

The reason, like all reasons where Nature rules, is simple to the extreme. As all natural air circulation is brought about by the force of gravity, being the running under of heavier air and the uplifting of lighter air, the cell is placed to meet this natural condition and thus prevent air circulation in the royal cradel. With the air tight ceiling and the depressed opening the air in the cell is kept uniformly moist and warm. As moist air is light and hence forced up by the heavier, the upper portion of the queen-cell is ideally perfect. When one has observed how rapidly royal jelly dries up, and becomes unfit for the osmotic ingestion of the larva, he will appreciate the statements just made.



#### GERMANY.

##### EARLY BREEDING DESIRABLE.

At a late bee-keepers' meeting at Durheim, Editor Reidenback spoke at length on how to produce strong colonies ready for the harvest. He said to accomplish this object one must understand the nature of bees. There is a time when the development of a colony is very rapid, then there is a time when only enough young bees are reared to keep the number good; finally, life comes almost to a standstill. Spring-time is the time when growth commences and with the advance of the

season it increases; with the setting sun it decreases. It is poor policy to allow swarms late in the season. The time for them to grow into populous colonies is past. We need strong colonies to take advantage of a honey flow, because a strong colony sends proportionately more bees to the fields than weak colonies. Herein lies the whole secret: A strong colony, numbering 30,000 bees, can send a force of 10,000 workers to the fields, or about one-third, while a small colony of about 10,000, send out but 1,000 or one-tenth part.

A large amount of honey in the hive

has a stimulating influence upon bees in the spring. Honey produces stronger bees than sugar. It has been observed that bees reared and fed on good honey make flights when the temperature is much lower than colonies fed on sugar. These are facts and the wise bee-keeper observes them.

#### YOUNG QUEENS MAY SWARM.

It has been laid down as an old, infallible rule that young queens will not lead out swarms the same year in which they were reared, but Seipz Bztg. says this rule only holds good so long as queens remain at the head of the colonies which reared them.

#### GOOD PRICE FOR "EXTRACTED."

The honey, offered at a regular "Honey Market" day, Oct. 6, 1905, in Berlin, brought 30 cents per pound for extracted. Comb honey is not mentioned. Leipz Bztg.

On a similar occasion extracted honey brought 19 cents in Hannover on Oct. 3. Comb 31 cents. Centralblatt.

Under date of Nov. 1 the same paper has this to say about the honey and wax market: "Little demand for honey, but wax is sought after by wholesale dealers at 32 cents.

#### FORAGE MUST BE SCARCE.

Alberti says, in his book on bee-keeping, that the average locality in Germany may be considered as fully stocked up with 30 or 40 colonies. A. Schmidt, Guschau, has come to the same conclusion. His average yield when but few colonies were kept was 25 pounds of extracted. Now, with a force of 60 colonies the average has been lowered to but 12 pounds. Schmidt also claims to be justified in saying that field bees seldom fly to pastures over a mile distant. If it is a fact that average locations are fully stocked with but 30 swarms, then that fact explains why the majority of bee-keepers in Germany keep so few colonies.

#### WHERE THE GERMANS LEAD US.

An illustration in *Deutsche Imker* of the late exhibition of bees, bee-hives, honey, and apiarian implements made at Stuttgart, shows that German bee-keepers respond to calls of this kind better than Americans do here. Particularly the exhibition of bees and hives must have been very elaborate, showing hundreds of them very artistically arranged. The reason that such exhibitions can be made in Germany, where bee-keeping is not nearly as remunerative as in America, is undoubtedly because the German governments give substantial aid to these undertakings.

#### A FATAL STING.

Franz Derndl, of Perg, died from the effects of one bee-sting. It was his ill-luck while eating honey to swallow a live bee, which stung him in his throat. This caused swelling of the affected parts and death occurred within a half hour. Leipz. Bztg.

#### IT WAS AN OLD ONE.

Among the apiarian implements exhibited at Danzig was an old log-gum from Austria. Its height was some six feet and the diameter about two feet. It was found in the forests of Hagenort in the year 1740, and contained then a swarm of bees. In 1775 it was cut off from the stump and moved to the bee yards of Lovenz Konsecki where it remained in use as a habitation of bees till 1904, where it was purchased by Siech in Saaben.—*Deutsche Imker*.

#### MAY BE SO.

F. Tobisch, the compiler of the *Sammel-Korb*, in *Deutsche Imker*, does not believe in protecting his bees with winter cases or any kind of packing. Hive walls one inch thick, he says, are protection enough. He wants a large hive, with plenty of honey above the bees, and the entrance so arranged

that it cannot become clogged. Tobisch has only the one fear, viz: That his bees may starve. Of every 100 colonies that die during the winter, 90 starve, he claims.

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### FRANCE.

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#### COMBS 45 YEARS OLD.

A box hive belonging to Mr. J. Touchet is 45 years old. It is the first one he bought when he began bee-keeping. The hive is so nearly worn out that a few years ago Mr. Touchet had to reinforce it with a coat of cement. Mr. Touchet makes the remark that the bees are as large as any other notwithstanding the age of the combs. During these 45 years the colony has not swarmed more than five or six times; the last swarm came out ten years ago. He adds that he has but very few swarms in his apiary. He uses what is called in Europe "mixed" hives, that is, a box hive for brood nest with a super of movable combs. The cause of so little swarming is due to the fact that the supers are used altogether with built combs. I may add that the "mixed" hives are very much used in Europe and well liked.—L'Apiculteur.

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#### RUNAWAY SWARMS.

The question has often been raised as to the right of a bee-keeper to enter the premises of somebody else to take possession of some swarm of his which has chosen to settle there. The French courts have decided that the right to follow and take possession of his swarm imply the right to go on or in the property to get it. Furthermore, if the owner of the property refuses to permit the entrance, which he has a right to do, he must be willing to pay the bee-keeper the value of his swarm. It is understood that the bee-keeper is liable for any damage he may do to the tree on which the swarm has alighted or in any other way.—L'Apiculteur,

If I relate the above it is because the point has not been raised here. I have read several reports in the bee papers on that and similar legal questions. In all it was stated that the owner of the land has the right to forbid anybody and everybody from entering his property, but no decision went any farther than that.

The point that a bee-keeper has as much right to take possession of his swarm wherever he finds it just as well as if it was his horse or his cow, has never, as far as I know, been raised in this country. And, should the occasion arise, it would be well for our National Association to see about it.

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#### ECLIPSE AND BEES.

During the last eclipse of the sun, an apiculturist of Pau, in the southern portion of France, noticed that the obscurity came so quickly that the bees which were out could not find the entrances of their hives in time. The covers, the ground around and in the apiary and other objects were covered with bees that had succeeded in coming in that far, but failed to get in. They remained perfectly quiet until the eclipse was over.—L'Apiculteur.

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#### WINTERING.

According Dr. Mirbeck, the bees of a colony produce by their respiration about 50 grams of vapor every day. This must be disposed of in some way or other; if not, the dampness of the hive would be disastrous. A sufficient ventilation will do the work. For that purpose the entrances should be of sufficient size. If not there should be above the frame a cushion of hay or other absorbant—Revue Electique.

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L. B. Smith tells Rural readers that The Apiarist is the fourth bee journal that has been started in Texas. Mr. Smith's knowledge of the history of Texas bee journalism is, evidently, incomplete.

THE  
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The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

**Our Fifteenth Birthday.**

With this number THE AMERICAN BEE-KEEPER enters upon its sixteenth year of continuous publication. The thousands of commendatory letters received from honey producers and the constant increase in circulation inspire its editors to renewed efforts and a greater determination to pursue their labors with unswerving fidelity to the craft, regardless of the interests of allied industries.

We look hopefully forward to, and wish every reader of THE AMERICAN

BEE-KEEPER a bountiful honey harvest for 1906. Every bee-keeper is invited to make use of our columns in any way tending to interest, instruct or otherwise assist his fellow craftsmen in the common effort to place the apiarian industry upon a more substantial and profitable basis, both as a domestic hobby and as a commercial enterprise. A mutual exchange of ideas results in a general dissemination of knowledge that will ultimately place bee-keeping in its deserved position of prominence.

We are truly grateful for the kind interest of our patrons who have assisted in extending the circulation of THE BEE-KEEPER, and thereby have enabled us to materially improve the standard of the journal from time to time. In thus assuring them of our gratitude and well-wishes, we thank them again, in anticipation of their continued favors throughout the present year.

The American Bee Journal is slowly falling into line, and becoming somewhat "like other folks," these days. Some time ago it abandoned its distorted method of spelling, and now it condescends to publish the address of each contributor, just as all other bee journals do and have done, for the convenience and information of their subscribers. We congratulate the Journal upon its happy awakening.

Pratt's golden bees secured first prize at the Liege, Belgium, show, season of 1905. This is the fourth grand prize carried off at the European exhibitions by the stock of this enterprising Pennsylvania breeder. For those who have the stock, and cater to the foreign trade these great shows afford an excellent means of advertising.

Some "bee-keepers," it appears, keep bees for comfort. Comfort is quite generally conceded to be an agreeable commodity; but not so generally believed to be very remunerative.



### The Truth About Caucasian Bees.

Under foregoing beautiful title, D. Everett Lyon, Ph. D., writes in *Gleanings* for Nov. 15th as follows:

"In the *American Bee-Keeper* for October I notice that the new Caucasian bees are referred to as 'the most worthless of bees that have ever been offered to the American public,' and less a false impression be given concerning this noble race I desire to enter a most emphatic protest.

"Without hard feeling I am inclined to believe pretty strongly that the gentleman who gave the above characterization of Caucasians is entirely ignorant of an acquaintance with them, or else he never possessed the pure Caucasians.

"Will the writer of the above quoted paragraph tell us whether he has actually handled and studied the habits of Caucasians, or is he taking the opinion of someone else? My experience with them is just the opposite, and I know that they are not a worthless race of bees, but, on the contrary, a valuable acquisition to present valuable races.

"Mr. Frank Benton, the government apiarist at Washington, in a letter to the writer states that they are the gentlest of all races, and good honey gatherers, holding their own with the Italian in this respect, and can be manipulated without smoke, veil or gloves.

"This season I gave them a thorough trial as to gentleness—pulled hive lid off, jarred the frames, and, even when they were being robbed during late fall, due to carelessness in leaving some honey exposed—even under these conditions I shook them from their combs in front of their hives to test their tempers, and I have yet to record their first sting.

"Now, why will a magazine like the *American Bee-keeper* come out and try to give such a race a black eye?

"I suppose it is because they are a new race (I mean, of course, the bees,) that they are thus attacked, and I am

told that when the Italians were first discovered or brought out in this country they were denied the qualities we now know they possess.

"Perhaps the friend who writes against Caucasians imagined he had Caucasian bees when, perchance, they might have been a cross, or the queen had not been purely mated before he got her.

"I personally am inclined to believe that he did not have any real Caucasians at all. I know they are far from being worthless race.

"Mr. E. L. Pratt, of Swarthmore, Pa., has some 38 colonies of pure Caucasian bees, and he has not found them worthless; and his experience and word have great weight with me, for I consider him one of the brainiest bee-keepers in this or any other country, and without an equal in practical knowledge of the habits of the honey-bee.

"Give the Caucasians a chance, and before anyone condemns them let him be sure that he has had pure Caucasians and not a hybrid."

The caption under which Dr. Lyon writes would lead his readers to anticipate something more than a mere reiteration of the stale and threadbare claim of gentleness. This, however, is the only claim of merit which he cites as a result of his own experience, and since this one point, which is of minor importance, has probably never been disputed, Dr. Lyon's attempted arraignment of the editor of the *American Bee-Keeper* appears very flat indeed.

Dr. Lyon seems to fear that we are taking someone else's opinion as a basis for our belief. In a nutshell he thinks we are talking of something in regard to which we know absolutely nothing. Then he proceeds to bolster up his "noble race" by citing another's written testimony, instead of telling us just what the noble race has accomplished under his own personal manipulation. Are you "taking the opinion of someone else, doctor?" All that has

appeared in the editorial columns of *The American Bee-Keeper* in regard to this subject has been written from actual experience with imported stock, but that experience was too limited to justify a condemnation of the race. It was, however, quite sufficient to suggest very forcibly the possibility of their worthlessness, hence we deemed it our duty to advise caution, and, until Dr. Lyon can present something more substantial in their favor than gentleness and a report at second-hand, that they are good honey gatherers, we are still inclined to repeat the advice, as well as to regard with disapproval the action of the government in spreading the Caucasians broadcast over the continent.

Dr. Lyon devotes much space to an expression of his personal ideas of the editor of the *Bee-Keeper*, which, by the way, it may be noted, are not particularly flattering, since he would lead his readers to believe that we had written without knowledge of the subject. Under the glorious stars and stripes it is the Doctor's benign privilege to muse to his heart's content, and to form opinions galore, and we would not deprive him of the privilege if we could. Meantime, we are thinking too—wondering if Dr. Lyon ever produced a carload of honey, or if his apiarian experience has fitted him to pass competent judgement upon any race of bees, from the viewpoint of one whose livelihood comes by the production of honey.

As Dr. Lyon regards the Caucasians as a "new race," we commend to him a reading of the letter from Mr. J. B. Hall in this number of *THE BEE-KEEPER*; and we take occasion to inform the Doctor that it was in Mr. Hall's apiary, and with the bees referred to that the editor of *THE BEE-KEEPER* received his introduction to the Caucasian race.

Dr. Lyon will have to put forth a decidedly more "emphatic protest" than the foregoing if he would have *THE*

*BEE-KEEPER* share his exalted opinion of this "noble race."

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#### Another New One.

It's a dull season in Texas when that state cannot record the advent and demise of one or two bee journals. The latest is *The Apiarist*, of Waco, published by Phillips & Huff. It contains 24 pages and the subscription price is \$1.00 a year.

Like nearly all of its predecessors, *The Apiarist* claims for itself the distinction of being "the only bee journal in the South." *THE AMERICAN BEE-KEEPER* sincerely trusts that *The Apiarist* may find its journalistic trail strewn with more nectar-secreting flowers and less cactus thorns than have been encountered by the many other "only" ones who have found an eternal resting place in the "Lone Star State."

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"Glucose and Its Uses," is the caption under which Mary Hinman Abel very exhaustively discusses our greatest competitor, in the January *Delineator*. The magnitude of the glucose industry in the United States, according to this writer, rather puts the present honey production in the shade. She says that in the glucose factories of the United States thirty-five million bushels of corn are used, and cites the manufactures as authority for the statement that about one-half million barrels of glucose are consumed annually as table syrup. Little is the wonder that the "Honey Producers' League" felt the need of prompt and vigorous action.

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The possibility of publishing a really good monthly bee journal at less than a dollar a year has been questioned by some of our worthy contemporaries. The reader is invited to look this number over very carefully and to compare it critically with those that cost a dollar. Bear in mind that we will send the *American Bee-Keeper* three full years for only one dollar, in advance.

We have repeatedly stated that our experience with the Caucasians has been too limited to justify either condemning or declaring in favor of the race. Any person who, with one or two seasons trial with one or two colonies of any new race, will pronounce judgement upon that race, is obviously a tyro or sadly deficient in some natural qualifications that are essential to apiarian success.

It would appear to be the part of wisdom to determine very thoroughly the qualities inherent therein before seeding the land broadcast with the blood of a black, unknown race of bees. Test all things, and "hold fast that which is good."

The Apiarist, the new Texas bee journal, invites secretaries of bee-keepers' associations to send in minutes and programs for publication; and says that is what the Apiarist is published for. It should affiliate with The Canadian Bee Journal.

It would be a good thing for the National Association if they would make every publisher, editor, manufacturer or dealer in supplies or their employes or agents ineligible to any office in the association. It would be equally good for the rest of the craft.

The Christmas number of Gleanings contained 100 pages, including a handsomely executed cover in colors. Even though rather more than one-half of its space is taken up by advertisements, they are interesting, and this particular number is doubtless the most elaborate bee journal that has ever been issued in America.

The Bee-Keeper arises to ask what constitutes the true "nobility" of bee-dom? If it is the quality of reluctance, as to the stinging habit, let us yield the honor to "la abe ja de tierra," for they cannot sting.

### A Bee-Keeper's Woes.

The New York Tribune is responsible for the following story: A German bee-keeper undertook to carry some of his choicest bees to a bee show. He took a train in Hanover with his bees in a basket at his feet. The bees escaped from the basket and crawled up his trouser legs. His actions soon aroused suspicions in the hearts of two women who occupied the same compartment with him. They pulled the bell cord and stopped the train. When the bee fancier explained the situation he was placed in an empty compartment to have it out with the bees all by himself. Here he removed his trousers and began shaking them out of the window to free them of the swarm. Unfortunately they caught a telegraph pole and were swept away, bees, money and all. At the next station the irate station master brought forth the reluctant bee fancier in a rug, and he pawned his watch to acquire decent raiment to walk back along the line in search of his bees and his trousers.

Officers elected to serve the National Bee-Keepers' Association during 1906 are as follows: President, C. P. Dantant; vice-president, Geo. E. Hilton; secretary, W. Z. Hutchinson; general manager, N. E. France. F. Wilcox and C. A. Hatch received the largest vote for directors.

The Review wisely advises "a little caution" upon the part of those who think of introducing Caucasian bees.

The Chicago convention is said by those in attendance to have been a "stem-winder."

The Honey Producers' League is reported to have "gone dead." The good die young."

Honey producers as a rule keep bees for the honey they produce.

**The American Bee-Keeper Circulates.**

Our numerous friends and patrons, who have rendered such noble service in behalf of THE AMERICAN BEE-KEEPER, will doubtless be pleased to learn that we begin Vol. XVI this month with a most gratifying list of subscribers—a list that includes more or less of the bee-keepers of every state in the Union, every province of the Dominion of Canada, the various republics of Central and South America and the West India Islands. Beyond the seas THE BEE-KEEPER goes regularly to bee-keepers in Germany, Austria, Holland, New Zealand, England, Belgium, France, Ireland, Scotland, Switzerland, Japan, Sweden, Italy, Spain, Australia, Hawaii, Tasmania and various parts of Africa.

Gratified as we are by this progress, we are not yet content, and hopefully anticipate the addition of several thousand subscribers during 1906.

The kind assistance of every present patron of THE BEE-KEEPER is respectfully solicited, in order that we may the sooner evolve our ideals in the production of a Twentieth Century bee-journal.

**Thinks Caucasians Promising.**

Mr. John W. Pharr, Barclair, Texas, writes that he is favorably impressed with a Caucasian queen received early in September last, though he realizes that his experience with this race is yet too limited to warrant the formation of any settled opinion. He says this queen is prolific, her bees good workers, and that he has noticed that at times when other colonies were dormant the Caucasians were active. This all goes to prove that with Caucasians as with other races, some strains are better than others. We shall be pleased to hear from all who have tested the Caucasians. It is the truth we want; and more experience with this race will be necessary to determine the actual truth.

One swallow isn't a whole summer.

**It's all in the Queen.**

A contributor to our esteemed contemporary, L'Apiculteur, of France, reports that with one exception all his hives face the east. The one exception faces south, and is somewhat shaded by a tree. The position of the hives he considers noteworthy for the reason that the hive having its entrance to the southward always yields a greater quantity of surplus honey than any of the others.

It is not improbable that the shade may have a beneficial effect; but there is little doubt that if this apiarist will turn the entrance of this particular colony to the north, east or west, its superiority will still be evident. If he were to stand the thing on its head, yet it would outstrip its competitors in the honey-gathering contest. If he will exchange queens with some one of the inferior producers, however, he will doubtless find that the favorable record will have followed the queen. Blood tells.

C. W. Dayton, Chatsworth, Calif., writes: "Say, did you know that these California mountains is the best place in the world for queen-rearing? I only rear for my own use. Bees fly up and down so much that it gives them great lung power. Then, also, the high altitude makes the air very rarified, which calls for still more lung and wing power. The sages are all deep-tubed—almost, if not quite equal to red clover—and the poor years show which are the excellent colonies." We have just consulted our Queen-Breeders' Directory and are surprised to note that California has no representation therein. It is rather remarkable that some enterprising breeder has not taken advantage of such propitious (?) conditions in the California mountains and benefitted by the publicity to be derived for \$3.00 a year in the American Bee-Keeper Directory, and thus become immensely wealthy before this time.

## CINCINNATI NEWS NOTES.

Mrs. Geo. Hutton, of Carthage, Ohio, is very intensely interested in chickens, the raising of mushrooms, and has now taken up bee keeping. We know she will be successful and enjoy this hobby.

Mr. Wm. J. Gilliland, former secretary of the Hamilton County Bee-Keepers' Association, was re-elected mayor of Silverton, Ohio. Mr. Gilliland is a native of the Emerald Isle, and is every inch a bee-keeper.

Mr. Alois Lampert, of Norwood, a beautiful suburb of Cincinnati, has had a case of the bee fever. I am beginning to think the disease is contagious. We must be sure to give his case our attention the first thing next spring.

Mr. A. B. Bader is a jolly good fellow. His wife has bees in her bonnet, and he declares she will not let him rest unless he promises to buy a colony or two of bees next spring. Alright, "Butch," we will attend to the bees for your good wife next spring.

Mr. John B. Peaslee, former superintendent of our public schools, last spring purchased two two-frame nuclei, placed them in hives on the top of his residence. Early in the fall, from one hive, he extracted some forty pounds of fine honey. Maybe he can't talk bees; you ought to hear him.

Mr. Chas. F. Droste, of Price Hill, this city, former state senator, found a swarm of bees last summer in a hallow tree on his place, and now has a bad case of the fever, of which he positively can not be cured. However, the fever will be allayed next summer after he has bought about fifteen colonies.

Miss E. Herzog, residing in one of our pretty suburbs, and every inch a practical bee-keeper, sold last season \$75.00 worth of honey from five hives. At our county fair last summer, this young lady made an exhibit of both comb and extracted honey, and carried the first prizes. Had her bees only made more honey, in all probability she could have sold \$200 worth of honey, for she tells us people stop at her home in carriages and others telephone her for honey, and she is kept busy telling them she will have more honey next season.

Mr. Wm. Cunningham, of Fort Thomas, Ky., that famous spot some eight miles from our city, likes bees, but

they don't like him. He claims that his wife has more courage than he. Last summer the writer visited at his home and worked with his bees. Mr. William stepped away back to the fence; well, he went as far as he could without hurting my feelings. His good wife was brave and sat down on the door step leading to her kitchen, but unfortunately happened to sit down on a bee. Say, Mrs. Cunningham, I won't say the rest, but it would have done you all good to have seen Mr. William laugh.

FRED W. MUTH.

### HONEY AND BEESWAX MARKET.

Buffalo, Dec. 6.—The supply of honey is only fair and more needed. The demand is good for fancy. We quote our market today as follows: Comb, fancy, 12-14, No. 2, 8-10c. Extracted, 6-8c lb. in 5 gallon cans. Beeswax 28-32c. Really fancy one-lb comb is wanted, but lower grades move slow and have to be cut accordingly.

Batterson & Co.

Chicago, Dec. 6.—The trade in best grades of white comb honey has been fair, yet retailers take only small quantities at a time. This honey brings 11-15c, other grades are difficult to place at 1 to 3c less per lb. Extracted selling at 7-7½c for white, and amber 6½-7c, dark 5½-6. Beeswax when clean and of good color, 30c per lb.

R. A. Burnett & Co.

Boston, Dec. 9.—We quote you our market as follows: Fancy white, 16c; A 1, 14-15; No. 1, 14c; No. 2, 12-13c. Extracted 6-8c, according to quality, with a fair demand. The very large quantities of honey carried over from last season is undoubtedly affecting the sale and prices.

Blake, Scott & Lee Co.

Kansas City, Mo., Dec. 7.—The supply of honey is good. The demand is fair. We quote our market today as follows: Comb, \$3.25 per case. Extracted, 6c and 6½c.

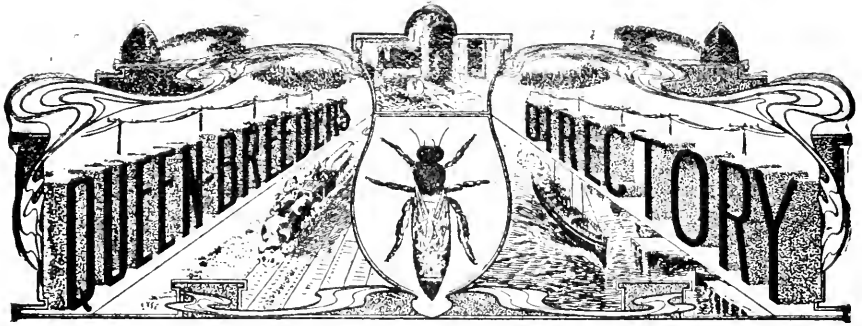
C. C. Clemons & Co.

Cincinnati, Nov. 24.—The demand for comb honey is relaxing to some extent, owing to the majority of the trade being well supplied. All fears of a comb honey famine have been allayed. We quote fancy white comb honey at 14c to 16c per lb. Extracted honey is in fair demand. Quote amber, 5½ to 6½c, according to the package and quality. Fancy white and white clover extracted at 6½ to 8½c. We are paying 28½c per lb delivered here for choice yellow beeswax (Notice:—We wish to call the attention of the producer to the above honey quotations, who mistakenly expect to receive these prices for his product. The above are our selling prices for honey.)

The Fred W. Muth Company,  
51 Walnut street

New York, Dec. 6.—Comb honey—The demand continues to be fair for all grades. Prices practically remain the same. We quote fancy white at 14 to 15c; No. 1, 13c; No. 2, 12c; buckwheat 10c per lb. Extracted honey is in good demand, especially California, with large supplies. We quote white, 6½ to 7c; light amber, 5c; buckwheat, extracted, 5½ to 6c per lb. Beeswax, firm and steady at 29 to 30c per lb.

Hildreth & Segelken.



ONE-HALF INCH SPACE ONE YEAR ON THIS PAGE, \$3.00

**W. J. DAVIS**, 1st, YOUNGVILLE, PA.—Breeder of choice Italian Bees and Queens. Quality, not quantity, is my motto.

**DEWEY'S HARDY HONEY GATHERERS.**—Reared under swarming impulse throughout the year. Large, strong, healthy. Send for card, "Can I Control Swarming?" Original. Untested, 75c., 6 for \$3.00; tested, \$1.50, 6 for \$5.00. Choice, \$2.50. High grade breeders, \$2.00 to \$10.00. **E. H. DEWEY**, GT. BARRINGTON, MASS.

**QUEENS HERE.**—We are still asking you to give us your trade. We sell Italians, Goldde<sup>us</sup> and Carniolans at 75c for untested and \$1.00 for tested. Prices on quantities and nuclei upon application. **JOHN W. PHARR**, BERCLAIR, TEXAS. Jan. 6

**SWARTHMORE APIARIES**, SWARTHMORE, PA.—Our bees and queens are the brightest Italians procurable. Satisfaction guaranteed. We are breeding the Caucasians absolutely pure from direct imported stock.

**W. W. CARY & SON**, LYONSVILLE, MASS.—Breeders of choice Italian bees and queens. Imported Leather and Root's Red Clover strains. Catalogue and price list FREE.

**MOORE'S LONG-TONGUED STRAIN** of Italians become more and more popular each year. Those who have tested them know why. Descriptive circular free to all. Write **J. P. MOORE**, L BOX 1, MORGAN, KY.

**HONEY QUEENS AND BEES FOR SALE.**—I extracted 300 pounds per colony in 1903. **THOS. WORTHINGTON**, Leota, Miss. Aug 5

**PUNIC BEES.**—All other races are discarded, after trial of these wonderful bees. Particulars post free. **JOHN HEWITT & CO.**, Sheffield, England. Jan 6

**THE A. I. ROOT CO.**, Medina, O.—Breeders of Italian bees and queens.

**THE FRED W. MUTH CO**, 51 Walnut St., Cincinnati, Ohio. Standard Bred Red Clover Three-banded Queens, Golden Italians and Carniolans. Safe arrival guarantee. Sedd for circulars.

**QUEENS** from Jamaica any day in the year. Untested, 66c; tested, \$1.00; select tested, \$1.50. Our queens are reared from the very finest strains. **Geo. W. Phillips**, Sav-La-Mar P O, Jamaica, W I. 5-5

**D. J. BLOCHER**, PEARL CITY, ILL.—Breeder of Fine Italian Bees and Queens. Our stock speaks for itself. Safe arrival of all stock guaranteed. Free information. Jan 6

**LAWRENCE C MILLER** has sold out his "Providence Queen" business to **ull & Williams**, Providence, R I. See large ad elsewhere.

**JOHN M DAVIS**, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired. No disease. Circular free

We are now booking orders for Providence Queens for spring delivery. **Cull & Williams**, Providence, R. I.

**C. H W. WEBER**, CINCINOATI, OHIO—(corner Central and Freeman Aves.)—Golden Yellow, Red Clover and Carniolan queens, bred from select mothers in separate apiaries.

**HOOPER BROS.**' Italian Queens reared in the West Indies are the most prolific and give the best results available any time of the year. Write at once for information to **Kingston, Jamaica, B. W. I.**, Box 162 nov-6

## HONEY DEALERS.

Under this heading will be inserted, for reliable dealers, two lines one year for \$1.25. Additional words, 12c a word. No announcement can be accepted for less than one year at these prices.

### OHIO.

C. H. W. WEBER, Freeman and Central Aves., Cincinnati, Ohio. If for sale, mail sample and state price expected, delivered in Cincinnati. If in want, write for prices, and state quality and quantity desired. 5-5

WE are always in the market for extracted honey, as we sell unlimited quantities. Send us a sample and your best price delivered here. The Fred W. Muth Co., 51 Walnut St., Cincinnati, O. 5-5

### COLORADO.

THE COLORADO HONEY PRODUCERS' ASSOCIATION, 1140 Market St., Denver, Colo.

## Cent-a-Word Column.

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

THE BUSY MAN'S METHOD OF REARING GOOD QUEENS—This leaflet describes the method used in rearing the Hardy Honey Gatherers (read elsewhere), and if carefully followed will produce queens of great merit. No loss of brood, no cell-cups, and but little time required. Large queens under swarming impulse. Nothing artificial about it. Every queen breeder needs it. Price 25 cents. E. H. DEWEY, Gt. Barrington, Mass.

INCREASE is a handsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

## Bee-Keepers

We carry a full line of FALCONER'S BEEKEEPERS' SUPPLIES, and that means THE BEST, and sell them at factory prices, f. o. b. Savannah, Ga. Order from us and save freight charges. Catalogue free for the asking.

**Harden & Rourk,**  
Savannah, Ga.

## A CARLOAD OF PAPER

was necessary to print the  
**1906 LEWIS CATALOG**  
now out. Send for one at once.



## Agents Wanted

For Lewis Goods by the Carload

For Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, North Carolina, South Carolina, Mississippi, Alabama, Georgia, Florida, Louisiana, Southern Ohio.

Liberal territory given.

For further particulars address Home Office.

## G. B. Lewis Co.

Manufacturers of Bee-Keepers Supplies  
**Watertown, Wis., U. S. A.**

## Homes in Old Virginia.

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold nor too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the VIRGINIA FARMER to Farmer Co., Emporia, Va.

### 3 and 5-Banded ITALIAN and CARNIOLAN QUEENS

Say, friends, you who have supported us during the past season, we desire to express our thanks for your patronage in the past, and respectfully solicit a continuance of your valued favors through the season of 1906.

Our queens now stand upon their merits and former record. We are preparing for next season, and seeking the patronage of large apiarists and dealers. We do not claim that our queens are superior to all others, but that they are as good as the best. We will furnish from one to a thousand at the following prices: Tested, of either race, \$1; one untested, 75c; 5 for \$3.25; 10 for \$6; 15 for \$8.25; 25 for \$12.50; 50 for \$23.50; 100 for \$45. For descriptive circulars address,

**John W. Pharr, Prop.,**

New Century Queen Rearing Co., Berclair, Goliad Co., Texas.

### Read This and Do it Quick.

All One  
Year \$1.40  
Without  
Gleanings  
80 cents

The Modern Farmer  
Green's Fruit Grower  
Agricultural Epitomist  
The Mayflower and Ten  
Beautiful Flowering Bulbs  
Gleanings in Bee Culture  
American Bee-Keeper.

Without Gleanings and American Bee-Keeper 50c. Good only a short time. Address.

**The Modern Farmer,**  
Box 15 - - - St. Joseph, Mo.  
The clean farm paper.

## WANTED

Every person who keeps pigeons, Belgian hares, cavies, dogs, cats or a pet of any kind to send for a free sample of the

### PET STOCK PAPER,

Address Box 20, York, Pa.

**Big Magazine** One year FREE to quickly introduce it. Many prefer it to Harper's, Munsey's, Ladies' Home Journal or McClure's. Send 10 cents to help pay postage. AMERICAN STORIES, Dept. H. D., Grand Rapids, Mich.

Several  
New  
Agencies  
for  
Bee  
Supplies  
in  
Texas

# 1906

For particulars address

**W. H. Putnam,**  
RIVER FALLS, WIS.

To Subscribers of  
**The American Bee-Keeper**  
and Others?  
**Until Further Notice**  
We will send the  
**Country  
Journal**

to any address in the U. S. A. one year for 10 cents, providing you mention the American Bee-Keeper.

The Country Journal treats on Farm, Orchard and Garden, Poultry and Fashion. It's the best paper printed for the price. Address

**The Country Journal,**  
2tf Allentown, Pa.

We will send The American Bee-Keeper three full years for \$1.00.



## Our Special Premium Offer.

We have been successful in closing a contract with the Selden Pen Mfg. Co., of New York, whereby for a limited time we can supply a guaranteed

### **\$2.00 Gold Fountain Pen, "The Celtric Model 1"**

and the American Bee-Keeper one year for only 90c to every subscriber, old or new. The pen will be forwarded immediately upon receipt of the money. It is made of the best quality of hard rubber in four parts, and fitted with a guaranteed irridium pointed 14-k GOLD PEN. The "fountain" is throughout of the simplest construction and can not get out of order, overflow, or fail to supply ink to the nib.

#### **"A Fountain Pen is a Necessity of the 20th Century."**

It dispenses with the inconvenient inkstand and is always ready for use.

"THE CELTRIC MODEL 1" bears the manufacturer's guarantee that the pen is solid GOLD, 14-k fine. If it does not prove satisfactory in every way we will exchange it for another, or return the fifty cents additional upon return of the pen.

This is an unusual opportunity to secure, at a very low price, an article of superior quality that is coming to be essential to the comfort and convenience of every one. Remember this offer is for a short time only.

**The American Bee-Keeper, Falconer, N. Y.**

## Chance Of a Life Time.

**100 WANTED TO RAISE  
BELGIANS**

Send for particulars and sample copy  
of the only

## Belgian Hare Journal

Published in America.

**Judge R. J. FINLEY,**

227 Lamb St., Macon, Mo.

## Special Notice to Bee-keepers.

# B O S T O N

Money in Bees for You  
Catalog Price on

## Root's Supplies

Catalog for the Asking

**F. H. Farmer,** Up First Flight.

182 Friend St., Boston, Mass.

**AGENTS YOU CAN Do It.**  
Medallions "Peuro  
or Pearl" New Me-  
dallions. Quick sellers. Big Money.  
Write at once. Special territory given.  
Largest Medallion Comp'y in the world.  
Agents' supplies. Novelties up-to-date.  
Write now. **Universal Manufac-  
turing Co.,** Pittsburg, Pa.

# The Miller Wax Extractor Is a Success



The highest results. The lowest Price, \$8, f. o. b. Providence.



## Cull & Williams

Providence, R. I.

Rhode Island Agents for Falconer's Unexcelled Supplies

## Big Song Book

"Polly, I Love But You," words and music; "Piking the Pike," "Just Because I'm from Missouri," "Hiawatha," "Navajo," "Bedelia," "Josie," "Only a Factory Girl," "Flirting at the Seashore," "The Little Brown Man of Japan," "Come Down, Miss Malinda," "Ma Ragtime Ebony Belle," and 44 other popular songs, all in one book, and sent postpaid **for only 10 cents.** We will also send a coupon good for 10 cents to everyone mentioning in what paper they saw this ad.

This is a Special Offer to Introduce our Goods, so send at once

## H. L. Leader Co.

Grand Rapids : : : Michigan

Free Months for Only 20 Cents

To a New Subscriber

## THE American Bee Journal

Established in 1861

It is the only Weekly Bee Paper in America. Those who write for it are among the most extensive and successful bee-keepers in the world. Many of them produce honey by the ton, and make money at the business, hence their experience is valuable.

Among the Departments represented in the Bee Journal are these: Editorial Notes and Comments, Miscellaneous News Items, Contributed Special Articles, Opinions of Some Experts, Proceedings of Conventions, Our Bee-Keeping Sisters, Mr. Hasty's Afterthoughts, Dr. Miller's Answers to Questions, Honey and beeswax Market Quotations.

Every Bee-Keeper, whether having one colony or 100, should read the old American Bee Journal every week.

Only \$1.00 a Year; or 20 cents for a trial trip of three months (13 copies), to a new subscriber. Sample copy free. Ask for it.

### George W. York & Co.

334 Dearborn Street,

Chicago, Illinois

## Music Lovers!

Big Magazine One Year 10 Cents

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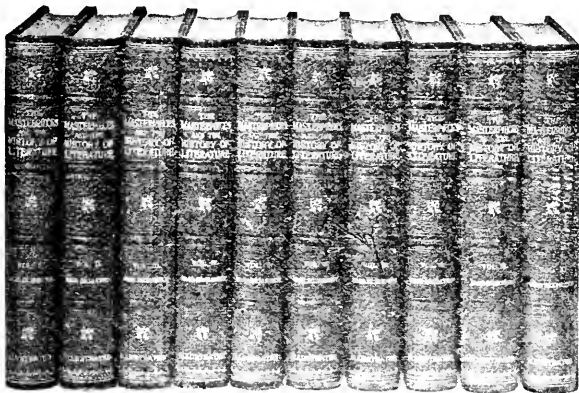


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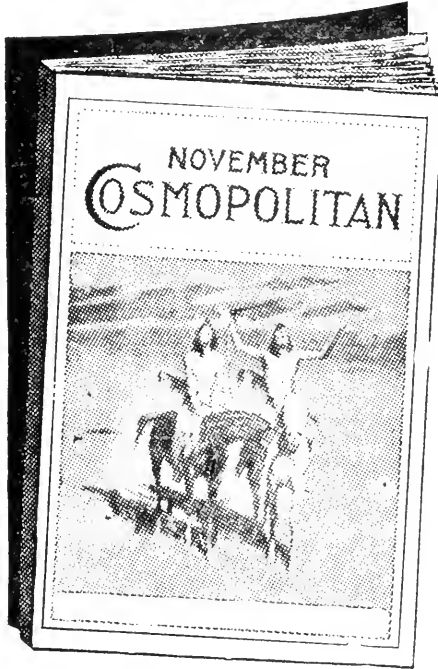
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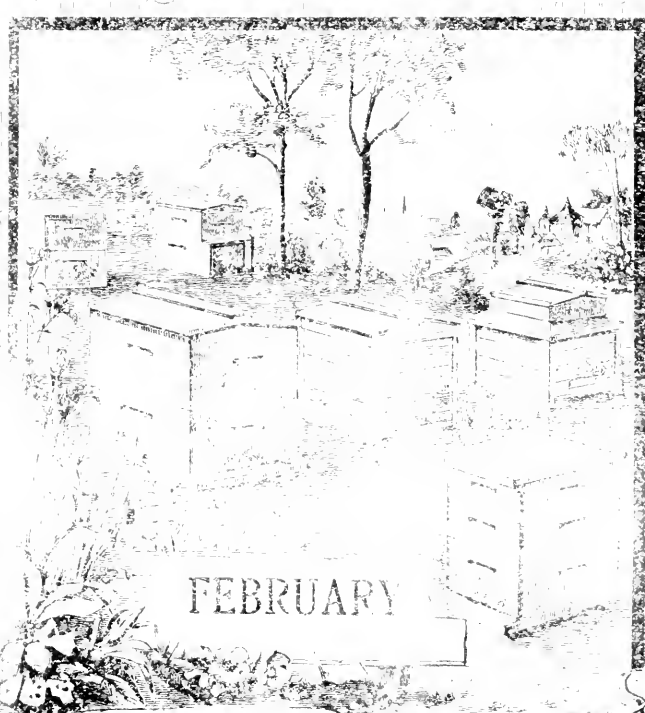
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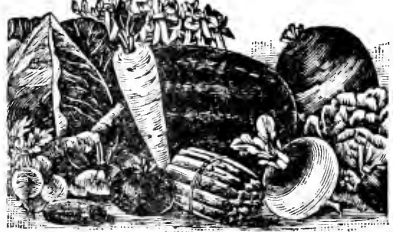
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Vol. XVI

FEBRUARY, 1906.

No. 2

## HUMIDITY.

A Philosophical Discussion of Its Influence on Bee-Life.

By ALLEN LATHAM.

THE ENTIRE subject of the part that water and water vapor plays in the economy of bee-life teems with interest, and would be too big a subject for one brief article. It is my purpose to treat in a partial manner the special part taken by water as it exists in the atmosphere. There is a widespread but rather vague knowledge that humid air concerns the welfare of the bee—possibly affording benefit here, but acting harmful there. Few bee-keepers, unless I am in error, have concerned themselves with the why of this, resting satisfied with the bare fact.

Though water is so important to bee life, as to all forms of life, and though a humid air may be desirable in the brood nest, taken all in all water, in one form or another, brings about the necessity for much of the work which bees have to perform, and is the source at times of not only distress, but even of death itself to bees, therefore, it might be safe to say that water is the honey bee's worst enemy.

I wonder how many of my readers

have studied the actions of bees under a high atmospheric humidity. Do so, and see what developments arise, and seek explanation for what can be seen. I am confident that many will conclude with me that excessive moisture may become actually painful to bees, causing uneasiness and evident distress.

Right here is a possible explanation for the ill-nature displayed by bees on certain days. For are bees ever more spitefully cross than on those days we term muggy?

Heat has usually been given as the cause of the hanging out of bees, and no doubt it often has much to do with that phenomenon. Yet intense heat, if the air is dry, will not cause so general clustering outside the hive as will a much lower degree of heat accompanied by excessive humidity. More than that, bees will cluster out when the thermometer does not stand above sixty.

I saw a marked instance of the phenomenon last spoken of in the spring of 1905. One morning late in April or

in early May I observed that every colony in a row of eight was hanging out, the clusters varying from the size of a good prime swarm down to a bunch the bigness of one's fist. This small cluster was from a hive in which there were not enough bees to cover well three combs. Why should they cluster out, for surely they had plenty of room and the morning was not warm? Later in the day the mists disappeared, the air became dry, and even the large cluster went into the hive. Why was this, for the air had become no colder?

And so it went on all summer. Bees hung out in huge masses on humid days even when the sun was not shining, but stayed inside on hot dry days.

The continued observation told me one useful fact, namely, that no safe estimate can be made of the strength of a colony of bees by the size of the cluster hanging out, unless, indeed, at the same time many colonies are compared one with another.

I think, too, that it told me another thing, namely, that great humidity distresses bees. Finding it difficult to get rid of the water in their systems after their usual manner in the hive, because of the excessive humidity, they stayed outside where the circulation of air would assist their natural functions.

It seems that the urinary organs of the bee are not able to do as much work in the way of taking care of water as those of vertebrates, the respiratory organs probably doing a great share of this work. Obviously, in a dry atmosphere the respiratory organs can easily do most of the work, and thus relieve the delicate urinary organs of the bee; but in humid air the respiratory organs can no longer throw off the water, and it must be taken care of by the urinary organs. The latter organs being ill adapted for much of this work, and there being no suitable repository for the excreted water, great discomfort comes to the bee.

It is safe to assume that 95 per cent,

or possibly more, of the ventilation of the hive, as performed by the bees themselves, is to exchange the humid air of the hive for the drier air of the outside. It is a well-known fact that breeding brings about increased moisture in the hive, and that simultaneously with increased breeding comes increased fanning at the entrance. That bees require but slow exchange of air for the purpose of oxygenation seems either to have escaped the notice of most observers or at least to have been considered of small moment.

It is usually stated that bees need moisture for successful breeding, and such would certainly seem to be the case; but that the statement has ever been proved does not follow, and set off against it is the fact that bees try to rid the brood-nest of moist air. Probably a most careful and exhaustive study of the matter would reveal the truth that there is a certain humidity which is best, and that the activities of the bees are bent to preserve that uniform humidity.

The power which bees have of throwing off water is in itself phenomenal, and, when one considers that, he is led to wonder that a bee can suffer in a humid atmosphere when not engaged in active work. I have in mind, of course, the power which the bee has of ridding the nectar as gathered from the flowers of its large percentage of water. It is possible that the belief is still rather prevalent that the honey is placed in cells while still thin and there evaporated after the manner in which we dry fruits—but the truth is far otherwise. The way of the bees is more after the manner which we have of evaporating (?) an orange in a few minutes and then discarding the skin and pulp.

The observation hive tells us that the bee gets rid of the moisture in the honey while the honey is held in her own body, and that the honey does not find a permanent resting place in the cells until well cured. The very fact

that honey is deliquescent in humid air, and that the atmosphere of the hive is rather humid, will logically bear out what has been seen by a few observers. The fanning by the bees is not so much to bring currents of drying air over the cells of honey, as many apparently believe, as it is to bring dry air to the laboring insects in the hive, air into which they can little by little unload moisture from their respiratory organs.

To offer an illustration, by no means intended as exact, it seems as if the bee was able by some delicate process to separate the water from the honey something after the manner that we can separate buttermilk from butter. The spiracles of the bee carry away the water in the form of vapor, while the buttermilk leaves the churn as a liquid stream. If the level of the buttermilk outside the churn could reach the level inside, the flow would cease; if the humidity of the air in the hive reaches a certain point, then no more moisture can leave the body of the bee by way of the spiracles. Is it any wonder, then, that the bees put forth such strenuous efforts to keep up the circulation of air in the hive in the hours following a heavy honey-flow? The new air becomes warmer in the hive, becomes thereby drier, and hence acquires the power of taking up more water.

To cite still another instance in connection with the effect of moist air upon bee-life: When the south wind comes in winter time, bringing with it air of high humidity, the bees, especially in the cellar, become exceedingly restless. Heat is generally blamed for this restlessness, but unjustly. Let him who doubts this last statement bring the cellar to the same temperature with dry air.

This article, with its various phenomena brought under one head, has been rambling. To epitomize my theme, I would say: Humidity brings discomfort to bees; that this discomfort causes restlessness, and sometimes fiery tem-

per; that hanging out and fanning are only acts to relieve the humidity within the hive; that bees have a power peculiar to themselves of eliminating water from their systems; that this power is correlated with the humidity of the atmosphere; and finally, that humidity plays an important part in the economy of the bee-hive.

## BEE VEILS.

By A. C. Miller.

HOW MANY sorts and kinds of arrangements pass for bee veils and how few of them are entirely satisfactory. Some are heavy, some wrinkle and are hard to see through, some will persist in getting against the neck or face permitting the bees to sting the wearer, others push the hat over one's eyes when a view of a tree top is attempted. All of them are uncomfortable when the temperature is high, and some are more so than others.

The following described arrangement is the result of long experience and is in every way as satisfactory as any veil can be. Figure 1 shows the complete veil in use, and figure 2 shows the way

Fig 1.

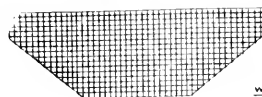


Fig. 2



Fig. 3

the wire is cut to make the desired shape. The top or straight edge of the wire cloth should be the selvage and is the edge sewn to the hat brim; the other

edges are "hemmed," that is they have a half inch turned over and flattened, which prevents ravelling. The other articles necessary are a cloth hat, a piece of wide tape a little longer than the strip of wire cloth and a piece of firm cotton cloth about 38 inches long by 8 inches wide. The cloth hat found most satisfactory is made of brown or white duck and is known to the trade as a "beach hat." The quality best suited to the purpose costs 40 to 50 cents, varying with the seller.

To prepare the parts and put them together, proceed as follows: Cut the wire cloth two inches larger than the distance around the hat brim and fold over half inch along the two ends and along the lower edges, easily done by pinching the wire firmly between two strips of wood and bending the wire. Then take the wide tape, fold it equally over the hemmed edge of the wire cloth and stitch the two edges of the tape together, sewing right through the enclosed wire cloth. This is easily done on a sewing machine by using a stiff needle, thread about 30 or 40 size, and tighten tension. It is a little hard on the needle, but otherwise perfectly safe to the machine. Next the cloth is sewn to the taped edge of the wire in the same way. This double row of stitching through the wire and tape has several advantages. The next step is to sew the wire to the brim of the hat. Put the wire against the hat brim as shown and begin stitching at the middle of the front, having the wide part of the wire at the front of the hat and letting the ends lap at the back. Next stitch the two ends of the cotton cloth together and the ends of the wire cloth to the surface against which they rest. Double stitching at the hat brim is desirable. If the wire cloth is given a coat of paint before the tape is sewn on it will be less likely to rust and crumble. The writer painted his with white enamel paint, except that part coming in front of the face, which was

given a coat of black. It makes a fairly cool veil, one which keeps away from the head, gives freedom of movement, is durable, is bee proof, looks half way presentable and is easy to see through.

Often a veil is not needed, especially in a small apiary or for brief operations, but when one is necessary the best veil is none too good and a poor one is almost worse than none at all.

Providence, R. I., Oct. 11, 1905.

#### Caucasian Bees in England.

One editor characterizes these as "the most worthless race of bees that has ever been offered to the public." I think that is practically the finding arrived at in this country by our Mr. W. H. Brice eight years ago, after giving them a pretty exhaustive trial. His verdict was: "I consider them worthless for bee-keeping purposes in this country, and, in a word, I call them 'wasters.'" "Thus," he says, "exit 'Reines abeilles de la race Caucasiennne gris et jaune de qualite eprouvee'." They are quiet, too quiet, poor breeders, lazy as workers, and bad winterers. Americans are seemingly finding out something similar now. — British Bee Journal.

#### Another Dickle "Theory."

F. Dickle says: "Since it is generally admitted that queens reared by the new and so-called improved methods are inferior to normally reared queens, it is advisable that bee-keepers make better use of the cells so easily obtained from their colonies having cast swarms." I wonder how many bee-keepers of the front rank would subscribe to this doctrine? Queen rearers, of course, will set it down as rank heresy, but Mr. A. C. Miller gives it his approval. — British Bee Journal.

"Never tell folks you can go ahead of 'em, but do it. It spares a great deal of talk and helps them to save their breath to cool their broth."



## LOCATING APIARIES IN CALIFORNIA.

A Glimpse of the Difficulties That Beset the Tenderfoot in the Sunset State.  
Isolation, Hardships and Powerful Competition Are Some of the  
Things That Come With the Honey Harvest There.

By C. W. DAYTON.

THE ORDINARY mortal coming from the East out here to keep bees in California would be considerably disappointed at the difficulties in obtaining an apiary location; and the more so when he sees the miles and miles of rocky and brush-covered mountains, much of which brush is first-class honey yielding plants.

Since residing here twelve years I am in position to inform the prospector in a short space what might require many years to find out, and, maybe, end in failure or loss of means already possessed. Our ranch or tract of mountain land consists of about 60 acres, taking it as though it was level, but, on account of the up and down lay of the land there may be 80 to 90. At our east line begins a grain and stock farm or ranch comprising 120,000 acres. Across the section line on the north side is another very nearly the same size. When we go to the city we traverse this farm, and it is ten miles to the first house and four miles farther to the second. Northwest we are joined by a 90,000-acre farm and southwest at first is a 5,000-acre farm, and extending around that, like a horseshoe, is a larger one of 500,000 acres. None of these large farms will sell off a small slice, and, besides, it is held at what would be considered a very exorbitant figure.

In this locality, 20 or 30 miles from the market city, it could not be bought for less than \$100 per acre. Some of these large farms contain one farm house and others several farm houses, according to the size of the farm and to the devotion of the land to grain or

stock raising. A farm or ranch usually occupies a valley between the ranges of mountains, and extends up against the mountains all around so far as there is any tillable or grazing land. Where it is so far back and so rocky as to be considered worthless for any purpose it remains in the possession of the government. This usually leaves a more or less narrow strip in the center of the mountain ranges that can be occupied by homesteaders, but it is usually a life-long job, and sometimes more, to make a road to such homesteads. It is not only a lonesome life, fraught with privations, but the scarcity of water often forbids the enterprise altogether. For several years we hauled water in the dry part of the season about eight miles. In the rainy season it could be had at one and a half to four miles. But this would contain either sulphur or alkali, so that we occasionally went the longer distance to secure better water.

The strip in which our land is situated is about fifteen miles long, one-half mile long at one end and one and one-half miles at the other. The canyons which run up into the mountains cut this strip at right angles. These canyons are the only places where the mountains can be entered on account of their abrupt contour, and are one-half to three miles apart. Some contain springs of water and others no water at all. Wherever there is a spring it has been secured many years ago and held as securely as a gold mine. Not only would it have been secured by settlers, but it would have been included in the large farm, because it is very favorable

to stock to get water without traveling several miles for it, and then, perhaps, it would have to be drawn by artificial contrivance.

In earlier times if it had been known that these rocky, precipitous mountains contained such fruitful bee pasturage no doubt it would all have been included within the large ranches. But the usefulness of the sage brush is a comparatively recent discovery. On the first discovery that there were profits in bees and sage brush, as well, or even better than grain and cattle, many of these large farmers engaged in extensive bee culture. Lower prices came on, more dry seasons and bee diseases crept in, which shut out the unscientific producer. The large ranchman managed bees about the same as stock, which consisted of buying a few cattle for a start, branding them, turning them loose to choose their own pastures, and increase. Persons born and brought up scarcely outside the saddle, roping steers and lassoing wild horses, could not be expected to tone down, in the course of a few years, to the careful, painstaking methods necessary to bee management.

Extensive (the opposite of intensive) farming eventually brought the land to near sterility. There are less bushels per acre produced and the grain is not so high in quality as formerly. The mountains are also giving less and less pasture. The large farms are, in consequence, becoming less remunerative in the other lines, so that the owners are turning their attention toward honey production, employing men with more or less bee knowledge as managers of their apiaries.

A great difficulty to the small-capital bee-keeper is to get help when needed, in the rush of the season; men to do the work; wagons and teams to haul supplies and honey to and from the distant market, besides the capital for the operation of his business until the disposal of the crop. Men dislike to leave the city to work in these isolated localities,

and so demand high wages. Since the large farms comprise all the grazing land it is expensive to keep horses, as their feed must be obtained from the city, not only in the season of a good crop of honey, but during the passing of the poor seasons, which are more numerous than the good. With several shipping expenses and middlemen's profits added, it comes high.

When a man buys or hires he is expected to pay soon. This necessitates the early disposal of his crop. With so large an army of bee-men in like condition, from a like cause, it causes a sudden flush of the local market. The buyers of honey are the usual sellers of sugar, syrups, etc., and it is common for sugar to be low about the time bee-men come in with their samples of honey.

In 1897 I took a sample of my best honey to a wholesale dealer in Los Angeles, who has branch offices in New York, London and Hamburg. Said the buyer: "Yours is pretty white; but we sometimes see it lighter." Said I, "I do not regard my honey so highly for the color as for taste." He said he did not buy honey by taste, but entirely by color. He went to the rear of the store, and returning, said to me: "Well, how much do you want for your honey?" "Four and one-half cents," said I. "Ho!" said he, "we are offered more at two and one-half cents than we would care to buy," and turning on his heel as if cutting the final flourish in his name with a pair of skates, went rapidly away. I kept my honey eight months and obtained eight cents, and this same wholesaler offered six and one-half. That is a long time to keep a crop where the producer has not much capital, besides rents, debts, etc.

But these large farmers have horses, wagons, feed and men on hand year in and year out. If they take a load of grain or wool into the city they can bring a load of bee supplies out. They use groceries and other farm supplies

in such large quantities that it pays them to own and operate stores of their own and sell much of their honey and other produce in a retail way. I know of farms 30 miles in length having a store at a city at each end and a store midway, besides banks and mills in distant large cities.

In the East we can approach a small farmer who has a wooded pasture or a neglected orchard and he will nearly fall over himself to obtain \$5 or \$10 a year for an apiary location which otherwise would return him nothing, but to these large farmers \$5 or \$10 a month is no inducement. They have learned to speculate for profit in other ways than from grain and grass alone, and if there

are dollars to be obtained from bees they want them in their own coffers.

They are quite agreed that their Mr. Boss Honey-slinger makes report of their chain of apiaries over his own name although he may not own a bee, the horse, or two-wheeled gig he rides in. He gets assistants from the Cassellman ranch of 20,000 acres, of which Mr. Cassellman is foreman; which ranch Mr. Johnson of the city is local manager of, besides five other ranches of comparative size. The owner, Mr. Sandso, lives in Philadelphia, New York, or perhaps in Europe, so far away that he is not aware of the local fame that he is robbed of.

Chatsworth, Cal., Nov. 15, 1905.

## WESTERN ILLINOIS CONVENTION.

### A Very Interesting Report.

By J. E. JOHNSON.

THE FOURTH semi-annual meeting of the Western Illinois Bee-Keepers' Association was held in the county court house September 20th, and was fairly well attended. All bee-keepers present reported a very light crop of honey, some getting no surplus at all. Mr. G. W. Caye, of Kirkwood, Ill., succeeded in getting 4,000 pounds of surplus from 170 colonies, which was about the best average.

Mr. J. Q. Smith, president of the Illinois State Association, and State bee inspector, was present and gave an interesting talk on foul brood and told of his work of inspecting bees throughout the State. Some localities in Illinois are badly infected with foul brood, other localities being entirely free from the disease. Mr. Smith has, during the past year, visited many infected apiaries in different counties and has been quite successful in treating them.

It is probably well known that this State gives \$1,000 per year to aid bee-

keeping, but bee-keepers are not compelled to treat or have their diseased bees treated unless they are willing, but so far Mr. Smith has met with no opposition. All have not only been willing, but most of them anxious, to have help in treating their bees. So the Illinois foul brood law and appropriation is a decided success even though the compulsory clause was not allowed. However, we may have need for that clause in the future.

Mr. Smith gave a cordial invitation to the association to join the State Association. After some discussion it was decided by unanimous vote to do so in a body. The question box was one of the main features of the convention.

Mr. Alva Reynolds reported having, by Inspector Smith's help, entirely rid his bees of foul brood.

Mr. Reynolds is one of the oldest bee-keepers in this part of the State and attended bee conventions 25 or 30 years ago. He at one time lost every colony

by foul brood and quit bee-keeping for about 10 years, but three years ago he caught 26 swarms in his old hives, and so, although over 70 years old, he again became a bee enthusiast. But it seems that his old hives, that had been empty for 10 years still had spores, which developed the foul brood.

Mr. W. B. Moore presented all bee-keepers present with a money purse and wished them all success in being able to get it full of honey money the coming season.

President Johnson reported having received two Punic queens from John Hewitt, of Sheffield, Eng., one of these being a virgin, and although about 21 days old when received, she was successfully introduced and soon became fertile and began laying. So far the Punics have proven to be all right. He expects to give them a fair trial next season.

Mr. E. D. Woods reported that he had always found that colonies having young queens wintered best and came out strongest in the spring, and asked that all present make it a point to mark all colonies having young queens and report at our spring meeting as to their success in wintering. Several questions pertaining to bee culture were discussed, but, not being a shorthand reporter, I am unable to do justice to them.

We are preparing to hold the best convention ever held in Galesburg next spring. Mr. J. Q. Smith, Mr. C. P. Dadant, Mr. M. Bevier and Mr. Baxter have promised to be with us, and probably other noted bee-keepers. All bee-keepers are cordially invited to attend. All may have a voice in the meeting whether they are members or not. The next meeting will be held on the second floor of the court house at Galesburg, Ills., on the third Wednesday in May, 1906.

The price of honey is advancing, which has given some traveling men an opportunity to furnish grocers with adulterated honey. We have made it our business to watch this matter and advise

grocers in regard to honey of this kind, and until this fall they have let it alone, but the scarcity of honey seems to have tempted some of them, and the State's attorney, with the aid of the State chemist, was able to make a wholesale arrest, and 22 grocers were fined \$25 each for selling adulterated honey, vinegar and butter. The grocers pleaded guilty, but claimed that they knew not that the goods were adulterated and thereby got only a \$25 fine, but a second offense will not be less than \$100. So I think they will not risk offending the pure food law again; not only so, but they will give us strict attention when we talk honey to them, and the genuine article will look nicer to them and they won't haggle over a fair price for the same.

The daily papers gave this matter an airing, so the consumer will know that all honey bought of these stores in the future will be pure honey. I had the pleasure of attending the meeting of the Illinois State Bee-Keepers' Association at Springfield, November 21-22. This association is now, I believe, the second largest bee-keepers' association in the United States, there being something over 200 members. Each member this coming year will receive a large cloth-bound report of the convention at Springfield and of other conventions. This book will also contain a lot of other information on the treatment of foul brood, etc. Every bee-keeper in the State should be a member of the State association; the report alone will be worth more than the membership fee. Anyone who will send Mr. James A. Stone, Route No. 4, Springfield, Ills., the secretary, \$1, will be given membership in the State association and the N. B.-K. A. for one year, and also the report.

There are many attractions at Springfield, as visitors can see the old home of the great statesman and president, Abraham Lincoln, as well as numerous other points of interest.

Williamsfield, Ills., Dec. 7, 1905.

## SANTO DOMINGO.

Something of Apiarian Conditions in That  
Isle of Tropical Beauty and  
Bloody Insurrections.

By Joseph Braun.

MODERN BEE-KEEPING has not yet reached this country except in one or two instances in the vicinity of the capital. One company of three or four Dominicans have a new apiary of about 300 dove-tailed hives with Hoffman frames; Italians for the most part and a few hybrids. Another person has probably 50 modern hives, with black or native bees, and myself beginning with self-made hives and movable frames, but at present occupied by black bees. These bees are not very good. The bee-keeping company of Santo Domingo City claim their Italians are 5 to 1 compared with the blacks.

The black bees here are as large as the Italians and have gray-brown rings or bands around the abdomen. The young are grayish all over when they first emerge from their cells.

My location is not a very good one, as one side fronts toward the northeast, on the Samana bay, from whence almost daily there blows the tradewind. To the other side is a large prairie of little value for bees.

The native bee-keepers have their bees in hollow logs of three to four feet in length, and of any diameter from six to twenty inches, just as they find old logs in the woods, which they cut off unevenly with the axe and clean out. Also pieces of royal palm with the pith pushed out, serve as bee-hives.

Honey has not much value, though wax is worth 25 cents a pound. From some of the ports there is some honey exported packed in empty kerosene cans.

There are great possibilities for bee-keeping in this country. On a "voyage" which I made to the capital in the month

of August, overland, about 65 miles, I heard the distinct hum of drones twice in one day.

During month of August bees can not find enough around Samana Bay to sustain life, though this location will some day be a bee-keeper's paradise. It is about 20 miles wide and all kinds of honey bearing trees and creepers abound; especially pomarosa. The air is full of the hum of wild bees, but no bee-keepers. Only the huts of a half-dozen cattle raisers are met up with in traveling over the mountain range, which is not a very high one. On asking these people why they don't keep bees, they tell me if they want honey they can find plenty in the woods. I remember an incident some three years ago: Two farmers had about ten miles of land east of here. One was complaining about the high price of honey in comparison with cane syrup. The honey was 25 cents a demijohn of about three gallons. In these parts there is not much sale for honey. In the places along the bay it is about 10 cents a bottle, or 40 cents a gallon. It's not often to be had, and when it is, generally unclean. I suppose the higher price here is on account of the shipping ports of Sanchez and Samana.

The northwest part of this country is an excellent bee country. Campeche abounds there and many other excellent honey plants. Also the district around the capital, in fact, all the parts of the country which I have traveled over are good for bees. Even four miles from here, where I have taken out a wild colony from a rotten log, in the dull season, the bees had plenty of stores, and were carrying in pollen fast. In the same log I found a large snail shell well sealed up, and upside down.

Sabana La Mar, Republica Dominicana,  
W. I., Oct. 15, 1905.

The excellent portrait of Prof. Frank Benton, shown in this number was taken Sept. 1905, at Tiflis, Caucasus Russia.

## HUGENTOBLER'S APIARIES.

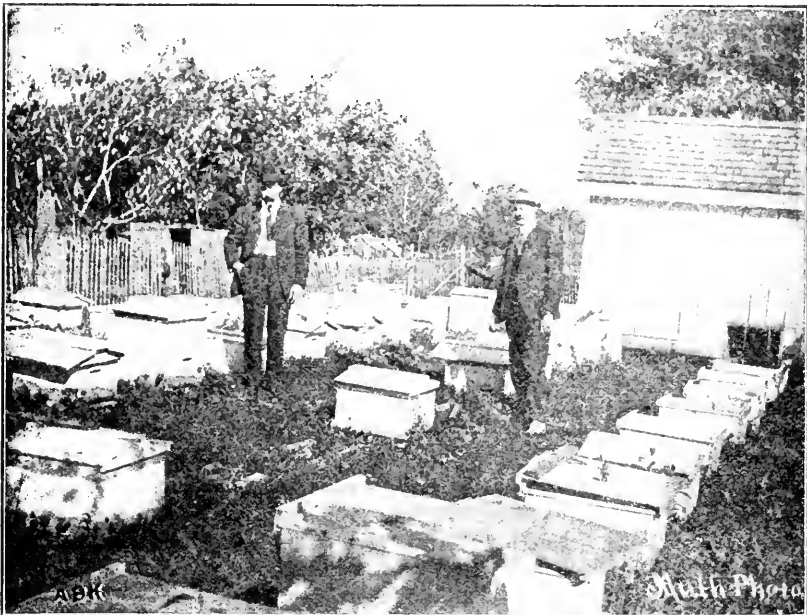
By Fred W. Muth.

THE TWO PHOTOGRAPHS I send you are glimpses of the apiaries of Mr. Robert Hugentobler, of Miami, Ohio.

Mr. Hugentobler is one of the most practical bee-men with whom I have had the pleasure of becoming acquainted, and talking the subject of bees and honey. Before our friend entered into his real vocation in life, bee-keeping, he

keepers, and also many who are in reality bee-keepers. He will not even consider this, for his uncalled for, and almost painful modesty, banishes the very thought, and I fear will be the cause of the bee-keeping world never knowing the real Mr. Hugentobler, who could, by his knowledge, enlighten many on this subject.

His apiaries are models and ideals in every respect; his main product is comb honey, which he raises by the ton; grades his honey so carefully and nicely



was an eminent instructor in our public schools, but the heavy strain of his hard work laid claim to his health, and it was then that he came into the bee-keeping world and from the beginning manifested an intense interest in his new work. Mr. Hugentobler is well read on the subject of apiculture in the fullest sense of the word; I have often tried to persuade him to take up the queen rearing part of the industry or write articles for the various bee journals. He would certainly surprise many so-called bee-

keepers, and also many who are in reality bee-keepers. He will not even consider this, for his uncalled for, and almost painful modesty, banishes the very thought, and I fear will be the cause of the bee-keeping world never knowing the real Mr. Hugentobler, who could, by his knowledge, enlighten many on this subject.

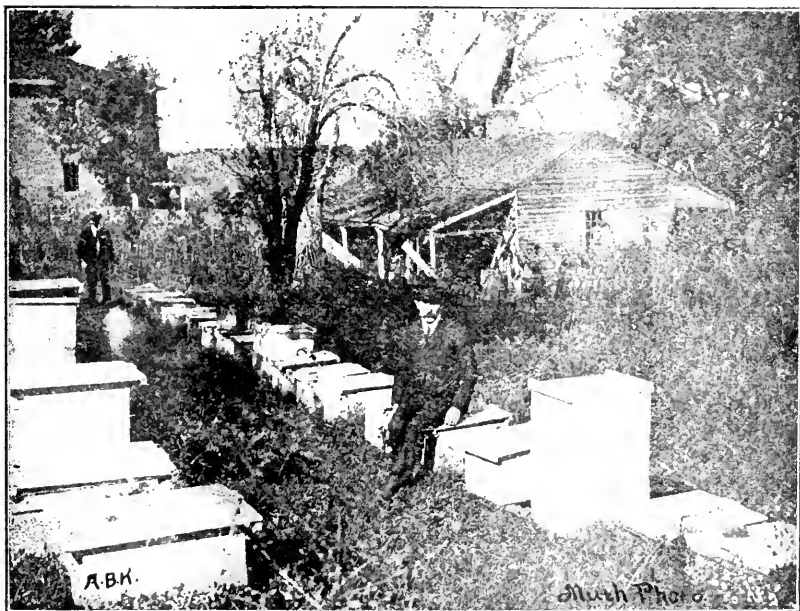
At the beginning of the big honey flow Mr. Hugentobler cages all queens, and after ten days examines all the colonies to destroy the queen cells that may have been built in the interim. Then, when the proper time comes, the queens are released. In this way he controls the swarming propensity remarkably.

At the present time the subject of our photograph has four apiaries, with

some four hundred colonies in all. Mr. Hugentobler is the elder of the two in the picture. The other gentleman is my understudy, Mr. William H. Ager, of this city, who is hopelessly afflicted with the bee fever. Mr. Ager is extremely enthusiastic in the bee-keeping industry, and promises to become one of THE bee-keepers of the near future.

I know Mr. Hugentobler won't mind if I tell a little tale out of school. I often tease him by telling him there is one thing missing: he is a bachelor, and

mind in regard to the new machine are, (1) is the capacity of the machine sufficient for a comparatively large business, and (2) does it get all of the wax? Some of our association members have German wax presses, and they agree that the machine is a hopeless nuisance when the comb is melted in the machine, but by melting in a large kettle or tank the capacity of the press is increased many fold, and the steam within the press assists in maintaining the proper temperature; and in this, is perhaps su-



if the right kind of a "bee marm" would know of this, I am sure he would be in danger of being kidnapped.

Cincinnati, Dec. 2, 1905.

#### WAX EXTRACTING METHODS.

By E. F. Atwater.

MR. A. C. MILLER'S article on "Extracting Beeswax," with a cut and description of his new machine, surely holds out a large promise which I hope will be fulfilled.

The two questions which arise in my

perior to the Hatch-Gemmill press.

Several years ago I made a modified Hatch-Gemmill press, and I think that perhaps it might be improved by arranging it so that the mass under pressure would also be under boiling water; and it does not get all the wax. Very little wax is left in the slum-gum.

We press our wax outdoors at times, when the bees will not bother. We have a tank on a concrete arch or foundation. This tank is about 26 inches square, and in this we melt the comb.

A barrel is filled with water and kept boiling hot by steam from an old boiler. We open the press, put in the burlap sheet, throw in a bucket full of boiling water to heat the press, draw off the water, fill the press from the tank, fold over the corners of the burlap, apply follower, and add the pressure. You can't hurry it.

When you have pressed out all the wax that will come, release the screw, remove follower, loosen up the slum-gum, throw in a bucket full of boiling water and press again. This has never been mentioned in print, so far as I know. Boiling water leaving the mass of slum-gum tends, under pressure, to carry most of the wax with it. The slum-gum, as it comes from the press, is so nearly free from wax that when dry it is hardly any more cohesive than so much dry sawdust. My tank will not hold enough combs to test the full capacity of the press, but I have several times pressed out fifty pounds of wax in two hours, alone, but this is above the average.

I am anxious to hear reports from those who test the Miller machine, in regard to its wax output per hour from old comb, and in regard to its thoroughness of extraction. The simplicity of the process, other things being equal, is greatly in favor of the new machine.

The foregoing by Mr. Atwater, calls for a little further explanation of the new machine.

It has a greater capacity than the presses on the market and it does get all the wax. I make these statements on the result of the work of the machine in the hands of disinterested persons. It can be used in connection with a supplementary system, such as used by Mr. Atwater, and it differs from the press in that it can be hurried.

For large producers of wax a special machine with automatic feed and steam connections might be more convenient, but of course would cost much more.

ARTHUR C. MILLER.

## THE "LONG IDEAL HIVE."

### A Reply to Mr. Braun's Questions.

By Dr. O. M. Elanton.

THE TWENTY-FRAME, one-story hive as worked by me is free spacing and of the true Langstroth pattern, arranged one and one-half inches from center to center of top bar. They hang almost always perpendicular and any little variation can be easily regulated. They are easily moved apart so as to lift rapidly the frames from the hive. The ends of the frames are directly to the entrance.

The entrance is fifteen by one-half inches with blocks to move in front of them to any distance required for ventilation of capacity of colony.

The bottom bar is one-half inch from the floor and if the lumber is not seasoned ought to be three-quarters of an inch to allow for shrinkage. I use a sheet of sail cloth over the top bars, which is soon propolized; boards or quilts are my abomination. With sheet you can rapidly strip it off and remove your surplus honey. If holes are eaten through the sheet it shows that the bees are craving ventilation, and you must be governed by their needs.

The top of the hive should at least be four inches above the sheet to give coolness and ventilation. In winter, the holes in the sheet can be easily stopped by pieces of sheet.

I often remove one frame where the surplus honey is located and spread them so that the surplus honey will be thicker and give more honey for the extractor.

Ease and rapidity of manipulation with thick combs is the desideratum of the bee-keeper working for extracted honey. Time is gold when the honey flow comes with a rush, often filling the hive in five or six days. The cry of the bees then is "give me room." If in extremely large colonies and hot



weather, the bees continue to hang out; I fold back the corners of the sheet so the air can pass out, and close when needed.

You can use division boards and work as many frames as you see proper.

Greenville, Miss., Dec. 24, 1905.

### PROF. BENTON ABROAD.

By F. Fenouillet.

(Translated from the French by Adrian Getaz.)

THE EMINENT American apiculturist, Mr. Frank Benton, is now traveling through Europe. I had the honor and pleasure of spending two days with him (the 7th and 8th of July) at the home of M. Mont-Jovet at Albertville, in the department of Savoie.

Mr. Benton is known among the apiculturists of the whole world, by his writings, his investigations, and experiments of all kinds on the management and direction of the apiary. His chief invention is that of the queen shipping cage which bears his name, and with which queens can be sent anywhere across land and sea. He is now superintendent of the department of agriculture at Washington. He has established there a considerable apiary, to which queens of all races and from everywhere have been sent, some from Mr. Mont-Jovet among them.

Mr. Benton has traveled considerably. He has been in Greece, Palestine and Egypt, the East Indies, the Island of Ceylon, Austria, Italy, Germany, France, and through the whole United States. He lived during seven years at Munich (Bavaria), where he was raising Carniolian and Cyprian queens and shipping them to Canada and the United States.

At the present time Mr. Benton is sent abroad by the United States government to study the different species and varieties of bees, especially two kinds found in the East Indies, Ceylon, Java and Japan; one known as *Apis dorsata*, of a

yellowish gray color with wings of a rusty color, and the other known as *Apis zonata*. Both are of large size, about twice that of our common bees, and, therefore, having correspondingly long tongues, which permit them to gather nectar on flowers too deep for other bees.

Another object in view is to introduce the Caucasian bee in the rocky Mountains, especially the territory of Wyoming, the climate of that part of the United States being similar to that of the Caucasus region.

A third undertaking will be the crossing of the Cyprian and Caucasian races. It is hoped that among the hybrids, some will be found having the qualities of both without their faults, and that from such hybrids a superior strain of bees may be developed.

Besides the bees themselves, Mr. Benton is to study and import the best nectar-producing plants that he may find.

Mr. Benton left Washington on the 2d of June. He has already visited several leading apiculturists in England, France and Switzerland. From here he will go through Italy, then Austria and Greece, and thence through the Caucasus, Afghanistan, Hindostan, Nepal, the Sunda Islands, chiefly Java and Borneo, Japan, the Phillipines, Sandwich and finally return to the United States, and from San Francisco across the continent to Washington.

His son, Mr. Ralph Benton, professor at the Agricultural College of the State of Montana (United States), has been appointed to help him, and will join him either at Milan or in Carniola. We learned that the United States Government spends every year \$50,000 for the advancement of apicultural interests.

Mr. Benton is 53 years old, of medium height, his moustache already gray, his face showing a good-hearted, open-minded, honest man. He is strong and in good health, an untiring walker, never minding the hot sun. He speaks

nearly all the European languages; the French perfectly well.

He is very agreeable company and kept us well interested, telling us many of his traveling adventures and scrapes.

the first page on the left.

We visited the two queen breeding apiaries of Mr. Mont Jovet. There are about 500 colonies in both. Mr. Benton wanted to see everything, study every-



PROF. FRANK BENTON.

He had with him a Japanese translation of one of his writings; the letters are very complicated, placed in vertical columns; the text begins at the last past page on the right side and ends at

thing and make notes on everything. He bought a few queens and sent them to Washington, On the 9th of July he took the train toward Italy.—L'Apiculteur.

**JEFFERSON AND ST. LAWRENCE  
COUNTY (N. Y.) CONVENTION.**

The Jefferson and St. Lawrence county bee-keepers held their annual convention in city hall, Watertown, N. Y., Dec. 13th and 14th. President D. R. Hardy gave the address of welcome, which was very much enjoyed by all.

After the business part of the meeting, A. A. French gave a very interesting address on "Who Shall Keep Bees?" It was both interesting and instructive, and we hope to send same for publication in the near future. (Mr. French's address will appear in THE BEE-KEEPER at an early date. — ED.) The next on the program was an address on, "Which is the Best Bee for Comb Honey," by D. R. Hardy, and he said "any old bee that would bring in the honey." He has tried Italians from several different breeders, and last season he bought 20 Carniolan queens mated with Italian drones, and they have proved very successful with him. They seemed to gather honey when other bees were not getting any, and went into winter quarters well supplied with honey. No country could produce finer honey than New York, Canada and the northern countries. If we are working for comb honey, we must have a bee that will produce nice honey and a quantity of it. He was not certain how the Carniolan bees were coming out. Expects to test them another season and if they do as well as this season will be thoroughly satisfied.

F. H. Loucks gave his idea of honey for exhibition purposes. Said first point was to have comb filled to wood and capped, and, second, have honey in comb of good quality. He does not approve of bleaching honey. Size and shape of section does not count, but section should be nice and white, having no saw marks, etc. First comes flavor in extracted honey, then thickness, third, color, with the package as

fourth consideration. E. Elethorp was called upon to reply and said he also thought looks come first in comb honey.

G. B. Howe spoke on "What Steps Bee-Keepers Have Taken that is Detrimental to Their Interests," and he said that covered a multitude of sins. He thought the first was putting poor honey on the market. Poor grading is very detrimental, and also the pound sections. We should not call a box of honey a pound, but should sell it for what it is.

T. H. Barber tells us what he considers the best process to render old combs into wax. He has two tanks, one inside of the other, to melt the combs, and when thoroughly melted uses an old cider press and squeezes the wax through about three thicknesses of burlap. He then remelts the wax and, when melted, dips into dishes for caking.

The question of whether a bee-keeper shall buy his supplies or manufacture them himself was very ably handled by Racine Thompson. He favors buying supplies. Says the cost of supplies would be more to manufacture than to buy for a small apiary. It was discussed at some length, some of the members being of the opinion that supplies can be manufactured at less cost, especially everything except sections. Upon inquiry it was found that those favoring the manufacture of supplies were located where they could purchase lumber cheaper than the most of us.

C. A. Hallegas explained the management of bees in producing comb honey. Said the main thing was to have strong swarms and then practice the tiering up plan. Leave all honey on until the end of the season. Prevent swarming all possible and lastly, after honey is taken from hive, keep in a warm room.

Mrs. A. A. French said she could not say what part a bee-keeper's wife should take in management of apiary, but would tell us the part she took. What she said was to the point and showed that she was speaking from experience. She cares for their home

yard during the swarming season, and, as Mr. French says, is better than any man he could hire in the yard.

The question box was used, and many points brought out that would otherwise have been lost.

Dr. E. F. Phillips gave a very interesting lecture in the evening which was very much enjoyed. He is a very bright man and well suited for the position he holds. GEO. B. HOWE.

### SUGAR FEEDING.

#### A Reply to Mr. Chantry's Article in January Bee-Keeper.

By J. E. Hand.

MR. CHANTRY'S ARTICLE on sugar feeding in the January BEE-KEEPER is rather interesting and deserves more than passing notice. The first time I read it I was at a loss to account for the great loss of bees. As he says, he was obliged to add three swarms at different times during his experiment to keep up the force of bees. I then read it again carefully and found he had caged the queen. Then I did laugh. Why, bless your heart, Thomas, didn't you know that you should never cage a queen in feeding back? If your queen had been at liberty and had been a good one she would not only have kept up the full force of workers, but probably would have given you a natural swarm, which would have added \$2.00 more to your already large profit.

However, aside from the blunder you made in caging the queen, you have made a pretty fair showing on the profit side of sugar feeding. Let us see: 94 pounds of honey, at 15c, \$14.10; 20 pounds in brood chamber, at 7c, \$1.40; 125 pounds of sugar, at 5c, \$6.25; 62½ pounds of extracted honey, at 7c, \$4.38.

At present prices you made a clear profit of \$4.87 on an investment of \$10.63, and if you had not caged that queen you could have added \$2.00 more

for a swarm, making a clear profit of \$6.87 on a \$10.63 investment. Whew! I had no idea that sugar feeding was so profitable, and all this profit aside from the greatly improved condition of such fed colonies for wintering, as well as for next season's honey crop.

Now, while I firmly believe that such articles as has been running in THE BEE-KEEPER of late, will do more to injure the reputation of pure honey than all the newspaper canards that have ever been printed, yet I believe in either telling the truth or keeping still. It is useless for any one to say that sugar honey cannot be produced except at a loss. I have seen thousands of pounds of pure sugar honey that was produced at a profit. And it was a strictly first class article, and I want to say right here that such honey is of the very best quality and can never injure the honey market. On the contrary, it will create a demand for honey wherever it is seen and used.

All this talk about the danger of sugar syrup fed to the bees in the fall for winter use, getting into the next season's surplus and contaminating the honey, is the foolishlest kind of twaddle. Any novice ought to know that such stores would be consumed long before next season's honey flow. If a little should get into the honey it would only be an improvement to the honey, and should not be considered as a calamity. I would not think of taking the risk of buying extracted honey to feed my bees for winter. My bees are wintered on stores of sugar syrup, and I know from past experience that they will winter perfectly.

Birmingham, Ohio, Jan. 9, 1906.

Mr. Joseph Braun, who writes of Santo Domingo in this number, says that the temperature there ranges from 80 to 90 throughout the year. We wonder if that would "bake" Editor Abbott, or whether he would suffer intensely with the cold.

THE  
**AMERICAN BEE-KEEPER**  
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**TERMS AND PRICE OF SUBSCRIPTION:**

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Special location, 25 per cent extra. Cuts inserted without extra charge.

**DISCOUNTS**—On continuous insertions we allow the following: Three months (3 times) 10 per cent. Six months (6 times), 20 per cent. Twelve months (12 times), 30 per cent.

**HOW TO ADDRESS.**

The home office of The American Bee-Keeper is at Falconer, N. Y., and all matters relating to subscriptions, discontinuances, changes of address, advertising or other business, should invariably be addressed to the Falconer, N. Y. office.

Matters relating to the editorial department—manuscripts, photographs, or correspondence in any way referring to articles, that have been or are to be published, should be addressed to The American Bee-Keeper, Fort Pierce, Florida.

**DISCONTINUANCES.**

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrears, if any are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

According to custom house reports, there was shipped from Dominican ports during the first three months of 1905, 14,760 gallons of honey, and 107,825 pounds of beeswax.

Editor Abbott, of the Modern Farmer and Busy Bee, thinks the editor of the AMERICAN BEE-KEEPER has been baked so long in Florida that he regards this state as the only one in which a man can live. Then he says, "By the way, the most we ever suffered from cold in our lives was in Florida." Consistent, isn't he?

**"Advanced Bee Culture."**

We acknowledge the receipt, through the kindness of the author, Mr. W. Z. Hutchinson, editor of the Bee-Keepers' Review, Flint, Mich., of a copy of the newly revised edition of "Advanced Bee Culture."

This new work contains over two hundred pages, written in the easy, plain and concise style characteristic of Mr. Hutchinson, and deals exclusively with the practical phases of advanced apiculture. It contains numerous beautiful reproductions from photographs, and is exquisitely printed on heavy paper. The harmony in both color and design, as displayed in the binding of "Advanced Bee Culture," reflects the skill of the modern book-maker and does credit to his art. It is, we think, the most handsomely clad volume that has come to grace the apiarian library of our day. The price is \$1.20, postpaid.

**Very "Small Potatoes."**

With the beginning of the sixteenth volume of THE BEE-KEEPER, last month, it was found necessary to make a new contract with a new printing house, for our work. Co-incident with this change occurred the serious illness of the foreman of the new establishment. This, in connection with the transportation of all material, etc., from one city to another, resulted in a number of typographical inaccuracies, which, however, came out on time.

Editor York, of the "old reliable" American Bee Journal, takes occasion to compile a list of the errors and publishes them, in order that his readers may fully appreciate the weaknesses of THE BEE-KEEPER. Since Mr. York's action was hardly prompted by any Christlike spirit, and being a radical deviation from the ethics of modern journalism, we are forced to the belief that he has rather a hard time to find "stuffing" for his weakly "old reliable."

**Canadians on the Caucasian Question.**

By way of introduction, in publishing the editorial from THE BEE-KEEPER for December, pages 255-256, the Canadian Bee Journal says:

Nothing for a long time has so agitated the minds and divided the opinions of the United States bee-keepers as the introduction of this race of bees by the department of agriculture at Washington. Gleanings is rather favorable to the newcomer, while Editor Hill, of the AMERICAN BEE-KEEPER, waxes hot in his denunciation of them.

Editor Craig then supplements the editorial reproduced, as above mentioned, by this very wise comment and admonition:

The sarcasm is striking; Mr. Hill's reference to his experience with the Caucasians probably dates back to his tuition with our Mr. J. B. Hall, of Woodstock, who spoke in no uncertain tones of his dislike to the breed at the recent Ontario Bee-Keepers' convention. In our opinion it will be best for Canadian bee-keepers to steer clear of these bees until they gain a better reputation. We have received the following letter from Mr. R. F. Holtermann along the same line:

Editor Canadian Bee Journal, Brantford, Ont.:

Dear Sir,—Unwisely, I think, and so do many others, the department of agriculture at Washington, D. C., is arranging without a thorough test to distribute the Caucasian bee. Mr. J. B. Hall condemns them strongly and says that after 23 years' effort to stamp them out, their objectionable traits at times crop up in the apiary. Would it not be well for Canadian bee-keepers to suppress their curiosity and let the United States distribute them. We can wait a season and may keep ourselves from introducing at different points through the country what may be as objectionable as the English sparrow.

Again the AMERICAN BEE-KEEPER rejoices to find itself surrounded and supported by the actual producers whose interests it seeks to defend without fear or prejudice. The Canadian bee-keepers are prudent in the position they have assumed; and we trust that apiarists of the United States will demand more knowledge in regard to Dr. Lyon's "no-

ble race" before they accept and scatter Caucasian blood abroad.

**The American Bee-keeper Indorsed.**

The following formal indorsement of the policy of the AMERICAN BEE-KEEPER by the New York State Association of Bee-Keepers' Societies, one of the largest and most influential apian organizations of the United States, is an expression of commendation most gratifying, and one that indicates the trend of the times; betokening the advent of a new era in the field of American apiculture.

The editor extends assurances of his appreciation of the honor thus conferred, and of the sincere purpose of, not only himself but also that of his esteemed associate. Mr. A. C. Miller, to adhere strictly and solely to the interests of the producing fraternity in the management of the AMERICAN BEE-KEEPER in the future.

The self-explanatory indorsement follows:

Romulus, N. Y., Jan, 13, 1906.  
Mr. H. E. Hill, Fort Pierce, Fla.

Dear Sir:—I send you the following resolution which was adopted at the New York State Association of Bee-Keepers' Societies, held at Geneva, N. Y., Dec. 18 and 19, 1905:

Resolved: That a vote of thanks be tendered to Harry E. Hill, editor of the AMERICAN BEE-KEEPER, by this, the New York State Association of Bee-Keepers' Societies, in convention assembled, for his plain and fearless characterization of those interests that would impose and prey upon the honey-producer, and for his unselfish efforts in behalf of the true honey-producers of this country, be it further;

Resolved, that this resolution be placed upon the minutes of this meeting and that the secretary forward a copy of the same to Mr. Hill as a further evidence of our approval of his course, and of the esteem of this Association.

C. B. HOWARD, Secretary.

Gleanings for Nov. 1 discovers that fruits are competitors of honey. THE BEE-KEEPER told its readers that way back in last May.

### Artificial Swarming.

The so-called Alexander method of curing black brood and foul brood is in reality the Simmins plan, first given by Mr. Samuel Simmins in his book "A Model Bee Farm," in the edition of 1887, pages 57 and 53, and at greater length in the 1903 edition, pages 120, 121 and 122. For our readers who are not familiar with the plan we will say its efficiency lies in depriving the colony of a laying queen for approximately three weeks, and as a consequence there is no brood and no soil for the disease-producing plants to grow in. It gives the bees a chance to clean house and get the upper hand of the trouble.

We congratulate ourselves and our readers on securing Mr. Allen Latham to write for THE BEE-KEEPER during the ensuing year. Mr. Latham is a close observer, original in his method of study and he has made many interesting discoveries. Current articles by him deserve particular notice. His observations on the cocoon of the queen and worker differ materially from Cheshire's, and Mr. Latham is positive as to the accuracy of his work. Special effort will be made to have the scientific matter of direct benefit to the practical bee-keeper.

Any of our readers who have early volumes of the AMERICAN BEE-KEEPER, old bee books, or bee magazines, or leaflets, price lists, news clippings, etc., relating to bee matters will confer a favor upon THE BEE-KEEPER by communicating with Mr. Burton N. Gates, 10 Charlotte street Worcester, Mass. Mr. Gates is compiling a history of bee literature, which, from what he has told us, we believe will be both interesting and instructive.

Along about 120 days from this time bees will be wanting a place to put their loads. Better think of it now and lay plans. Forehandedness pay cash.

It has arrived, the specific "It" being Hutchinson's new edition of Advanced Bee Culture, and if you have not got it, get it quick, be you beginner or veteran. From cover to cover the book is filled with interesting bee lore and it is beautifully illustrated with illustrations which illustrate as well as embellish. In every detail of paper, type, presswork, binding, etc., it is well done and bespeaks the good taste of the author. American bee-keepers have in this volume a book to be proud of. It cannot be "reviewed" or "condensed" it must be seen, handled and read, and if when you have finished you do not feel that the author has conferred a special favor on you, something is the matter with you.

Mr. G. W. Adams who appeared for the first time in our columns last month is a thorough bee-keeper of many years experience. It was the good fortune of the associate editor to be Mr. Adams' guest one day last summer and we succeeded in persuading him to tell our readers of some of the good things he makes and uses.

In connection with the article on artificial comb which appeared in January number, it will be fitting to quote the following from the Bee-Keepers' Magazine of 1873, where the editor answering a question about artificial comb says: "We have a fine sample made in Kentucky, we have forgotten by whom."

Bee diseases are said to be losing their virulence in some parts of New York state. Such things die out better than vicious laws, so have an eye to all proposed measures for creating inspectors.

Let the keeper of but a few colonies leave the testing of new races to persons who can afford to experiment. It will be time enough for the former to buy when the latter pronounces them good.

### A Successful Association.

At the December meeting of the Worcester County (Mass.) Bee-Keepers Society the secretary, Mr. C. R. Russell, read an interesting and comprehensive paper on wax extracting.

Unique features of the meeting were the practical demonstration of wax extracting by presses and by the new system, and the testing of sundry samples of commercial wax for purity. Mr. Russell showed himself thoroughly familiar with the subject. The enthusiasm and push evinced by the members of this society are refreshing. One of their achievements has been the education of the local press until it successfully and accurately reports the proceedings of the society, and so popular is the subject of apiculture that some of the dailies gave nearly three columns to the meeting above referred to. Go thou and do likewise.

Distinguished apiarists who have honored THE BEE-KEEPER office with a call this month are Mr. D. H. Coggshall, of Groton, N. Y., and Mr. W. A. Selser, of Philadelphia. Messrs. Coggshall and Selser have both recently possessed themselves of winter homes in South Florida, and are now quartered with their families at Stuart, on the East Coast, where they are near neighbors of Mr. O. O. Poppleton.

Should there be a notable lack of editorial stuff in this number of THE BEE-KEEPER, it is because we have been blessed with an abundance of better material. Please remember when you read all the interesting and instructive letters from various parts of the world, that we will send THE BEE-KEEPER three years for one dollar. Mention it to your bee-keeping acquaintances, please.

"All folks that grow up right off, like a mushroom in the night, are apt to think no small beer of themselves."

### A Queen Breeders' Catalogue.

WASHINGTON, D. C., Jan. 8, 1906.

Inquiries frequently come to this office for the names of queen breeders of various races and strains of bees, and in order that reliable information may be given, I am preparing, in co-operation with the American Breeders' Association, a catalogue of queen breeders.

There is a catalogue of considerable size in this office, but in order that no queen breeder of any importance be omitted, I would respectfully request all breeders having one hundred or more queens for sale annually to the general public, who see this notice, to send me the following information as accurately as possible: Races bred, annual output of each race and number of mating yards. For my personal information I should be glad to learn the method of queen rearing used, the number of breeding queens of each race used and the number of colonies in each yard from which drones are allowed to fly.

Hereafter all persons requesting information concerning dealers in any strain will be given the names of the four dealers nearest to the address of the inquirer. This will, I believe, be a fair way of giving the information without favoring any breeder, and will repay the breeders for their trouble in answering these questions.

Respectfully yours,

E. F. PHILIPS,

Acting in Charge of Apiculture.

The associate editor recently did a little visiting among New York and Massachusetts bee-keepers. If the reception accorded him and the hearty endorsement given the AMERICAN BEE-KEEPER and its policy are criterions, then the efforts we are making are well appreciated.

COLLINGDALE APIARY—J. R. Rambo, breeder of Caucasian and Golden Italian queens. Italians bred from stock received from Swarthmore. Caucasians bred from imported queen. Queens reared and mated in separate yards, 6 miles apart. Satisfaction and safe arrival guaranteed. Agent for The W. T. Falconer Mfg. Co.'s bee supplies. Collingdale, Delaware County, Penn.



## HONEY AND BEESWAX MARKET.

Buffalo, Dec. 6.—The supply of honey is only fair and more needed. The demand is good for fancy. We quote our market today as follows: Comb, fancy, 12-14, No. 2, 8-10c. Extracted, 6-8c lb. in 5 gallon cans. Beeswax 28-32c. Really fancy one-lb comb is wanted, but lower grades move slow and have to be cut accordingly.  
Batterson & Co.

Chicago, Dec. 6.—The trade in best grades of white comb honey has been fair, yet retailers take only small quantities at a time. This honey brings 14-15c, other grades are difficult to place at 1 to 3c less per lb. Extracted selling at 7-7½c for white, and amber 6½-7c, dark 5½-6c. Beeswax when clean and of good color, 30c per lb.  
R. A. Burnett & Co.

Boston, Jan. 11.—There is good demand for strictly new honey, with light supplies. Fancy, 16c; A No. 1, 15c; No. 1, 14½-15c; No. 2 practically out of the market. Large stock of old honey on hand, going very slowly. Prices nominal,  
Blake, Scott & Lee Co.

Kansas City, Mo., Dec. 7.—The supply of honey is good. The demand is fair. We quote our market today as follows: Comb, \$3.25 per case. Extracted, 6c and 6½c.  
C. C. Clemons & Co.

Cincinnati, Dec. 30.—There is no demand for honey at the present time on account of the holidays. However, prospects for the coming year are bright, and we are looking forward to a revival of trade about January 15th. The price of comb honey remains firm; we quote fancy white at 15 to 16½c. Extracted: Amber in barrels at 6 to 6½c, according to the quality. Fancy white extracted in 60 pound cans at 7½ to 8c. Amber in 5ans, 6 to 7c. (The above are our selling prices of honey.)

We are paying 30c per pound, delivered here, for choice, bright, yellow beeswax  
The Fred W. Muth Co.

51 Walnut street

New York, Dec. 6.—Comb honey—The demand continues to be fair for all grades. Prices practically remain the same. We quote fancy white at 14 to 15c; No. 1, 13c; No. 2, 12c; buckwheat 10c per lb. Extracted honey is in good demand, especially California, with large supplies. We quote white, 6½ to 7c; light amber, 5c; buckwheat, extracted, 5½ to 6c per lb. Beeswax, firm and steady at 29 to 30c per lb.  
Hildreth & Segelken.

### BEGINNERS

Should have a copy of

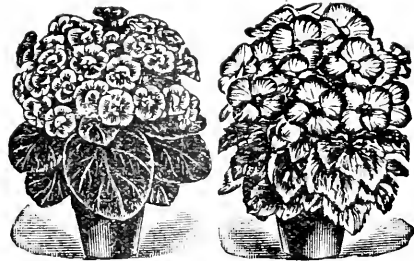
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All of the above sent, postpaid, for 10 cents in coin or stamps. Order early. Avoid the rush.

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## Homes in Old Virginia.

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold nor too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the VIRGINIA FARMER to Farmer Co., Emporia, Va.

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It is bright and up-to-date. Tells all about Southern Home Life. It is full of fine engravings of grand scenery, buildings and famous people. Send at once; 10c a year, postpaid anywhere in the U. S., Canada and Mexico; 3 years, 50c; or clubs of 6 names, 50c, 12 for \$1. Send us a club. Money back if not delighted. Stamps taken. Cut this out. Send today.

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1005, Birmingham, Alabama

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J. E. Andrews, Fort Pierce, Fla.

When writing mention The American Bee-Keeper.



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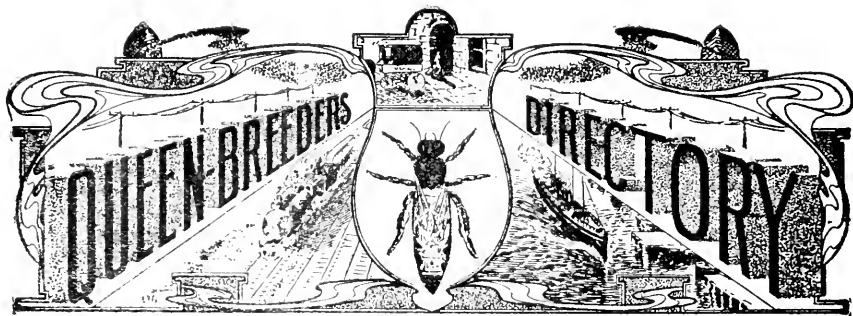
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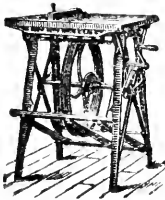
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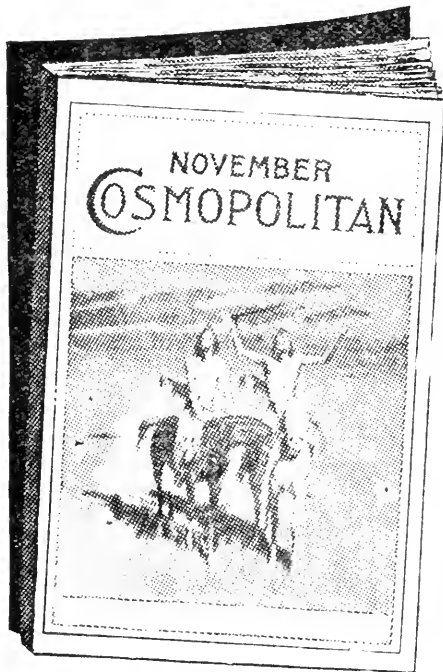
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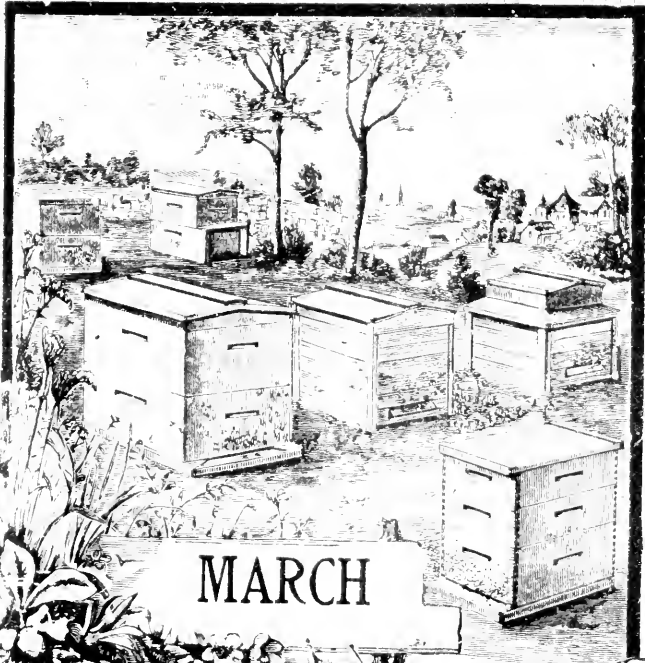
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INTERESTED  
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MARCH

1906

VOL. XVI

NO. 3

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**The American Bee-Keeper, Falconer, N. Y.**





Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

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## BRAIN POWER OF BEES.

### Evidence of a Latent Instinct That Gives Rise to Some Interesting Questions.

ALLEN LATHAM.

WHETHER we call the action which emanates from the central nervous system of the bee, reason or instinct, matters little, and it is never likely to have an undisputed title so long as the definition of the term instinct is inexact. What chiefly concerns us is the complexity of that action, and what chiefly interests us is the extent to which it trespasses upon our own divinely given mentality.

It is unwise to take too decided a stand upon either side of the question, Do bees reason? Few of us would care to go as far, for instance, as did Father Langstroth, or as does Maurice Maeterlinck of the present time. When sentimentality sits in the seat of science a comedy is pretty sure to be enacted; and with all due respect for the memory of Langstroth and with all due sympathy with the feeling of Maeterlinck I can see only false deductions in some of their statements regarding the wonderful reasoning powers of the bee. Yet

to make the rabid statement that bees never do, in any sense, make use of a reasoning faculty, may sometime be shown to be entirely unwarranted.

In most cases one can apply this test to the actions of bees: Will other bees invariably, when put under like conditions, perform the same acts? If the answer is always yes, we are forced to the conclusion that the bee's reason and man's reason are essentially unlike, since we know that two men do not act the same under like conditions.

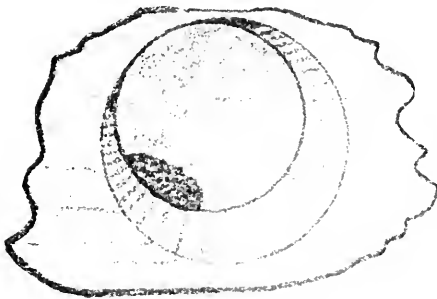
It is easy, too, to understand the instinctive action of the honeybee when every act performed is only one of a series and is essentially the part of the life-work of every bee, or at least is perfectly normal to every bee. It is when some unusual act takes place, one which may not have occurred among the ancestors of certain bees for a score of generations, that our amazement becomes supreme; and it is then that, almost filled with awe, we ask: Is this

reason? For it is well nigh beyond our belief that an instinct can lie latent over a score or more of generations.

In offering the incident which I am about to describe, I am inclined to prefix an apology. It may be that such an act is extremely common, and that I have been carelessly ignorant of it,

had not bored a good clean hole. A few days later, however, the chip was doubled in size, and there were two or three bees busy about it. The bees were in reality building a wall across that entrance, building of wax and propolis, mostly of propolis (bee-glue).

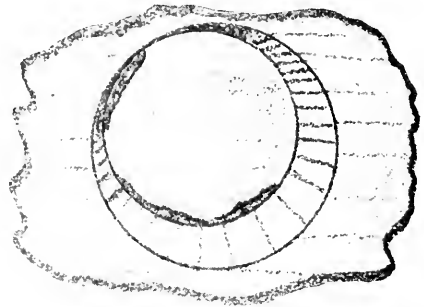
In the course of a week the wall was



No. 1.—THE WALL BEGUN.

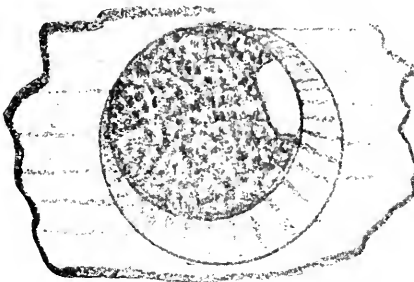
since I kept bees twenty years before I saw the first instance. A year later I saw the act repeated, and I can get bees to repeat it by bringing about the right conditions.

A few bees were placed in a box five by five by nine inches, with a hole a little over one inch in diameter at one end. The weather was somewhat cool and the conditions unfavorable for the



No. 2.—THE WALL HALF DONE.

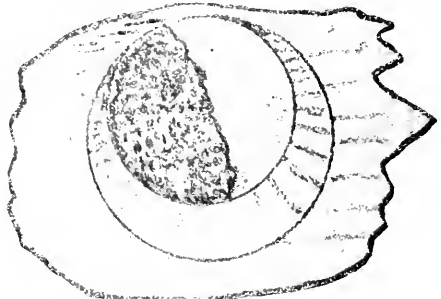
completed, and all the opening except a space large enough for two bees to pass in was closed. The wall was not smooth and flat but more like paper which has been wet and dried rough. It was of uneven thickness, as could be seen by holding it to the light. The wall persisted till well along into summer, though at times it was partly removed only to be rebuilt soon. When



No. 3.—THE WALL COMPLETED.

development of an extremely weak colony. There were less than a pint of bees all told, and they had but one small comb at the extreme rear of the box.

Not many days after leaving the bees thus I noticed on the inside edge of the opening a chip-like projection; and I remember thinking at the time that I



No. 4.—THE WALL TORN DOWN.

the colony had gained well in numbers and the weather had become warm, the wall was permanently torn down.

There seems to be no doubt that this wall was built to shut out currents of cold air, and as an act of rare occurrence it demands more than a passing notice.

Yes, it is perfectly true that bees habitually stop cracks and small holes which they are not using as exits. In such case they are only doing what may be seen to occur in every normal colony where, especially in late summer, bees are extremely eager to stop every crack with propolis, which they push into the crack lavishly plastering it rather promiscuously.

How different that wall across the entrance; built in late spring, and built sparingly of propolis; there was no filling of a hole, but only a thin wall extended across the hole!

It rouses most interesting reflections. Did bees once live in the open, and build nests after the manner of the paper-nests of the hornets? Did they perchance build pitchy umbrellas above their combs? Did they, if living in cliffs, wall off their homes? At any rate, why that latent instinct which upon occasion rouses to meet the needs of the hour?

Rowley, Mass.

### ODOR AMONG BEES.

A. C. Miller.

THESE RECENTLY appeared in these columns a quotation from the British Bee Journal touching on a translation of an article by Mons. L. Forrestier on "Odor Among Bees." Because bees possess an acute sense of smell and because certain foreign odors are repulsive to them it is assumed that they distinguish strangers from the inmates of their own home entirely by the stranger's odor. M. Forrestier undertook a few experiments to prove what he already believed, namely, the foregoing theory. In the course of these experiments he "washed his hands several times to remove all human odor", fallacious reasoning. Then he smeared his hands with juices from crushed drones of one colony and presented his hands to the same and other colonies. In some instances the sisters

of the drones were peaceable and in others not, and so of alien stocks. The successful cases he attributed to the presence of home odor, and when it failed with the "home" colony he laid it to a supposed loss of said home odor due to high wind.

Then he immersed bees in alcohol and presented them at home only to have them thrown out. Bees similarly treated but "allowed to rest by themselves until they had reproduced their personal odor" were safely received. He entirely overlooked the effect of the alcohol on the poor victim, forgot its pain producing and irritating action. No wonder that a bee so treated was ready for a "scrap" as soon as she was able to stand.

These experiments, like the others, were worthless so far as proving anything about odor.

If the would-be investigator will take some propolis and dissolve enough of it in a little alcohol to make a solution the color of weak tea and will then wash his hands and wrists over with this he may go from hive to hive with impunity. If he will leave one or more fingers unwashed with this varnish he will, if the bees are at all cross, be likely to get stings on the unprotected fingers. In this case we see that it is human odor to which they object, and that the propolis from one hive protects from the attacks of the bees of all. It is not the recognition of home odor that protects but the absence of human odor, the propolis varnishing over and sealing the pores of the skin. Drop a bit of the "paper" from a hornet's nest into the hive and note the signs of fear and anger. It is an inanimate and inert object and yet it creates consternation. These things plainly show the bees' acute sense of smell, and that odors alien to bees to greater or lesser extent excite the bees, nothing more or less.

We know that if we acutely agitate all the members of a colony of bees by smoking or shaking or dequeening, etc.,

they readily receive aliens, be they queens, drones or workers. We cannot rationally assert that the sense of smell is suspended in such cases. Some other cause than odor governs the attitude of the bees of a colony toward a stranger. We are not working with reasoning beings but merely with little automata that respond freely to external influences. If the mere odor of a stranger at one time excited other bees to resent its presence it should at another time if the "odor theory" is tenable, but we find it does not so operate. We do find, however, that if the stranger goes calmly about its business it is unmolested, but if its advent has been such as to disturb it, to excite fear, or to arouse a combative spirit trouble generally ensues and experiments strongly indicate that the stranger is the aggressor. We may admit that odor acquaints the stranger of the fact that it is in a strange place, and yet we do not have in consequence to admit that its odor governs its reception; on the contrary, evidence is abundant that despite strange odors bees peaceably intermingle.

Mons. L. Forrestier's experiments are very interesting, but they only prove that under abnormal conditions bees act irregularly.

### THE EVIL OF SUGAR FEEDING.

Dr. W. R. Claussen.

**I** NOTE WHAT Mr. Thos. Chantry has to say in the January number of AMERICAN BEE-KEEPER in regard to sugar feeding and it is evident that either I have made my statements ambiguous or Mr. Chantry has hastily read what I wrote.

I do not contend that sugar feeding, in order to produce honey, can be carried on at a profit, for I have never tried it, but I do claim, and I know from experience, that where brood nests are packed with sugar syrup in the fall it may be, and often is, carried into the

supers and I also claim that such stuff is not honey, and I know it has not the dietetic value of sweets gathered from the flowers, and whether sold as comb or extracted honey, is an imposition on the buyer, who, when he buys honey expects as he has reason to, to get the pure article.

I am not at all anxious to earn the \$100 offered by Mr. Chantry, as my honey has acquired a good name and the fact that sugar is not fed in my apiary is known to all my customers.

Now, whether sugar can be fed at a profit or not I do not, as I said before, know, nor do I care, but if Mr. Chantry will turn to Root's A B C he will find that Mr. Root agrees with me, that sugar syrup fed to the bees and stored in the combs is still sugar syrup. Again he will see Mr. Langstroth is of the same opinion and says, "Sugar syrup fed to the bees can be readily distinguished, after they have sealed it up as before." Then let him turn to Prof. Cook, who wrote some very valuable articles, and he will find he says, "In all feeding, unless extracted honey is used, we cannot exercise too great care, that such feed is not carried to surplus boxes. Only let our customers once taste sugar in their comb honey and not only is our own reputation gone, but the whole fraternity is injured." Now, here is the very authority, and two others besides, that he quotes. All three agree we ought to make sure that no sugar syrup finds its way into our surplus and that is why I say let sugar alone and avoid even the appearance of evil. To be sure, if my bees were literally starving and no honey was to be had I would feed syrup rather than lose my bees, but such a state of affairs has never existed where I have been and I hope it never will. Maybe, as some of the fraternity are fond of saying, it is due to "locality."

Waupaca, Wis., Jan. 8, 1906.

We are growing nicely, thank you.

## THE RAISERS OF HONOLY.

Addresses and Discussions About Bee-Keeping as Given at Institute in Session Here.—Many Points Brought Out.

THE FOLLOWING newspaper clipping, which refers to the convention of the New York State Association of Bee-Keepers' Societies, held at Geneva, N. Y., Dec. 18-19, 1905, together with the accompanying picture, was sent to us by Mr. F. Greiner:

The election of officers, the transaction of miscellaneous business and a

sulted in the choosing of the same men who have officiated for the year, who are as follows: President, W. F. Marks, Clifton Springs; vice president, Charles Steward, Sammonville, N. Y.; secretary and treasurer, C. B. Howard, Romulus. An advisory board will be appointed later.

The miscellaneous business consisted



BEE-KEEPERS AT THE GENEVA CONVENTION.

consideration of how best to protect the honey producers from the exorbitant prices at present charged by manufacturers of the supplies needed by the bee-keeper occupied almost the entire time of the bee-men at the morning session of the institute which is being held today in the A. O. U. W. hall. The election of officers which was the first thing on the program re-

principally of a discussion as to whether the institutes of bee-keepers, which are similar to the farmers' institutes, should be continued or not, and as to whether the association should become affiliated with the New York State Society for Agricultural Research. The discussion of the first matter ended in the delegates deciding that the bee-keepers should keep in as close touch

as possible with the latest developments and that by all means the institutes should be continued. President Marks advised the members to co-operate with the officers and make known the subjects they wish discussed at these institutes, and also the speakers whom they wished to hear. The second matter was also decided in the affirmative, the delegates voting to become affiliated with the Agricultural Research society and to send a delegate to the annual meeting of that body.

These matters were followed by an address upon "Supply Manufacturer vs. The Honey Producer," by H. L. Chase, president of the Ontario County Bee-Keepers' Society. The address of Mr. Chase favored some action on the part of the honey producers looking toward relief from the present conditions. All of the manufactures of supplies have practically formed a combine and as a result the producers are obliged to pay what are considered exorbitant prices for the supplies needed, Mr. Case advocated the formation of a stock company or co-operation with an independent dealer so that the producers could obtain these supplies at the right prices.

#### AFTERNOON SESSION.

The principal items of interest at the institute and annual meeting of the New York State Association of Bee-Keepers' Societies brought out during the sessions held yesterday afternoon were regard to the best methods to be adopted by the honey producers to protect themselves from the high prices charged by the manufactures of supplies, and a discussion of the properties and value of the Caucasian bee. This is the now famous bee which the newspapers of the country have exploited during the past couple of years as the stingless honey bee.

#### COMPLAINT AGAINST COMBINE.

The first discussion was brought out in the president's message given by W. F. Marks of Clifton Springs. Mr.

Marks declares that a few years ago the several manufacturers of supplies for the bee men were small concerns with limited capital but that now they are all combined and the capital of the combine runs over a million. These concerns have grown rich through the sale of these supplies and made it impossible for the producer to buy except at the prices set by the combine. He declared that the producers had stood the condition long enough and that some remedy should be sought. In addition Mr. Marks advocated the withdrawing of the New York State Association from the National Bee-Keepers' Association, stating that the association was working more for other interests than for those of the honey producers and that it had come to a time when the producers must either fight for control of the national association or else withdraw and form another association which would work entirely for the interests of the producers.

The message also criticized in a way the majority of the papers dealing with bee-keeping, the speaker declaring that the majority of these papers were run for private ends and not for the good of the man who produces honey. The message also touched on the fact that what the producer needed was more modern methods for selling and disposing of the goods. In the discussion which followed several of the speakers advocated the formation of a stock company for the manufacture of the supplies needed by the bee-keepers. One speaker declared that last summer he had written to over a dozen supply firms asking them for prices on the goods needed and that a comparison of the catalogues showed the prices to be exactly alike and from the appearances of the books it was evident that they had all been printed from the same press and that the same cuts were used in all of them. It was declared, however, that there were independent man-

ufacturers and that some of these were selling shipping cases for ten cents a piece, whereas the combine wanted seventeen cents. The discussion ended by a motion being put to the effect that the association elect a business manager who would look after the matter of supplies and inform the members where the goods desired could be bought the cheapest. The motion was seconded but President Marks ruled that under the constitution the matter could not be taken up at the time, and it was accordingly let go over.

#### A WASHINGTON OFFICIAL

The president's message and the discussion was followed by an address on the "Honey Bee," given by Dr. E. F. Phillips, of the United States Department of Agriculture at Washington. Dr. Phillips talked principally on the Caucasian bee, a new variety, which the government is at present testing and distributing to the bee-keepers throughout the country. This bee is a very gentle one, and when it was first imported from some point between the Black and Caspian seas, the newspapers took the matter up and announced it as the stingless bee. The result is that a vast number of people have made demands upon the department for queens of this variety. Dr. Phillips declared, however, that the impression that had been circulated was entirely erroneous and that while the bee was a very gentle one, it was by no means stingless, as numerous people had discovered. The bees, although gentle, would protect their colonies. It has not as yet been determined just what their honey producing qualities are. Of those sent out different reports had been received, some favorable, and some placing the new variety in the same class as the older ones, but none of them entirely unfavorable. Dr. Phillips would not give an opinion yet as to the value of these bees as honey producers. In regard to the practice of the government sending these bees out to any one ask-

ing for them, he stated that it need not cause the bee-keepers any unnecessary alarm, as the same condition existed twenty-five years ago at a time when it was reported before that a stingless bee had been discovered. The address was followed by a discussion upon the subject, which was taken part in by nearly all those present.

The afternoon session closed with a short address upon "How Can This Association Best Serve the Honey Producers?" by T. I. Dugdale, secretary of the Fulton and Montgomery Bee-Keepers' society, West Galway, N. Y., a question box on the several subjects discussed during the afternoon and the appointment of committees.

#### EVENING SESSION

The evening session of the Bee-Keepers' institute yesterday was taken up with two interesting addresses, one upon "Bees and Flowers," by Professor U. P. Hedrick, horticulturist of the New York State experiment station, and the other upon "Breeding and Improving Bees," by Dr. E. F. Phillips, of the United States Department of Agriculture. In his address Professor Hedrick showed the relation of bees and flowers, both from the standpoint of the bee-man and fruitman and showed that bees were almost a necessity in every orchard from the fact that they distributed the pollen needed. In addition he declared that the greater number of the new varieties of fruit was the result of cross pollination by bees. The only argument advanced against the bee in orchards was to the effect that they help carry the pear blight, but this was not considered of any great moment for the reason that there would undoubtedly be a pear blight just the same were there no bees. The whole paper tended to show that bees were of a great deal more benefit to the fruit man than they were a damage, and that in certain lines it would almost be impossible to get along without them.

Following the paper a bee man pres-

ent spoiled the record somewhat by telling of the narrow escape he had from a lawsuit by reason of the fact that his bees had stolen all the wax from his neighbor's grafts. Several of the other men present had had the same difficulty, but they advised that a little pepper or carbolic acid mixed with the wax when it was put on would soon stop the bees working in it.

#### BREEDING OF BEES

The address of Dr. Phillips, which followed, was mainly an argument for the improvement of the honey bee by breeding. He stated that the subject of breeding in order to obtain the proper kind of a bee for certain localities and also the best honey producers would soon have to be taken up by bee-keepers the same as it has been by cattle breeders and breeders of other animals. Bees in this country, as far as honey producing qualities are concerned, have not, as a rule, improved and this is believed to be due to the fact that very little attention has been paid to breeding. It is now announced that the breeding of bees to produce certain qualities will soon be taken up the same as breeding of other stock.

#### MORE ABOUT FEEDING SUGAR.

Harry L. Smith.

I HAVE just read Mr. Chantry's article on this subject, in the January BEE-KEEPER, so, as I had overlooked the articles referred to in the November number, I looked that up and read them. Now I wish to give my experience:

I have kept bees for several years and have practiced feeding with sugar syrup to fit them for winter, and also to strengthen them in the spring so as to have them ready to make the most of the honey flow when it came and I have never found the slightest trace of sugar in the comb honey supers.

I say comb honey supers, as I have never extracted any honey and conse-

quently have never used extracting supers.

The comb honey thus produced was retailed in our villages near by and was pronounced the very best.

And this honey was made on "artificial" foundation, as starters, too.

It seems to me that Mr. Miller as well as Dr. Claussen are frightened by a shadow, so far as the danger of injuring our markets through the presence of syrup in our honey. My experience contradicts that of Mr. Miller, in that my bees never move honey from the brood chamber to store in the supers; so that would only leave the chance of direct storage in the supers, and if the bees would handle the syrup in this manner I doubt if anyone could produce honey from sugar except at a loss, at the present market rates.

If Mr. Miller will get his acquaintance to reconsider his determination to avoid publicity in his experiments, and will "turn on more light" he will convince more of his readers, and if such base tricks are resorted to by bee-keepers he certainly owes it to the "good common people" to give the matter a thorough airing and let the consumer see the vile deceit that is practiced on him.

East Dixfield, Me., Jan. 20, 1906.

"There's nothing I hate so much as cant of all kinds; it's a sure sign of a tricky disposition. If you see a feller cant in religion, clap your hand in your pocket and lay right hold of your purse, or he'll steal it as sure as you're alive; and if a man cant in politics he'll sell you if he gets a chance."

"Have you a boy? Well, make a farmer of him, and you will have the satisfaction of seeing him an honest, independent and respectable member of society; more honest than traders, more independent than professional men, and more respectable than either."

"A long face is apt to cover a long conscience—that's a fact."



## APICULTURE IN IDAHO.

Honey of Superior Quality, Though Bringing Immediate and Profitable Financial Returns is but the "by-product." The Growth and Prosperity, Almost the Very Lits of Idaho's Great Fruit Industry, and Acres of Blooming Alfalfa Depends to a Very Large Extent Upon the Little Busy Bee.

THE KEEPING of bees and the production of honey in the Snake River Valley is destined to become a pleasant and profitable rural industry of no small magnitude.

On our ever increasing acreage of fruit bloom, dandelion, white, red, alsike and alfalfa clovers, the bees make merry pillage, and in the hands of intelligent owners, the beautiful white comb or liquid honey is produced in large quantities, and finds a ready market at satisfactory prices.

While the eastern bee keeper must pack his bees in chaff or sawdust, or carry them into the cellar to insure safe wintering, we of this more favored climate need only see that our bees have sufficient honey to last until spring, leaving them on their summer stands without protection, and in April we may confidently expect to see nearly every colony in splendid condition.

No better proof that this is indeed the natural home of the honey bee need be presented than the fact that in few localities does one see so many bees as here.

Almost every farmyard contains its quota of bee-hives, from which the rancher and his family secure the purest and best sweet in the world, direct from nature's own laboratories, the nectaries of the myriad flowers.

Nor are our bees the common brown bees of the eastern states. Instead, the bee hives of this valley are peopled with the best old Italian blood, the golden bees of which Virgil wrote so long ago; "This better breed—their bodies shine like drops of sparkling gold."

As Longfellow wrote in Hiawatha, so we find it here, in regard to the clearing and settlement of our new lands:

"Wheresoe'er they move, before them Swarms the stinging fly, the Akmo, Swarms the bee, the honey-maker; Wheresoe'er they tread, beneath them Springs a flower unknown among us, Springs the White Man's Foot in blossom."

Few people realize the indispensable work of the bees in pollenizing flowers. Without the bees to perform this important work, many varieties of fruit are wholly or partially sterile, while the bee is an absolute requisite in the growing of some seed crops, notably some of the clovers.

The surplus honey that the bees may store is really only an incidental to encourage us in their propagation, while their great work is the pollenization of the blossoms. Our valley produces two or more carloads of honey per year, and, with the opening of the new lands under the government reclamation project the product will be increased many fold. Our honey brings top prices in Portland, Seattle, Butte and Spokane, in competition with the finest product of Utah and California.

One of the latest novelties in the line of fancy food products, is pure honey put up in paraffine paper bags of various sizes.

This honey has been variously styled alfalfa butter, crystallized honey, candied honey, or granulated honey. The bee-keepers store their honey in large galvanized steel tanks, holding upwards of two tons each. Here the beautiful liquid honey of crystalline clearness clarifies perfectly, and with the coming

of the cool fall weather, the natural process of granulation begins (all pure honey will granulate sooner or later, and this granulation is an indication of purity.)

The honey first becomes cloudy, then granular, and at this stage it is drawn off through a large faucet into the paper bags.

The bags are placed in boxes, and in a short time the honey is almost as hard as a block of marble and fully as white. Many prefer the honey in this form; after peeling off the bag the honey may be sliced like butter, or, by heating, it is easily restored to its original liquid condition, just as it came from the comb.

When the consumer buys honey in glass or tin, he is paying for an expensive and useless jar, bottle or tin can, but when buying honey in paper bags, he gets his money's worth of honey, as the cost of the bag itself is merely nominal.

The Boise Valley contains one apiary of about four hundred colonies, another of three hundred, and many of fifty to one hundred and fifty colonies; one firm having seven hundred colonies located in eight yards, in the Meridian, Star and Roswell districts.

There are three firms engaged in the manufacture and sale of bee-keepers' supplies of all kinds, and one queen-breeder, who rears the finest selected Italian, Carniolan and Caucasian queen bees for sale. We are fortunate in having a satisfactory pure-food law to protect our products, and also an efficient law for the inspection of our bees and the gathering of statistics in regard to the industry.

While we have not been able to realize the dream of the poet, who saw

"A golden hive on a golden bank,  
Where golden bees by a chemical prank,  
Gather gold instead of honey,"

yet for those who will attend to the details of bee management, the returns will compare favorably with any rural

industry, for the relative amounts of capital and labor invested.

The first bees to live and prosper here were shipped to Boise nearly forty years ago. They were fine Italians from the apiary of E. Kretchmer, of Coburg, Iowa, and were destined to found the Boise apiaries of the late Mr. Morse, an old-time pioneer, and of Mr. McClellan, who lives at the south end of Twelfth street, where two of those old hives that came across the plains so long ago may still be seen, and in them the lineal descendants of those first bees to forage on the wild flowers then so plentiful on the low-lands near Boise.

Honey then sold for fifty cents per pound, and a swarm of bees hanging on a limb sold readily for \$10.

From this small beginning has sprung the thousands of colonies which are now scattered over this and neighboring valleys.

We have an efficient bee-keepers' association which ships in supplies from the east in carload lots, furnishing nearly everything needed to the members at jobbing prices and also finding a market and shipping honey in carload lots.

This association was probably the first to agitate in favor of legislation to protect the bee-keeping industry, and to the efforts of its members is due no little credit for the excellent protection which we now enjoy.

In this connection it may be well to state a fact which is not generally understood, namely, comb honey has never been manufactured, and cannot be manufactured, save by the bees themselves in the natural way.

To counteract the evil effect of the false and sensational assertions in regard to artificial comb honey, a reputable firm, with a paid-in capital of \$50,000, has for years offered \$1,000 for a single pound of artificial comb honey. In addition to the above, the National Bee-Keepers' Association, with over

2,500 members, has out an offer similar to the above, with no takers.

The United States Department of Agriculture is my authority for the statement that there is no artificial comb honey.—E. F. Atwater in Midwinter Number Boise Capital News, Feb. 6, 1906.

### WHO SHOULD KEEP BEES ?

A. A. French.

“EVERYBODY,” was once the current answer to this question.

Among the attractive features of apiculture is the pleasure it affords. There is a fascination about the apiary which is indescribable. I doubt if there is any other class of manual laborers who engage in their business and dwell upon it with the same fondness as does the bee-keeper. Indeed to meet a scientific bee-keeper is to meet an enthusiast. The profits, too, of apiculture urges its adoption as a pursuit.

Thirty years ago it was the general idea, a bee hive out of doors would be considered as much a part of a well regulated domestic establishment as a sewing machine in doors. But people have got bravely over that, and many other crude notions that prevailed, even among bee-keepers themselves. The time has now fully come for insisting upon it that only those should keep bees who are properly qualified to do so.

The same law of division of labor which forbids every man being his own shoe-maker, or blacksmith, prohibits every man from being his own honey producer. Among the numerous topics in the realm of apiculture, this deserves a prominent place. After one has made a visit to a well regulated apiary, and an enthusiastic apiarist, he goes away inoculated to keep bees. Enthusiasm is contagious, and it is no wonder that people who know nothing of bee keeping catch the infection and go away determined, hit or miss, to start an apiary. It is more often a miss than a hit, and

thus we become undesignedly the means of reducing our fellow beings into disappointment. As a preventive of this, or, at any rate, as a check, there should be some words spoken in plain English, in reply to the question, “Who should keep bees?”

All will agree that it is not desirable for people to undertake what is sure to end in failure. Those who start at bee-keeping and make a botch of it are very apt to decry the whole thing as a humbug, a delusion and a snare. No doubt the interests of bee-keeping as a whole, have suffered from the maledictions of sore-heads who, if they had been wise, would have never touched a bee-hive, except to throw it aside.

I confess I feel myself somewhat at a loss in giving a categorical answer to the question I have taken as a text. It reminds me of the discussions there used to be, and are still, as to what constitutes a call to the ministry? Nevertheless there is such a thing as a call to the ministry, and there is also such a thing as a call to bee-keeping. Many have hit their heads against a pulpit in the mistaken idea that they have been called to be preachers. And just as many have blundered into bee-keeping, under the delusion that they had a call in that direction.

Something would be gained if we could impress people with the conviction that it is not wise to follow mere impulses. There would be less danger of blundering if they would seriously ponder the inquiry, “Am I cut out for a bee-keeper?”

In a general way it may be safely said, that in order to succeed in this business, or profession, there must be an aptitude for it. What that is, it may be difficult to state in detail, but I am fast coming to think that the true bee-keeper, like the true poet, is born, not made.

No man succeeds very much in any line of things which does not stir him with lively interest. But this alone is not enough. The true bee-keeper must

have keen preceptions and be at once of an observant and reflective turn of mind. He must be a modern Job for patience, and a modern Bruce for perseverance. No matter what his natural aptitudes may be, he will make serious mistakes at first, and needs to learn that as Napoleon was wont to say, "He is not the best general who makes no mistakes, but he who repairs them as quickly and as thoroughly as possible."

He must not be irascible for in that quality the bees are more than a match for the most irascible mortals. He must have perfect self-control, for if a man cannot control himself, he may rest assured that he cannot control the denizens of the bee-hive. He must be sanguine and hopeful, for he will see many dark days. He must have a mind for details, and regard nothing as trifles that has to do with the welfare of a colony or an apiary. "Unconsidered trifles" have often led to important discoveries.

In addition to the natural aptitude which has been imperfectly sketched an education in bee-keeping must be ob-

tained. It matters little how this is done, provided it be thorough. Let no one rush into bee-keeping imperfectly equipped with knowledge on the subject.

It is positively ridiculous to see how some people act in regard to this matter. They seem to suppose that they have only to get a few colonies of bees and they are completely set up in the business. It is no doubt possible for a tyro in bee-keeping to become self educated in a sense. With the invaluable bee books and excellent journals that are available, the theory can be easily mastered.

Then comes the practical part; to manage bees with an eye to profit from honey productions, is an attainment far beyond mere theory, however correct. I do not think this can be gained in any other way so quickly or so well as for the beginner to apprentice himself to some good practical bee-keeper, and happy is he who has the opportunity of so doing. — Delivered before the Jefferson County Bee-Keepers' Convention, Watertown, N. Y., Dec. 13, 1905.

## THE IMPROVEMENT OF STOCK.

An English Apiarian Authority and Author Discusses Some Phases of the Subject from the Standpoint of Science.

SAM'L SIMMINS.

**EDITOR AMERICAN BEE-KEEPER:** Do most bee-keepers stop to consider how much depends upon the class of queens they use in attempting to secure good honey yields? I believe the greater number certainly are aware of the vast importance of the queen in the honey-getting business; and yet, after all, most producers find it a difficult matter to place a perfect queen at the head of every colony in a large apiary.

The average breeder of his own queens may happen to secure an extra good one by purchase or otherwise, and forthwith he rears a lot of daughters

from her, while all the time, without thought, he is getting these queens mated to drones from his other, or a neighbor's inferior stock.

When he secures that high grade queen why does he not breed drones from her by the thousands, or by the tens of thousands from her daughters, rigidly excluding all other drones? Then with another high grade queen of a different strain for rearing young queens to follow, there is the probability that in the course of two or three years low averages will disappear. The process would be continued by breeding

drones alternately, each other year from the daughters of these selected high grade queens, thus securing a fixed type of constant honey-getters.

There is no reason why further high grade queens should not be tacked on to the fixed strain, using every following year drones from the daughters of the fresh queen brought into the apiary. This is the only way in which I have been enabled to secure a really valuable strain of Italians; the race as first imported being of very little practical utility. The widely varying results found in many apiaries is almost entirely due to the neglect of the drone breeding process. Without a most rigid selection on the male line no fixed type can be secured.

#### WHY ITALIANS DEGENERATE.

It has frequently been observed that Italians left to themselves, as to breeding, very soon degenerate to little more than blacks. Especially is this true in England and most other European countries, where there are many dark colonies around.

The great features in securing this transition are the undoubted fact that the native drone is stronger on the wing than the male from imported or most other yellow queens, and also that the yellow drone requires particularly fair weather to induce him to fly freely. Hence, where black drones abound, breeders of Italian queens are disgusted to find ninety-nine per cent. of the young queens turn out mismated. The same rule holds good in the case of Carniolans and natives.

In my own case I have been able to reverse these conditions by swamping my locality with high grade drones reared by selection through a series of years, something on the lines indicated above, so that my yellow drones are stronger on the wing than any local common males and always outstrip them in the race.

#### THE MATING OF QUEENS

When one knows he has a fine queen

just mated, it is with some reluctance that he decides to dissect her. I have thus destroyed many, and upon examination, within thirty minutes of a queen's return from a successful union with the drone I find the sperm sac only slightly occupied by spermatozoon showing that an hour or more elapses before the whole is congregated in that wonderful receptacle; the membrane left by the male being the sole protection while it is being slowly absorbed. A queen will occasionally mate more than once, as I have had them do under my own observation. She may be out too long after mating and get the living organisms chilled, or the workers may too hastily remove the protecting sheath left by the drone within the passage toward the sperm sac.

In this connection we may note one of the most marvelous acts in nature; and, as I have had considerable experience in making considerable experiments in the artificial impregnation of queens, the conclusions I have arrived at may be of some value.

In the natural act there must first be a mad flight of the insects in mid air, with from three to fifty drones in rapid pursuit of the queen, whose body is then extended to twice its usual size, while the receptive passage is distended in the same proportion. Then with the foremost drone nothing less than an explosive union takes place. Those peculiar horns, projecting from the drone on either side of the principal organ at the moment of the explosion first press wide open the outer or common opening of the queen's abdomen, while the central containing branch enters the vulva, not direct, nor in a straight line, but by the sheer force of an unbending motion, throwing the spermatozoa together with a large proportion of moisture, well forward into the oviduct, from whence it reaches the sac by gradual muscular contraction exercised at the will of the queen.

Every precaution appears to have

been taken by nature that the containing organs, detached from the ruptured drone, should remain until the act is accomplished, as the shrivelled remains of it may often be noticed late in the evening of the same day the union takes place, as doubtless most queen rearers have experienced.

But how do the drone and queen become detached? Well, if any reader will not hurry to remove a worker which has stung him, say on the hand, he will see the little creature immediately begin to spin round like a top, and so far from the bee being unable to remove its sting, it then does so completely. It is not always that it loses its sting, as so many have erroneously supposed.

The queen cannot get rid of the drone organs until they have shrivelled, but she does exactly as the worker, separating herself from her dying mate by spinning round until she is freed.

If fertilization in confinement has been a failure, the selection of the vigorous drones, as already observed, is always a possibility to the advanced apiarist. A possible eventuality may be the artificial impregnation of queens, judging from experiments I have already carried out.

#### BREEDERS OF GENTLE WORKERS

It appears to be a law that queens which produce very gentle bees are not worth much for honey producing purposes. At the same time it must be admitted that locality and climate modify many peculiarities in bees. Carniolans appear to be exceptions to the law; so also are some darker strains of Italians. Carniolans crossed with Italians I have found to show no improvement in honey gathering, while the resulting workers are quite gentle; but cross either with the black bee and they store three or four times the quantity of honey, though better stingers one will not desire.

#### CAUCASIANS

I wonder how soon American bee-

keepers will drop these like hot—no, cold bricks? The late Mr. Alfred Neighbour, of London, imported these some thirty years since, while other English dealers have occasionally given them a trial, only to drop them as being of no practical utility.

I think we cannot do better than hold on to the Italians, constantly improving these general favorites by the selection of both drones and queen-mothers. If history repeats itself as hitherto, this is what we shall do again, and yet again—stick to Italians.

Broomham, Heathfield,

Sussex, England, Jan. 10, 1906.

#### INTRODUCTION OF NEW RACES.

F. Greiner.

WHAT COULD be learned from reading years ago, as it related to the honey-bee from the Caucasus, did not produce a favorable impression with me. After an elapse of 25 years or more I feel no desire to even give this bee a trial. The first impression has been decisive.

The bee that was tested years ago may have been a worthless strain and it would be well to further test other strains and control the experiment. Still, I feel no desire to undertake it myself. It is a question whether it is good policy to flood the country with these bees at this time. When the bee has proven that it is equal in honey-gathering qualities to the other good races we have, then, it seems to me, would be the right moment. As for me, I should want a bee that can sting. This peculiarity of our honey-bee has its good points, and I would not want to miss them. If it was noised around that my bees had no stings or did not know how to make use of them, I am afraid my honey at the outyards would not always be safe. However, I fear little of the unduly large amount of gentleness of the Caucasians, for gentleness of our bees is largely a

matter of education, and, if necessary, a lot of bees could be educated (a la Coggshall) to become stingers. The great fear, however, is that the blood of worthless bees may find its way into our yards without our being able to hinder it. So far it has not been claimed, much less shown, that, as to productiveness, the Caucasian bee is superior to other races we now have.

The Carniolan bee has proven itself gentle enough for any one and as producers of fancy comb honey hardly find a match. I have noticed that exhibitors who carried away the prizes on comb honey kept Carniolan bees. I attribute the neatness, the snowy whiteness of their section-honey to this fact. Those who contemplate making exhibits at state fairs would do well to make a note of this. The Carniolan bee is extremely well fitted for the work. Native black bees would be my next choice. It is true that some individual colonies of Italians do pretty good work, but, generally speaking, they do not, and some especially bad colonies give us a product decidedly inferior as to appearance. Such colonies should be spotted by the bee-keeper and either run for extracted honey or their queens should be replaced by something better.

It is my aim to establish a small apiary of black bees in the nearby hills—perhaps rear a few choice queens for sale.

Naples, N. Y., Feb. 3, 1906.

#### DR. PHILLIPS CORRECTS ERRORS.

United States Department of Agriculture, Bureau of Entomology, Apiculture, Washington, D.C., Feb. 12, 1906.  
Dear Mr. Hill:

I notice that in the February number of the AMERICAN BEE-KEEPER you have an article entitled, "Prof. Benton Abroad" which is translated from L'Apiculteur. I noticed this article in the original and saw that it had one or two

mistakes, and since it has been translated into an American journal it may be well perhaps to correct it since this journey is of some interest to American bee-keepers.

The annual appropriation for apiculture is far from being \$50,000. I judge the mistake was made by the French author in confusing our dollars with the French francs, but our annual appropriation is not even 50,000 francs (\$10,000). The total allotment for apiculture for the fiscal year ending July 1st, 1906 is \$8,000, of which \$2,300 is set aside for Mr. Benton's expenses. Of the remainder only \$290 remains for the running of the office, apiary and traveling expenses after salaries and rent are paid. When the fact is considered that any honey and wax that is produced does not add to our income, it will be seen that this appropriation instead of being as liberal as our French author would have it, is rather small.

I may also add that Mr. Ralph Benton was not appointed to accompany his father on this trip.

I mention this matter of the appropriation because American bee-keepers might well wonder what was becoming of such a large amount of money.

Yours very truly,

E. F. PHILLIPS,

Acting in Charge of Apiculture.

#### Even Unto This Day.

"I consider it to be courteous and to indicate an ingenious modesty to acknowledge the sources whence we have derived assistance, and not to act as most of those have done whom I have examined; for I must inform you that in comparing various authors with each other, I have discovered that some of the most grave and of the latest writers have transcribed word for word, without making any acknowledgment." Thus wrote Pliny in A. D. 77. Sounds up to date.

The cheery smile oft hides a broken heart.

## ARTIFICIAL HONEY-COMB.

One Writer Who Evidently Thinks it Unwise to Publish the Whole Truth.

J. E. JOHNSON.

I WAS surprised to see, in the January BEE-KEEPER, an account by Mr. A. C. Miller of artificial honey comb being made 30 years ago.

However, I feel that Mr. Miller is doing a very wrong thing in making statements that he does in that article. He says: "It has been strenuously asserted that no such thing as artificial comb has or can be made."

I must say, Mr. Miller, that you are mistaken. It has been and still is claimed that artificial comb honey cannot be made, and this is still true, as in filling the cells and sealing it over lies the difficult task. This has not been done and probably never will be done.

But I want to call attention to another statement. Mr. Miller says: "Mr. Shaw's invention of artificial comb was ahead of the times and failed to be of profit to him. Today it would be appreciated and there is a possibility of its being put on the market the coming season." Such statements by bee-keepers furnish the best food for glucose men to start fresh lies about artificial comb honey flooding the market. It is of very little use of associations or leagues being organized to popularize honey or put down the lies already being published in the daily papers concerning artificial comb honey, when the editor of a bee paper will make such statements to furnish food for the sensational reporters of the press, who do not hesitate to add a little more to make it interesting.

Mr. Miller says, "Today it would be appreciated." I would like to ask by whom it would be appreciated? Does Mr. Miller think that the bee-keepers would rejoice to hear that artificial comb like the section shown on page 6

was being put upon the market?

Mr. Miller says on page 175, September, 1905, AMERICAN BEE-KEEPER: "Comb foundation in section honey is accountable for much of the distrust of its purity."

Has Mr. Miller so changed his mind that he now thinks that fully drawn comb artificially imitated will be hailed with delight? Mr. Miller says he not only has samples of this artificial comb but the implements to make it with.

Does he intend to put this evil upon the market? I hope not.

I very much admire Mr. Miller's writings on all subjects except feeding sugar and comb foundation. These subjects he, I think, carries to extremes. Of course we all have different views on these questions. Mr. Miller's accounts of the ancient things of bee-keeping, as well as the possibilities of the future, and his study of bee nature are valuable. However, I think the evil of sugar feeding for surplus is mostly imaginary.

Like Thos. Chantry, I say it cannot be done with profit, nor will it be done with profit, and very little if any fed in spring will ever reach the super.

The greater harm is to continue such discussions, which only has a tendency to influence the consuming public to imagine that our product is of inferior quality. I, however, think Mr. Chantry's testimony is valuable and ought to end this argument which is harmful. Mr. Niver tried this matter and got results very similar to Mr. Chantry's, and gave an account of his experience at the Chicago convention three years ago. He fed about thirty pounds of sugar to get three pounds of sealed honey. No one can say that they have made a success of sugar feeding except



for winter stores or early brood rearing.  
Williamsfield, Ill., Jan. 8, 1906.

The following, by Mr. Miller, very clearly presents his personal premises in the matter; and as it bears so directly upon the points questioned by Mr. Johnson, we give it place here.—ED.

#### Why Misrepresent?

The late League issued a 24 page pamphlet on the so called "Wiley Honey Lie." It reflects far more discredit on the compilers than on the originator of the story. It is ungentlemanly and un-Christian. No wonder the plain bee-keepers repudiated an organization which would put forth such a document.

In connection with this subject it may be well to say that perfect combs of paraffine wax were made long before Prof. Wiley's remarks, and further we have the statement of a bee-keeper of high character that in the late 70's he bought such combs filled with syrup and neatly sealed.

A little less spleen and a little more investigation at the time the professor made his statement would have revealed the Shaw invention, given the bee-keepers a useful article and saved many heart burnings. Truth will hurt no one so let us thoroughly ventilate this "artificial comb-honey" story.

First: It must be conceded that perfect artificial comb can be made. Second: Filling it with honey or syrup would of course be easy. Third: Capping it has been accomplished.

There, you have it. What of it? Does it hurt your business? You have been told so but how many of you have personal proof thereof? For 25 years you have howled at Prof. Wiley's statement and what has it accomplished except to make outsiders call you a lot of hot headed bigots.

Suppose you now own up to the fact that there was ground for his story? Does it follow that your business will go to the dogs? All your railing has not changed public belief.

But say to them "Yes artificial comb honey can be produced but it don't pay. Bees' labor is cheaper than machinery and human labor" and you have struck the part of the American anatomy that always hears, is always alert, the "commercial sense."

"It don't pay" will kill the most plausible commercial yarn.

Artificial comb of paraffine need never worry any one. It won't stand the heat. Artificial combs of wax in the sections would be worse than the heaviest foundation and they would cost too much. They would not pay. But artificial combs for the brood nest or extracting super may prove to be a real boon. The test thereof is yet to come.

ARTHUR C. MILLER.

#### Popular Science in Newspapers.

Burton N. Gates.

"IT IS difficult to understand why the daily press should have so little regard for the truth—at least when nothing is to be made by the falsehood! Just what is gained by objectless, stupid inaccuracy it is hard to say. An article on some scientific subject, for example, has no news value, and we may presume it is published for the edification of the more intelligent readers. Often, however, such articles contain so many gross misstatements that far from winning the commendation due alleged newspaper enterprise, they arouse only contempt and ridicule. Woe to the men whose misfortune it is to be interviewed for an article of this nature, unless he has the foresight to make written replies to the questions asked him."—The Editor (Frank M. Chapman) in Jan.-Feb. Bird-Lore.

Is this not quite to the point in the present day artificial honey and comb honey situation? Non-technical and uninformed reporters and editors misconstrue carelessly made statements. Seek the primal cause as the above editor has done: "Make only written replies to the questions."

Worcester, Mass.

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**DISCONTINUANCES.**

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

“Simplified Queen Rearing for the Honey Producer,” is the name of the latest production of the “Swarthmore Shops.” This is the fourth in a series of papers by E. L. Pratt, to whom we are indebted for an advance copy. Under the nom de plume, “Swarthmore,” Mr. Pratt has issued a number of booklets of especial interest to queen breeders, and his latest is in every respect up to the established standard.

Mr. Green, in Gleanings, says that the use of rubber bands in transferring is a novel idea and may prove valuable. Old as the hills, brother. Good too.

As an alert and beneficial organization among bee-keepers, none, perhaps, can make a better showing than the St. Croix Valley Honey Producers' Association, the headquarters of which is at Glenwood, Wis. This society provides its members with apiarian supplies and handles the honey crops also, to the greatest possible advantage. A pamphlet has recently been issued, which presents a financial statement for 1905, with numerous helpful suggestions to the producer and shipper of honey in Wisconsin; also a catalogue of supplies. Under the leadership of its organizer and present manager, Mr. Leo F. Hane-gan, this association promises well for the future. His push, pluck and progress are admirable.

Mr. T. K. Massie, an occasional contributor to these columns, is doing some good work in his department of the Rural Bee-Keeper. T. K. is not in good standing as a member of the “Mutual Admiration Society,” and his criticisms of current literature are not only interesting, but refreshing to a notable degree. We do not coincide with all Mr. Massie's expressed views; nor does he agree with the American Bee-Keeper in all things, but we admire his independent thought and resulting expression.

Rhode Island bees were gathering pollen from crocus January 21, 1906, which, so far as we know, breaks the record for early pollen in New England. And a few days later the temperature was below zero, Farenheit, and all nature was locked fast in frost. Fine place to winter bees, isn't it?

The associated bee-keepers' societies of the State of New York have withdrawn from membership in the National, and societies of other states are contemplating similar steps. The plain bee-keepers are taking control of their own affairs and leaving the “ring” to flock by itself.

### Good Bee-Keepers are Not All Good Salesmen.

Co-ordination of all branches of apiculture is essential to the greatest returns. A few men are able to master the art of selling as well as producing, while others excel in but one of these branches. Some few there are who are adept at one or another of the special branches of the art, such as queen rearing for instance. The successful producer who has not the gift of salesmanship had better, if he can, combine his interests with some member of the craft who has that gift, and if the latter has not the former's ability to successfully handle bees the combination should be mutually advantageous.

Membership in a bee-keepers' society oftentimes develop opportunities in these lines. Where a direct partnership is not possible, or for personal reasons not desirable, arrangements can sometimes be made whereby one bee-keeper skilled in salesmanship can be secured to sell the crop of several producers, he taking a prearranged percentage for the work. Co-operative societies are apt to be unwieldy, and too many persons have a finger in the pie. It seems difficult for the members to vest proper authority in the hands of suitable persons and give them the necessary confidence. And the smaller the interests involved the more friction.

If any of our readers can suggest ways whereby members of the craft can market their products at less expense or to better advantage we shall be pleased to hear from them. It will be well to have the marketing plans settled well in advance of the time they are to be put into execution.

Remember the success of the Jap's "preparedness."

Look over the records of your past season's work, study it, see where you might have done better and make notes for this year's betterment.

Can you use a few sample copies?

### A Successful Meeting.

That enterprising body, the Worcester County (Mass.) Bee-Keepers' Society, held an all-day "Institute" on Feb. 10. The morning session was occupied by an interesting address by Prof. James B. Paige, of Amherst Agricultural college, on a new bee disease just discovered by Mr. James Wood, of North Dana, Mass. A careful description of the symptoms and cause of the disease and its treatment together with an outline of bacteriological studies of it were given by Prof. Paige. He has promised an article on the subject, which we hope to present to our readers soon.

A banquet was served at noon at which about 70 persons were present.

The afternoon session was devoted to practical bee-keeping, particularly as adapted to the village resident. Addresses were made by Arthur C. Miller and Allen Latham, and a question box brought forth some interesting remarks.

The society changed its charter so that any resident of New England may now become a member. Interested persons may obtain desired information on the subject by writing Mr. Chas. R. Russell, the secretary, at Worcester, Mass. We advise all bee-keepers within easy reach of Worcester to join this lively society.

The hall was insufficient to hold all who desired admission in the afternoon and some 50 persons were turned away.

The next meeting of the society will be held in Horticultural Hall, Worcester, March 10.

Some of the principals in the late malodorous League are now talking of how hard they are working for the interests of the craft, of their independence and freedom from all entangling alliances, and this with the League scarce cold in its grave. "By their works ye shall know them."

We are in the market to buy good photographs of apiarian subjects.

**Colony Odors—Information Desired.**

In Gleanings for Jan 1st the editor, writing on small nuclei for queen rearing says: "So small a cluster can very easily be scented to an extent that it loses its body or individual odor, when it will attack its own queen." As the said queen is a part of the said cluster we would like to ask in all humility how it chanced that she too does not undergo the same change or loss as all the rest of the individuals of the cluster? Also we would ask that, if the smaller the bunch the sooner it loses its individual odor, and the more rapidly it acquires a foreign odor, why the same writer advises as necessary for safe introduction to confine for 24 or more hours in the receiving colony, the single queen (the smallest "cluster" possible) in order that she may have time to acquire the new odor?

It is said of the Caucasians that they will swarm frequently if not kept in large hives. Is it possible that the bee-keepers are so well stocked with eight-frame and Danz hives that the trade is getting stagnant? Are we to see mental somersaults among the elect and a combined advocacy of a new race of bees and a new size of hive? The bee-keepers have been fooled on sundry occasions but they are not to be fooled all the time. Tell us your experience, boys, and we'll print them.

Did it ever occur to you that many of the terms we American bee-keepers use are awkward or but imperfectly descriptive? For example, we laboriously say "bottom-board" or "floor-board," when "floor" would suffice. Again, we painstakingly say the "old colony" or "parent colony," while our English cousins say "stock" and are done with it. And the list may easily be lengthened. Wake up, bretheren. Get alive.

Artificial swarming, just as now taught, was practiced and advocated as long ago as 1836.

Gleanings has materially improved its appearance recently, having a handsomely designed cover executed in half-tone, which presents a very artistic effect. Each issue also gives an index to advertisements, which are classified for the convenience of its readers. For example, under the heading, "Publishers, Bee-journal," the following list is given: W. Z. Hutchinson, The A. I. Root Co., Geo. W. York. The half page advertisement of the W. T. Falconer Manufacturing Co., publishers of the AMERICAN BEE-KEEPER, does not count.

Dr. E. F. Phillips, acting in charge of apiculture, U. S. Department of Agriculture, Washington, is the author of a new work on queen rearing, the title of which is, "The Rearing of Queen Bees," and issued as Bulletin No. 55. Dr. Phillips is taking a very active interest in the welfare of American apiculture, and we doubt not that, if the craft should profit in proportion to his efforts and sincere desire to assist the industry, there will be rejoicing throughout the land.

"There are some folks who think a good deal and say but little, and they are wise folks; and there are others again, who bleat right out whatever comes uppermost, and I guess they are pretty considerable darned fools."

Mr. Ira Barber, one of the veteran bee-keepers, whose name was familiar to readers of periodical literature pertaining to bee culture during the past twenty years, died at his home in Eddy, N. Y., January 27th.

If you want to hear something good of the Caucasian race of bees, read the queen advertisements in almost any bee journal. Advertisers speak very highly of their wares, as a general rule.

"Dark combs are an indication of liver trouble and indigestion," says a poultry journal. We had supposed that "dark combs" were an indication of continued brood-rearing.

## HONEY AND BEESWAX MARKET.

Buffalo, Dec. 6.—The supply of honey is only fair and more needed. The demand is good for fancy. We quote our market today as follows: Comb, fancy, 12-14, No. 2, 8-10c. Extracted, 6-8c lb. in 5 gallon cans. Beeswax 28-32c. Really fancy one-lb. comb is wanted, but lower grades move slow and have to be cut accordingly.

Batterson & Co.

Chicago, Feb 7.—The demand is about normal with sufficient stocks to meet all requirements. The best grades of white comb honey bring 14c to 15c, with off grades at 1 to 3c less, depending on color, condition and shape. Extracted, aside from white clover and basswood (choice grades of which are practically unattainable) is in ample supply at 6½ to 7½c per pound; amber, 6¼ to 7c with off grades still lower. Beeswax 30c per pound.

R. A. Burnett & Co

Boston, Feb. 9—The demand for strictly new honey continues good, with a light supply, while there is a large stock of old honey carried forward from 1904 that moves very hard. Strictly new stock, fancy grades, 16c, and from that down to 14c, according to quality. Extracted is moving quite freely from 6 to 8c according to quality.

Blake, Scott & Lee Co.

Kansas City, Mo., Dec. 7.—The supply of honey is good. The demand is fair. We quote our market today as follows: Comb, \$3.25 per case. Extracted, 6c and 6½c.

C. C. Clemons & Co.

Cincinnati, Jan. 20.—The honey market is quiet. We do not offer white clover extracted honey on account of its scarcity; instead offer a fancy water white honey, equal to if not better than the white clover. In 60 pound cans, two in a crate, at 7¼ to 8½c. Fancy light amber at 7½c; other grades of amber in barrels at 5¼ to 6.3-4c according to quality; fancy comb honey, 16½c.

(Bee-keeper, please observe that the above are our selling prices of honey, not what we are paying.)

We are paying 30c per pound, delivered here, for choice, bright, yellow beeswax.

The Fred W. Muth Co.

51 Walnut street.

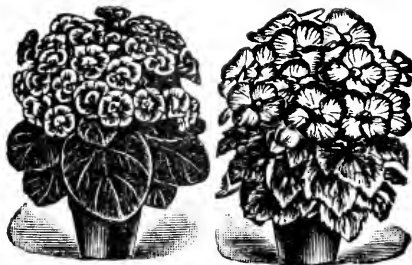
New York, Dec. 6—Comb honey—The demand continues to be fair for all grades. Prices practically remain the same. We quote fancy white at 14 to 15c; No. 1, 13c; No. 2, 12c; buckwheat 10c per lb. Extracted honey is in good demand, especially California, with large supplies. We quote white, 6½ to 7c; light amber, 5c; buckwheat, extracted, 5½ to 6c per lb. Beeswax, firm and steady at 29 to 30c per lb.

Hildreth & Segelken.

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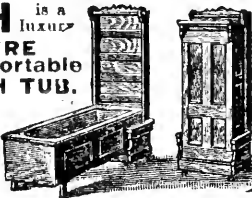
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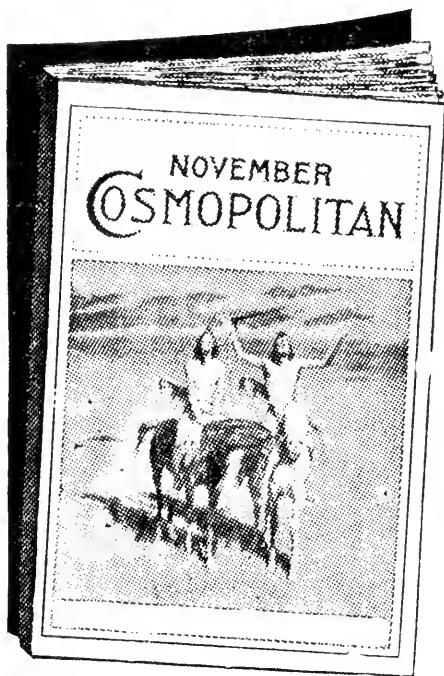
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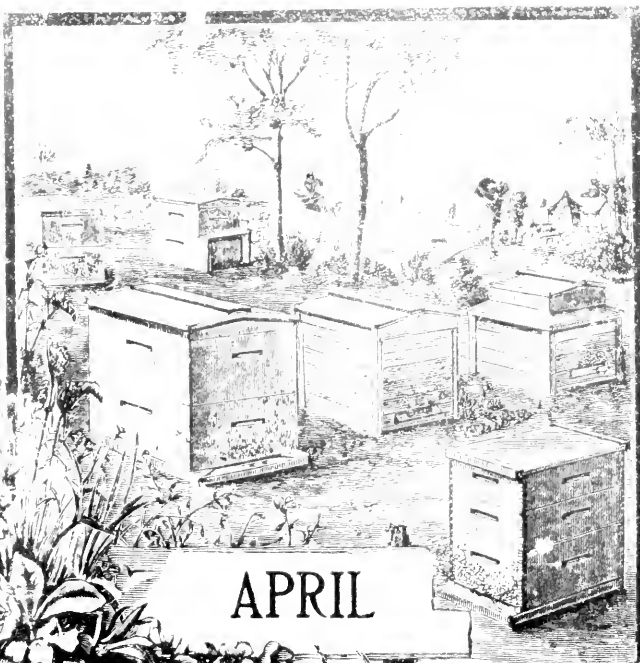
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APRIL

VOL. XVI

1906

NO. 4

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## The Amateur Bee-Keeper

By J. H. HAYN  
Author of "The Progressive Bee-Keeper"  
Illustrated by J. H. HAYN  
Published by W. F. & J. BARNES CO.,  
Rockford, Ill.

## The Progressive Bee-Keeper

By J. H. HAYN  
Author of "The Amateur Bee-Keeper"  
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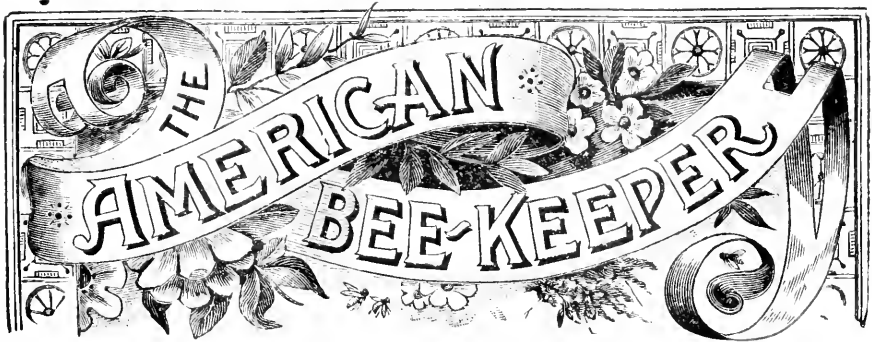
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Vol. XVI

APRIL, 1906.

No. 4

## PRESIDENT'S MESSAGE.

Convention New York State Association Bee-keepers' Societies,  
Geneva, N. Y., December 18-19, 1905.

W. F. MARKS.

**M**EMBERS OF THE New York State Association of Bee-keepers' Societies. Ladies and Gentlemen:—It is the custom for the president to open the annual meeting with a short "message." Personally, I am ashamed to take any of your valuable time for this purpose but I will endeavor to be brief. The prime object of this organization according to its constitution, is "to secure a state bee-keepers' organization that is systematic, representative, and vigilant, to devise ways to promote measures that are of general interest to the bee-keepers of the state." If this is not broad enough, the constitution can be amended at any annual meeting so as to embrace other objects that may be thought desirable.

It is not necessary that we should endeavor to make more, but better, honey-producers and to advance and protect the interests of those we have, in every legitimate way. This association differs materially from other organizations of like character, in as much, as the real power of this con-

vention is vested in an equal number of delegates from the several auxiliary societies, which together form this organization, thus, each local society has an equal voice in its management, making it in fact a representative body.

We need not enumerate at this time what this organization has already accomplished, that is a matter of record, but let us press forward, there are live issues to meet and important problems to solve. I will mention some of them, but they are for you to solve.

Profiting by experience we as honey-producers should see that in this organization the honey-producers' interests be paramount, now and forever. We must keep the organization from all "entangling alliances," we should beware of those "allied interests" who would blind you by flattery and profession of undying esteem, while they "combine" to advance the cost of their wares, your supplies, in order that they may reap an unreasonable profit at your expense. Do any of you believe, for a moment, that it was necessary for

our "allied interests" to "combine" in order to secure a reasonable profit? Stop, put on your thinking cap, and for a moment turn back the pages of time. Only a few years ago we find our "allied interests" working on a small capital, with hand and foot-power machinery. Where do we find them five, ten, fifteen, twenty and twenty-five years later? With immense factories, the most modern machinery, agencies in nearly every country on the globe, a paid up capital of a million dollars or more, we know not just how much, but one company alone with an invested capital of three hundred thousand dollars, does not that look as though there had been profit enough? all made before the "combine," yet they were not satisfied—they tell us to buy of them or go without.

Are you going to put up longer with this imposition? Need we ask "upon what meat does this our Caesar feed?" Will you permit the supply manufacturer and their close ally, the bee-periodicals, to be our "masters"? or will you stand together, and meet combination?

I number many personal friends among the "allied interests" but I have spoken no less plainly on that account as I believe they are imposing on the honey-producer. Is it not time to call a halt? Recognizing and respecting the rights of others as you do they also must be made to realize that the honey-producers have rights, which must be respected and which you will defend at any sacrifice. Our "allies" by their own free action, raised this issue, they have no one to blame but themselves; "having raised the wind, let them reap the whirlwind." Do what you may you cannot avoid the issue, with honor to yourselves, or to posterity. Sooner or later, it must be met in a vigorous manner, that will leave no doubt of your intentions and ability to cope with it. I present the subject for your consideration.

All, or nearly all, of our auxiliary societies have made it a practice to join the National Bee-Keepers' Association in a body, as provided in the constitution of said association. There is no question but that such affiliation strengthens the National Association, but at the expense of our local societies and ultimately of this Association. There is a question whether the practice should be longer continued. It is hardly necessary for me to say that it was partly through my advice that such affiliation was made possible. I had hoped that the National Bee-Keepers' Association could be made what its name implies. I worked earnestly and faithfully to bring this about, but I am convinced by actual experience that there are too many "other interests" represented in that organization to ever make it a true honey-producers' organization, without a disagreeable and continual contest. This must be evident to you who are conversant with the situation.

The question, then, is, should the honey-producers fight for the control of that organization, or should they abandon it, and in due time organize a National Honey-Producers' Society, in which from the start "other interests" are excluded? I have no personal grievance with the National Association. My personal and official relations with that organization, and with its board of directors, of which I was a member, were pleasant, but as soon as I became convinced that "other interests" were dominant and that the honey-producers' interest could not be promoted nor maintained in that organization, when the several interests clashed, without a perpetual fight, I determined to resign my position in that organization, which I did at the first opportune time. I have gone into this matter further than I intended, but I thought an explanation was due the members from this state for my action, which I believe you would certainly approve, did you know all that led up to my conclusions.

Nothing that I have said, or may say, should be construed as a personal reflection in any way upon the officers of that organization, with whom I was associated; I believe that under the prevailing conditions, they, like myself, were powerless to change those conditions. Right here let me say that the honey producers influenced by the bee periodicals, which are to be classed, with one exception, with the "other interests," are largely to blame for the lack of better conditions in said association. The honey producers must learn to think and act for themselves in such matters. Remember that most of the editors are either interested in supplies or are on office bent, so much so that these infallible gentlemen get together every few months and, unbeknown to the honey producers, "organize" some alleged bee-keepers' or honey producers' "this, that or the other thing," and of course elect themselves officers with almost Divine rights and power. This has been practiced to such an extent that it has really become scandalous, and has cast ridicule upon the industry at large. But, to return to the subject, I do not mean to say or imply that the national association has not done anything for the bee-keepers. It has done a great deal toward establishing the legal rights of those engaged in the pursuit (this you will observe did not conflict with "other interests"). I believe this year the members were able to purchase pails and cans of independent manufacturers, at reduced rates, through the efforts of General Manager F. . . . last year you will remember the same privilege and rates were withdrawn by the manufacturers at the behest of our self-styled "allies" following up their golden rule.

Other matters of vital importance to the honey producers require immediate attention and organized effort. It is on this point that the National Association is worse than nothing. I say worse than nothing because you are wasting

time with it, tied to your "allies" when you should be organized independent of them. Perhaps you cannot do any better; certainly you cannot do any worse.

I have repeatedly called your attention to the need of more modern methods for disposing of your products. I have just as frequently urged you to give these matters your earnest attention and thought, in hopes you could devise some way to increase the use of and facilitate the sale of your products. This is an old subject, but it is not less important on that account. I beg of you not to lose sight of the fact that you are practically at the home of the consumer—forty million of people, one half of the population of this country are within easy reach—but a few hours distant at most. Look at what other industries are doing and profit by their experience. Let me again bring this subject to your attention and urge you to give it your best thought, not only now, but throughout the year.

There should be not only motive, but method in our work, whatever we do, in order that we may gain substantial and lasting results. The greatest good to the whole industry should at all times be our motto. No individual honey-producer or auxiliary society should get the idea that they are not to a large extent dependent upon those who are engaged in the same pursuit. You should look upon such, if there are any, not with contempt, but with pity. You should endeavor to build up, strengthen and improve our organization and make it beneficial to the honey producers in every possible way. You should encourage independent manufacturers of bee supplies. This you can do by pledging yourselves individually and as a body to purchase such independent supplies only? Do it today. You need a periodical, edited and published wholly in the interests of the honey producer, and you should pledge it your support. In this way you will get new capital to invest in these enterprises; or what

would answer your purpose just as well you might encourage some that are already established but who are not satisfied with existing conditions and are willing to give the honey-producer a square deal, to enter the independent ranks. Why not? Our "allied interests," through correspondence schools and every other conceivable way, are trying to increase the number of honey producers without limit. Give them a dose of their own medicine. If independent manufacturers or capital does come to your aid, stand by them as long as they stand by you, let come what will.

I informed you a year ago that a temporary organization, consisting of fourteen of the allied agricultural organizations of this state, including our own, had been formed, known as the New York State Association for the Promotion of Agricultural Science and Research. At a meeting at Ithaca, Oct. 2-3, at which time, this organization was represented by its president, such organization was made permanent by the adoption of a constitution and the election of officers. If this meets with your approval, our industry will take its place with the great agricultural industries of this state. It is said to be the first organization of its kind in this country, as the objects sought are identical, it is hard to conceive how it can be anything but beneficial to all.

In conclusion, I will again urge you to give these matters, in fact all matters that may tend to better the conditions and advance the interests of the honey-producers, your best thought and study. These problems must be solved, and solved correctly. The honey-producers must have a fair, "square deal," and must not rest until they get it.

#### COMB HONEY WEEPING.

DEAR EDITOR:  
Would like to know the cause of comb honey being so thin. It has been that way all winter, where it is brought

into a warm room. I produced 500 pounds of fine comb honey last season, besides some that was not so nicely filled, and some extracted, and in spite of all I can do some of it will leak and run down over the comb, making it look bad.

Our main honey flow here is from white clover, and we get very white comb from it.

We have had a fine winter for bees here. I think it has been cold enough to keep them in most of the time. It has not been warm enough for them to get any pollen up to this date.

My bees have died less this winter than they did last, although they went into winter last fall very weak in numbers and not much pollen.

D. H. ZENCKER,

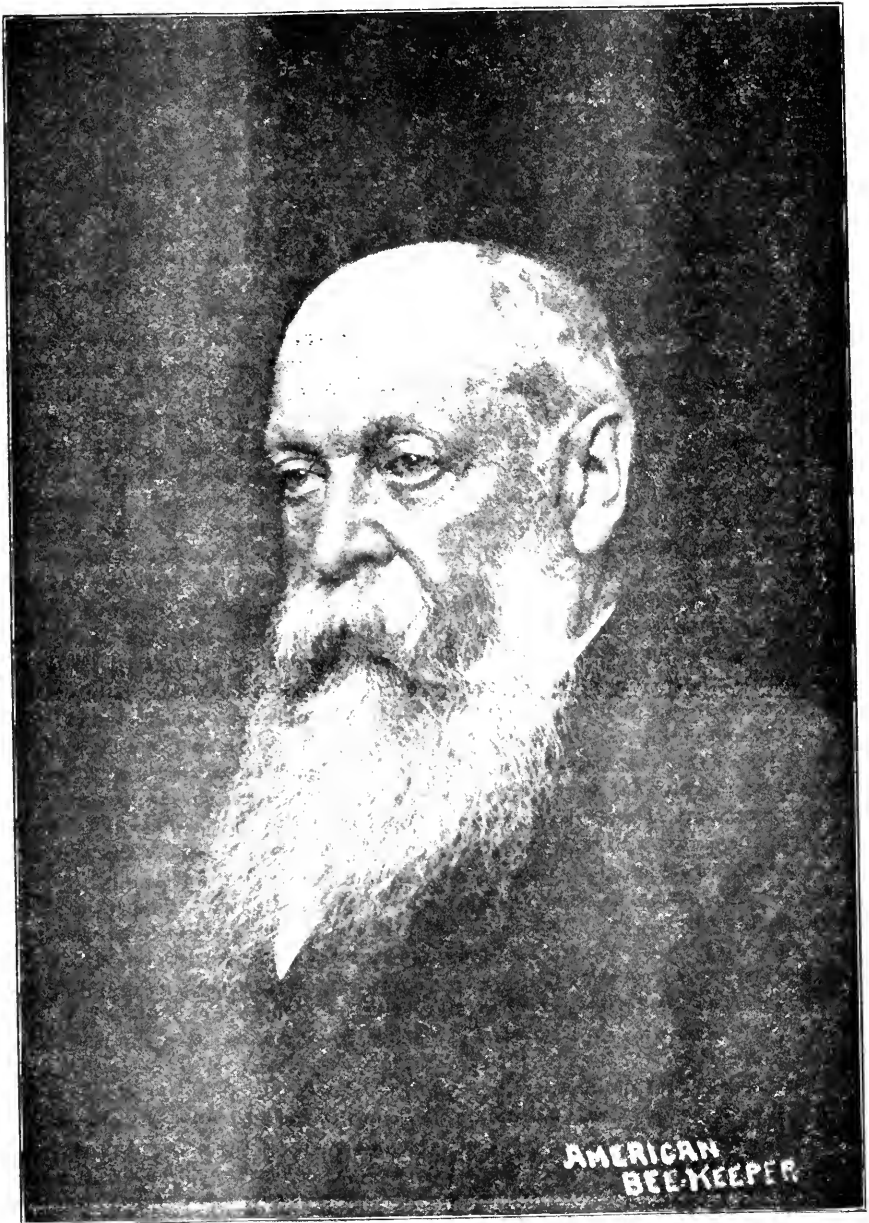
Upperco, Md., March 12, 1906.

(Doubtless, the chief cause of your trouble may be attributed to variable temperature. Such a condition results in a condensation of moisture upon the surface of the capping, and is known to honey producers as "weeping." Comb honey should always be stored in a warm, dry room. Under such conditions it will improve as time passes; while in cold storage or in a temperature that is constantly changing it will deteriorate very fast; and when the "weeping" stage is reached it is no longer a merchantable article, and should not be offered to the public, as the condensed moisture is attracted through the cappings and absorbed by the honey, thus greatly reducing its body and impairing the quality of the goods.—EDITOR.)

Cast your eye over the field, and if you see an opportunity to buy more solid apiarian information for a dollar than THE BEE-KEEPER is giving with a three-years subscription at that price, buy it quick. It's a bargain.

We buy and pay cash for helpful and interesting contributions.





JOHN MARSHALL HOOKER.

Born, April 26, 1829

Died, January 31, 1906

(See page 80)

## RESEARCHES ON THE POISON OF BEES.

The Physiological Effects. By C. Phisalix. Translated by Burton N. Gates, Clark University, from "Comptes Rendu De l'Academie des Sciences."  
Vol. 139, pp. 326. Paris, 1904.

UNTIL THE PRESENT day others, who have studied the poison of the bees, considered it as a liquid of relatively simple composition. It is the same as P. Bert and Cloez finds in the poison of the *Xylocopa* bee (*Xylocopa violacea*) (European, Translator) an organic base which is precipitated by ammonia and which is reduced by acids.

Dr. Langer (in 1898, Translator) with the poison of the domestic bee, (*Apis mellifica*) arrives at the same conclusion: the active principal in a base soluble in acids and precipitated by ammonia.

Such a very simply composed poison, like that of *Tules* (*Tules* is genus of the myriapoda, thousand legs, etc.—Note by translator), which is secreted by one kind of gland, appears improbable for bees, when two distinct glands concur in the secretion. The more general type is where the venom secreted by a single kind of gland, as in the serpents and batrachians (toads, frogs, etc.), contains several active substances. This is why I think the physiological analysis of the poison of the hymenoptera would afford, as in the study of the poison of the serpents, some new and interesting material.

The bees which served my experiments were furnished me by the Biological Laboratory directed by M. Bonnier, and were forwarded me in excellent condition from Fontainebleau by Mons. Dufour.

The sparrow is very reactive, physiologically to bee-poison. If we allow the bird to be stung in the pectoral region by two or three bees, we see within five minutes, symptoms of intoxication. At first there is a general and

increasing weakness. The bird staggers on its feet; if it tries to fly, immediately falls back exhausted. The paralysis increases and the bird in its attempt to fly is no longer able to rise from the ground; its eyes make inordinate movements; it is taken with a general trembling, which increases from time to time. It is a kind of a "dance de Sainte Sui" (Saint Vitas' dance), in which the muscles of the feet, wings, head and eyes are constantly stimulated; the respiration becomes difficult and the bird opens its beak in order to inspire the air which seems to fail it. Nevertheless the animal retains for a time its consciousness and defends itself with bill and claw; towards the end the agitation is interrupted frequently, by periods of somnolence, the paralysis increases and death comes, after two or three hours from arrested respiration, the heart continuing to beat for some minutes after. Autopsy shows that the blood is black and coagulates rapidly. The side of the inoculation shows a yellowish tint, due to the beginnings of mortification.

In this method, which consists in making the sting directly by the hymenoptera, the experiment permits observation of symptoms produced by the poison, such as present themselves in nature. It does not, however, allow for complete physiological analysis, because the method does not permit the measurement of the dose, nor variation of experimental conditions. This end we must reach by preparing a solution of the poison as follows:

The bees are rendered anesthetic by chloroform. When they have succumbed, we generally see the point of

the sting project from the end of the abdomen; with a pair pincers we grasp the sting, pull gently and draw out the poison apparatus intact.

The reservoir of the acid gland appears distended by a clear liquid. We plunge the apparatus thus isolated into distilled water, where the poison diffuses lending the water a milkish tinge. The solution is neutral to litmus. Inoculated into a sparrow, it produces the same result as the sting of the bee.

It is at first a local action, which becomes rapidly apparent if the injection has been made in the foot. The member, becoming inactive, hangs inertly and drags on the ground; the reflex digital is paralyzed and the bird has great difficulty in keeping its perch. The convulsive phenomena presently appear and remain for several hours. Finally, but slowly, we observe the somnolence approach; then follow the stupor and the troubled respiration, which are the immediate cause of death.

These three phases of the poisoning are produced by distinct poisons. This we are able to demonstrate indirectly by modifying the venom responsible for each phase of the symptoms. When the symptoms of one of these poisons are suppressed then the other symptoms persist.

Heated to a temperature of  $100^{\circ}$  C. for fifteen minutes, the solution of the poison loses its local action. Concerning the general phenomena, they still manifest themselves, but a little attenuated and no longer hasten death. If the heating at  $100^{\circ}$  C. lasts half an hour, the venom loses its convulsive properties, but retains to some degree its ability to stupefy. Kept in a closed tube for fifteen minutes at  $150^{\circ}$  C., the poison becomes completely inactive. Allowed to stand and age in contact with the air, the solution loses its convulsive properties, but still causes a slight local action (inflammation), somnolence and troubled respiration. Finally if we filter the solution of poison

(through a Berkfield bourgie with thin walls), all the stupefying liquid passes through, but still relatively small in quantity.

From the preceding experiments it results that the poison of bees, as it is injected by the insect, contains three distinct active principles: First, an inflaming substance which decomposes at  $100^{\circ}$  C.; second, a convulsion-producing poison, which does not resist prolonged boiling; third, a stupefying poison, which is not wholly decomposed at  $150^{\circ}$  C.

In the venomous secretions of an insect, the existence of two poisons of absolute contrary effects is a new fact of interest to compare with the observations of M Bouchard, demonstrated for the first time in his researches on the poisons of the urine.

One question still remains to solve. The venom as it leaves the sting is a mixture of two liquids secreted by two different glands; it remains to be discovered whether the poisons are secreted by two different glands or whether, as Caslet thought, they resulted from a chemical reaction, by the mixing of the two liquids. The experiments are proof. We extract the liquid contained in the acid glands reservoir; we dry it, and we inoculate a sparrow. The results are demonstrative. The bird succumbs with symptoms determined by the stupefying poison; with the other poison the action is very energetic.

It is therefore very evident that the stupefying poison and the inflaming substance are secreted by the acid gland. Concerning the convulsive poison, it certainly comes from the alkaline gland; but this remains to be proven by direct experiment.

February 14, 1906.

THE AMERICAN BEE-KEEPER is not the only bee journal; but no apiarist can justly claim to be well informed who fails to read it regularly.

## WOOD'S BEE DISEASE.

## A New Enemy Develops in New England.

THE FOLLOWING is from the address delivered by Dr. James B. Paige of the Massachusetts Agricultural college, before the Worcester County Bee-keepers Association, Feb. 10, 1906. We understand that a scientific study of the disease and its treatment will be continued at the college and shall endeavor to keep our readers posted thereon. Until scientists give the disease a name will it not be well to call it "Wood's Bee Disease," in honor of the discoverer, whose untimely death we chronicle in this number of the AMERICAN BEE-KEEPER?—A. C. M.

SYMPTOMS OF A DISEASE FIRST RECOGNIZED IN THE APIARY OF JAS. F.

WOOD, NORTH DANA, MASS.

JULY, 1901.

The larvae when about half-grown turn from a normal pearly-white color to a greasy-yellow shade. Soon after they die and lose their shape. At about this time the bees remove most of those dead. As the disease develops and the colony weakens many larvae are left in the comb. These later turn black, dry down and adhere as a dry, scale-like mass to the side and bottom of the cell. There is little or no tendency for the dead larvae to become viscid.

The slow progress of the disease, the removal of the dead larvae and the absence of any prominent or striking symptoms makes the disease difficult of diagnosis in its early stages, even by the practical apiarist who is continually working among his bees. Even in the advanced stages of development its existence would not in hardly an instance be detected among farmers' bees owing to the absence of such symptoms as dead larvae in front of the hive or a foul smell that might be detected with-

out removing the cover. This seems to have been the case with this outbreak of the disease.

It was not known that a trouble existed among bees in this particular section until attention was called to it by Mr. Wood, and this notwithstanding the fact that it must have been spreading for several years before it was recognized, having covered in that time an area twenty-five miles in length by several miles in width, destroying many colonies, many of which were kept in moveable-frame hives and subject to occasional handling. The attack of the disease is so insidious, its development so slow that under favorable conditions as plentiful honey flow, fine weather, etc., that the swarms may survive the attack sufficiently so that it may go into winter quarters in an apparently prosperous condition, but owing to its depletion, absence of young bees, soon succumbs to the attack. This loss has in many instances during the past two or three winters, which have been so severe, been thought to be due to the effect of cold, loss of queens, wax worms, etc. The result of an outbreak of the disease in a yard has been the loss of every colony in it. In some cases a colony or two have survived the attack for one year and successfully gone through one winter, only to die the following spring or summer.

As bacteriological study of material obtained from dead larvae resulted in the isolation of two organisms differing quite materially in both morphologic and cultural characteristics. Neither resembled the *Bacillus alvei* of Cheshire, or the *Bacillus milli* or *Bacillus thoracis* of Howard. It was not proven that either organism studied bore a causation relative to the disease and was

thought that their presence was incidental.

Close observation showed that the disease was usually spread in the apiary by flying bees from a diseased colony, entering the wrong hive. Its introduction into the yard was found to be due to the robbing out of hives that had harbored diseased bees the summer previous and which had been standing open in the yard. This source of infection was traced in quite an unmistakable manner in two different instances.

In the treatment of the diseased colonies a variety of methods were tried, such as spraying with vinegar, Beta naphthol, feeding antiseptic syrup solutions, disinfection of hives, etc. The best results were obtained by the use of the McEvoy method employed with preventative measures, consisting of removal of healthy colonies to new stands allowing diseased ones to remain on old stands in yard. Separation of healthy colonies in new position was found advantageous to retard spread of disease provided it appeared in any hives thought to be healthy at the time of separation.

The disease is known to have existed among bees in ten or eleven towns in the Connecticut and Swift river valleys during the past five or six years.

To prevent its diminuation those keeping bees should take particular pains to close hives in which colonies have perished during the winter. This should be done in early spring before the weather has become sufficiently warm to induce bees to fly. As soon as possible the wax should be rendered by use of steam or hot water, never with solar extractor. Hives, covers, frames, etc. should be thoroughly disinfected by boiling or with disinfectant solutions.

Only by co-operation can the beekeepers hope to stamp out this great menace to this industry.

The "rule or ruin" bump seems well developed in some people.

## YOUNG QUEENS IMPORTANT.

F. Greiner.

OUR FAILURES often impress themselves upon our minds more vividly than our successes and so I will mention the ill success I have had the past season with some old queens which I had in my yard when 1905 started in.

For several reasons, not necessary to detail here, I had failed to replace these the fall before or even as soon in the spring as queens could conveniently be reared. Some of these went right on and did a good business.

One black colony in an outyard came through in rather poor condition, but with a large amount of honey, which was partly removed. I rather expected this colony would build up during the summer and give some surplus during the fall honey-flow; but it did not do so. At the best there were only four combs of brood. Further the queen could not go. According to former experiences I expected that the bees of that colony would go to work and rear another queen. I was watching for this occurrence; but that did not happen. The bees did not seem to have "sense" enough to apply the only remedy at their command. My interest was aroused and to give them further opportunities I placed a set of brood combs full of brood on top of their hive, thus giving them a lift. This was in the late summer, near the close of the white honey season. By fall I had a fair colony of bees, numerically, but with a small amount of brood. I took them into the winter, but failed to obtain any surplus. I shall now with anxiety watch the development if they survive. Of course it is a money losing game to allow a colony to thus fool away their time, but we may learn a lesson from it.

The other colony, I have in mind, was a fine Italian, while the previous one was a "native." The queen was fine and had been clipped, the same as the

black. The colony built up in good shape and was among the best when the honey season arrived. I made a brushed or shook swarm of it and disposed of the brood combs. Everything seemed to go lovely and ere long I raised the first super giving the second and empty one under the first. I had taken particular notice of the queen when making the brushed swarm and had treated her very carefully; I knew she was all right. Still the supers were not finished up as on other hives similarly treated. I became impatient. Finally, at the very close of the season, I made an examination. I found the old queen apparently all right but only scattering brood through the hives and that very largely drone brood. In this case, the same as in the other, the bees had shown very poor "judgement" for they had made no provisions at all to rear another queen.

As to surplus honey, the outcome was anything but satisfactory. There was not one perfectly filled section. The first case given contained about half as much honey by weight as is usually found in a well filled one. Each section was "pinched down" and not marketable nor in any shape to be used as a "go back," for nearly all cells were sealed. The second case contained no honey whatever; the starters were drawn out some, and a little more new comb added. That was all.

Colonies with old queens which are allowed to swarm according to their own will, frequently supersede their queens during the swarming period, but when we take matters into our own hands it will be well for us to also see to it that old queens are replaced before they begin to fail.

Naples, N. Y., Feb. 28 1906.

#### BEE SUPPLIES IN BOSTON.

H. H. Jepson, 182 Friend street, Boston. Successor to F. H. Farmer. Bees, Queens and Supplies.

#### WHY MISREPRESENT?

W. J. Davis, 1st.

SEE PAGE fifty-eight, AMERICAN BEE-KEEPER for March. Professor Wiley stated some twenty-five years ago that artificial combs were now made (of paraffine), filled with syrup (glucose) and sealed so perfectly that they could not be distinguished from the work of the honeybee. He has since admitted that it was only a scientific pleasantry, like the making of artificial hens' eggs that would hatch; a statement so absurd that no one of sense would believe it for a moment. Prof. Wiley no doubt enjoyed the notoriety of public cudgeling by the different bee journals, until he admitted that it was only a "scientific pleasantry"—not claiming it to be a possible production. But the outsiders believed it. I have had men tell me it was a fact, for they had seen it.

It is a hard matter to convince a man that a thing does not exist when he has seen it with his own eyes. I can say that I have never seen such comb honey, and will venture the assertion that A. C. M. never saw such a section. The outsiders that call us bee-keepers a lot of "hot-headed bigots" are people who possibly never saw the inside of a bee hive nor even a honeybee, unless it was at a safe distance.

This Wiley story has gone the rounds of the city dailies about once a year for the past twenty-five years. The editors, though undoubtedly able men and understanding current events even all over this globe, yet know practically nothing of honey or many other products of the country that enter into consumption in city life. Yet the writer of "Why Misrepresent?" says it can be done. If it can, please tell us how we may cap sections which are filled with natural combs and nearly full of honey, and some which are partly sealed yet are not marketable?

For more than twenty years a stand-

ing offer of \$1,000, made by a reliable firm for one section of so-called artificial comb honey has not had an applicant. Why, you "hot-headed bigots," that is more than the average bee-keeper makes from a whole apiary in a year, and can't you make just one section? Yet the writer referred to says it can be made, but it "don't pay," and there you have struck the "American anatomy" that always hears, "the commercial sense." But, Brother Miller, there is another sense that is highly prized sometimes by the American people; it is called "common sense."

Youngsville, Pa.

### THE NUPTIAL FLIGHT.

E. L. Pratt.

I HAVE ON several occasions observed the mating of queen bees and in a few instances have seen the act of actual copulation and I wish to record the facts as witnessed during the season of 1905. My observations were made on dull days, when the sun was partially veiled, for on such a day one can look directly into the sky without being dazzled by the sun.

It is my belief that young queens never fly as high as we have been led to believe by past writings on the subject; nor do I believe that it is natural for them to go very far from the hives. From my observations I judge that a mating zone grows smaller and smaller by the increase of the number of drones in a given location.

In my mating yards during the height of the season there are at least ten thousand drones, and if half this number should be on the wing I doubt very much if any young queen could possibly get very far before being caught.

I will try to picture the action of the drones when young queens, due to mate, are in the air: They form in a flock (somewhat like geese) when in full pursuit of a queen, but do not fly stead-

ily as do geese; they slow when the queen slows and speed when the queen speeds. This gives a sort of jerking motion to the entire flock as it swiftly circles above.

When the flock first forms there may not be more than three or four drones but others soon join in the chase until they number perhaps eighteen or more. All the while the rear drones are grappling the drones in advance and come tumbling down together. These fellows, however, soon join in the chase again. I have seen the drones grapple each other thus until only three perhaps remain close to the queen. She may then dodge and thus slip the few left to reappear at another point in the air with another flock of suitors. The flight is wondrous swift, and one must be vigilant to keep track of it all. If you happen to be in a mating yard on a dull day when young queens are due to fly, look up and you will certainly see what what I have outlined above.

On one occasion the queen and drone fell at my very feet and I watched the queen kick herself away from the drone. That drone did not die instantly nor did he explode as the text-books have said; he lived, but of course he was injured. He could fly in the grass from blade to blade.

Drones are frightfully rough when in flight with a queen. They fly at each other and at the queen as though to tear from limb from limb. The queens are sometimes injured in this tussle in the air. Once an injured queen fell upon a bush near me. The drones came with her her down on that bush, some staying about all that afternoon expecting the queen to fly off again; she did not fly and after a while the drones went home disappointed.

The most impressive mating scene I ever witnessed was late in September. The day was dull but quite warm. When I stepped into the the yard there were at least three queens in the air, on mating bent. These three queens

gathered together in that yard more drones than I had ever before seen in flight in one spot before. The flocks whizzed by my head repeatedly and I was kept busy keeping track of it all. Several times I rushed to a knot of drones in the grass with the expectation of finding a mated queen; but lo and behold, only a lot of angry drones tussling and mauling each other. They were soon off, however, and, in the air, were forming into flocks again. This scene lasted fully twenty minutes until I at last saw a queen and drone come down in tumbling motion and I was certain that I had seen all there was to be seen. I rushed up and watched the queen kick herself away.

I captured the drone and caged him. he lived over five hours and it is my belief that he would have lived much longer if proper food could have been supplied.

In a future letter I will try to tell fully of the action of the drone parts, if I can manage suitable drawings for purpose of illustration.

Swarthmore, Pa., October 15, 1905.

#### DEATH OF JAMES FITTS WOOD.

Mr. James Fitts Wood, aged 44, died at his home in Athol, Mass., Feb. 15, 1905.

Mr. Wood was an acknowledged authority on the subject of bees and other insects, and was a lecturer and demonstrator in this line at the Massachusetts Agricultural college.

While yet a boy he became interested in the subject of bee-keeping and to prepar for his life work secured employment with the father of W. W. Cary of Colrain, Mass., who at the time was associated with Mr. Langstroth.

Upon his first visit to Mr. Cary's place he walked from his home to Colrain, a distance of more than twenty-five miles. After having served an apprenticeship of several years with Mr. Langstroth and the elder Cary and his

son he secured a position as superintendent of a large apiary in New York where he perfected his knowledge of the practical workings of the apiary as conducted on a large scale for the production of honey. Equipped with a thorough knowledge of the Cary apiary, he started in this line for himself after completing his work in New York. He was engaged in this line of work for several years up to the time of his death.

Being by nature a close student and



JAMES FITTS WOOD.

careful observer he was very successful. He succeeded in developing a strain of Italians remarkable for their gentleness, good working qualities and beauty. While thus engaged he devised several methods and invented and improved several appliances useful in queen rearing, notably the automatic queen releasing introducing cage.

Until his health became somewhat impaired he was an attendant at the bee-keepers' conventions held in the eastern section of the country. Although not a prolific writer he oc-



asionally contributed articles to the journals giving all in bee-keeping the benefit of the results of his labors.

To the end he was a close student of the subject of his life's work. He was a careful reader of all the journals and thoroughly conversant with the new discoveries and progress made in the subject of apiculture.

Through careful study of books and journals, or by personal acquaintance he was familiar with the names and work of those of his own time and earlier years who had contributed to the stock of knowledge of this important industry. It was his nature to allow full credit for an opinion relative to the value of a particular method, or advantage claimed for a new invention for use in the apiry. This he accepted until its correctness or worthlessness had been demonstrated by practical experimentation in his own hands.

JAMES B. PAIGE,  
Amherst, Mass.

#### CANADIAN BEE-KEEPER SUED FOR DAMAGES.

The following clipping is from a recent number of an Ontario newspaper:

A great deal of interest was taken in the Lucas-Pettit case, which was tried at the assizes at Simcoe yesterday. The action was brought by Freeman Lucas, a farmer of Nixon, near Simcoe, against Morley Pettit, a bee-keeper, for \$2000 damages for the loss of a span of horses and for injuries to the plaintiff by a swarm of bees. Last summer the plaintiff's horses were stung to death one day while the farmer was engaged in cutting oats. The bees swooped down on the horses in such force that they put the animals out of business in a few minutes, and killed them in about an hour. Mr. Lucas fled for his life to a mud puddle near by, and it was only by getting right into the mud hole that he escaped meeting the same fate as the horses.

The plaintiff alleged that the bees which did the damage belonged to the defendant, who had 160 hives of honey bees on a property across the road from the scene of the trouble. The defendant denied liability, and he was backed up by bee-keepers in Canada and the United States. It is said the National Bee-Keepers' association of the United States was behind the defence. The jury gave a verdict for Plaintiff Lucas for \$400.

W. S. McBrayne, this city, was for the plaintiff. George S. Lynch-Staunton, K. C., and H. P. Innes, Simcoe, were for the defendant. The case will be appealed.

#### THE LEAGUE NOT GUILTY

Marengo, Ill., March 7, 1906.

MR. EDITOR:

On page 58 of THE AMERICAN BEE-KEEPER occurs the following sentence: "The late League issued a 24 page pamphlet on the so called 'Wiley Honey Lie.'" Please permit me space to pronounce that statement utterly untrue. The League issued no pamphlet of any kind. So far as I know, no member of the League knew of the existence of the pamphlet in question until it was in print. Permission was then asked to put upon the said pamphlet the imprint of the Honey Producers' League; but no such permission was granted. If any later issue has upon it the imprint of the League, there is something in the nature of forgery in the case.

C. C. MILLER.

Do not judge a trade journal by its subscription price. Judge by its contents.

#### DO YOU WANT QUEENS?

The best queens? By return mail? We can fill your order from our fine strain of three-band Italians. Healthy and prolific, but the best of workers. Try them. Tested, \$1; untested, 75c. Per dozen, \$8. J. W. K. Shaw & Co., Loreauville, La.

## THE SUGAR FEEDING GAME.

### Mr. Chantry Stands Pat With a Good Hand.

Thos. Chantry.

FROM OUR experiment described in the January number Mr. J. E. Hand proceeds to make wrong calculations. He objects to my caging the queen.

The loss in weight of syrup and honey fed would have been still greater had the queen been free; and who would want a swarm in October to have to feed over winter at an extra expense? And further how would a queen keep up the strength of a colony, starting with no brood and the experiment lasting four weeks? It would take three weeks for the first bee to hatch. We did not want the bees to spend any of their energy or time or feed in rearing brood, which would be a useless expense afterward. We buy swarms in June and July for one dollar here, and in August and September for fifty cents, and later no one wants them as a gift.

One man last fall offered me fourteen colonies if I would take them out of the hives and leave him the hives, honey and wax. I'd rather buy next spring for \$4.00 each in good hives, ready for business; and he sulphured them. So there goes your two dollars—if there would be a possibility of getting it. Therefore I do not see yet that I made a great blunder in caging my queen.

Further, Mr. Hand counts our honey at 15 cents, which is not so. We sold for 12 cents, and lots of Wisconsin honey was delivered for 10½ to 11 cents.

His sugar price is also wrong. We paid \$6.25 per 100 pounds for it. Now figure it as it was: 62½ pounds of honey at 7 cents per pound, \$4.37½. 125 pounds of sugar at \$6.25 per 100 pounds, \$7.81¼; four swarms of bees, nothing only time to go 3½ miles and get them, three trips; actual cash cost, \$12.18. 94 pounds of

honey, at 12 cents, \$11.28; 20 pounds in brood nest, a dead waste, for that colony was no better off next season than any other. Actually, to us here, the experiment cost us 90 cents cash, besides a day constructing a suitable feeder, and the daily attentions in mixing feed and giving, and the procuring from a distance of the bees after hunting out their queen at the different trips, and the weighing and adjusting supers, crating honey, etc., etc.

Now, Mr. Hand, come out and get my \$100.00. It is ready for you as per my offer in the January BEE-KEEPER. You say you have seen thousands of pounds of sugar honey, but you did not say you produced it. I saw a fellow who said he fed his bees one hundred pounds of sugar made into syrup, and got two hundred pounds of honey, which was probably true; but in fact his bees used the sugar for feed and brood, which made them strong so they stored two hundred pounds of honey when a flow came.

The latter half of your article is just my sentiments exactly.

Sioux City, Ia., February 10, 1906.

## CINCINNATI NEWS

Fred W. Muth.

Cincinnati, March 3, 1906.

Rev. E. A. Wagner, of St. Paul's English Lutheran church, was quite a bee enthusiast when a boy; he took up the work of ministering into his people and has built up a strong congregation. In the past year he has again taken to apiculture and has one hive located in the belfry of the church, two in the yard of the parsonage, only to be removed into the belfry early in the spring. He also has an out apiary of three in the suburbs of Dayton, Ohio. Dr. Wagner promises us much in securing others to join in the work of the Lord, also to bring others in close touch with the real merits and advantages of keeping God's most wonderful insects

—the honeybee. We ultimately shall look to Dr. Wagner as a leader, and already he had planned to secure a swarm of bees located in a tree in one of the golf grounds situated in the west end of the city. This information was gleaned through one of the Sunday school boys, who became interested by knowing that his pastor was and would be interested.

Mr. Ed Childlaw, of Cleves, Ohio, informs us that on February 12th, the snow was four inches deep and that out of thirty-five hives in his apiary thirty-five were alive and flying. Although bee-keeping with Mr. Childlaw is only a side issue, as it were, he is one of those progressive bee-keepers who knows how to make it pay, and last season cleared \$250.00 from thirty five colonies. This, we think, is very good, considering the poor season in this part of the country. He reports that the clover never looked better than now, and is sure he will make quite a nice profit the coming season with his bees.

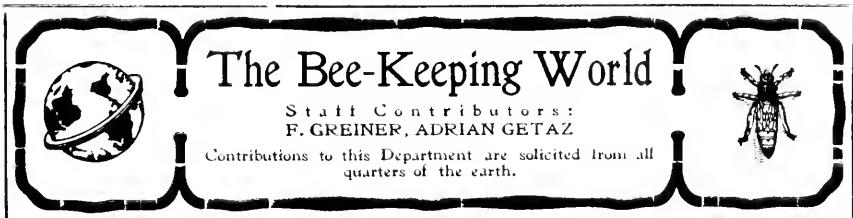
Mr. C. E. Woods, who resided in our city until last spring, when he purchased a nice little home and a few acres of ground in Latonia, Ky., a pretty little

villa some seven miles distant from Cincinnati. Behold, he too has the bee fever, and a bad case at that. Mr. Woods has the making of a bee man, in the fullest sense of the word. We will prescribe for your bee fever, Bro. Woods, in the spring-time when the trees begin to blossom, and cast their shade upon the tender grass beneath.

Mr. Samuel Fardo of Butler, Ky., called upon us Christmas Day. He is a successful huckster and bee-keeper, and realizes the advantage of raising fine comb honey, since he handles all kinds raised by the farmer bee-keeper, and sells direct to the grocery customers.

January 21st was an ideal spring day; never saw the bees fly better in June. Every living soul, that could, was out enjoying the beautiful day. The writer examined twelve colonies and found them in excellent shape, some with quite a nice lot of brood. The following day four bee men called at our store giving us nice orders for bee hives and supplies. My, how anxious the bee men are awaiting the first signs of spring, for they know they will reap a harvest this year.

(How do they know? —EDITOR.)



### GERMANY.

The German bee-keepers are obliged to chose between a great many different styled bee hives. Shilling enumerates twenty-eight, and says the list is much larger.—Illustr. Bztg.

According to the experience of Schenkenberger, who has a house apiary in use containing 38 colonies, only two

queens out of ten are able to safely return to their hive when out on a mating trip. The entrances of these hives are close, one to another, and this is the reason of S.' sad experience.

The same writer describes his nucleus-hives as a sort of "long-ideal" nine or ten small frames, divisible by inserting two close-fitting division boards, thus forming three separate

compartments each having a small round entrance, and facing different parts of the compass. (The gleaner of this has for some time used a similar nucleus hive holding four colonies, the four respective entrances facing in four different directions. This arrangement has given good satisfaction.)—Bralz. Bztg.

The German Central-Verein of Bee-Keepers has at present 50,000 members.

Three good rules for increasing the consumption of honey are laid down by Schneider in Preuss. Bztg. viz 1, "Offer for sale only pure, neat and faultless honey; 2, Employ business methods 3, Inform the general public through the press of the value of honey as a food."

Gerstung says in *Dei Biene* that in 1873 only 12 per cent of all the bees in Germany were in frame hives. In 1900 as many as 44 per cent were in frame hives.

Stolle reports a case of impure comb-foundation as follows: I bought of a so called reliable firm 12 pounds of comb foundation. It was used in well wired frames. Every sheet tore off and slid down on the wires causing great loss and confusion in the hives. The frames were largely built out with drone comb and were no good. It was the ruin of my bees.—Schlesurg H. Bztg.

#### CLAIMS QUESTIONABLE HONOR.

Freudenstein, editor of *Neue Bztg.* has been advocating the feeding of sugar for a number of years. In the last issue of his paper he says, that he does not claim to be the originator of sugar feeding, not even for a winter food, but claims originality of having discovered, that dysentery can be prevented and cured by substituting sugar for honey. He says that during his 19 years of bee-keeping he found that cleansing flights did not cure the disease. A colony which is diseased

will continue to "go back" till nature furnishes better food, or the bee-keeper does it. He claims originality for making the assertion that a swarm of bees may be deprived of all its combs, etc., placed on sheets of foundation and fed on sugar syrup and have them come out in the spring in No. 1 shape. Even without foundation the object may be accomplished and the result will be all worker combs at that; that bees need no pollen for safe wintering.

With a good supply of sugar syrup stored in combs with no pollen present bees need no cleansing flights during the winter, he says. And more, he would do everything he could to prevent such flights. [It will be remembered by the older readers that James Heddon made similar assertions many years ago.]

It is estimated that a swarm of bees numbering 22500 individual bees can and does carry about or nearly two pounds of honey in their honeysacks. Berlepsch concluded that it required 0.0001699042 oz. of honey for each bee each day and according to these figures the same swarm ought to be able to live without other food eight full days, but the fact is that a swarm generally starves in five or six days.—*Monats bl Weipfle.*

#### GOOD FOR GREINER.

An advertisement in *Deutsche Bzcht* referring to the Carniolan bee says: "The largest honey-yields by proper management are possible only with the Carniolan bee." With the following slight change of wording the gleaner endorses every word. Read thus: "The largest honey-yield with the Carniolan bees is possible only by proper management!"

Guenther still defends the "no-bee-space" between the upper and lower sets of frames. Guenther has had an experience of 50 years of practical bee-keeping.—*Deutsche Imeker.*

### ROMANIA.

The hive used largely in Romania is similar to the old straw-skep, has the shape of a bell and is made of willow twigs, basket fashion. To give greater warmth and protect against the sun the structure is coated with a mixture of clay. These hives are made very small and it is difficult to obtain any honey from them except by resorting to brimstone. The bees, perhaps on account of the smallness of their hives are given much to swarming, but the swarms are small, seldom weighing over two pounds. A very few of the more enlightened people in Romania have of late taken movable-comb hives of German pattern into use. The main honey season commences about May 15, and lasts a month, usually there is a short flow in August and September. On account of the severity of the winters and the poor management of the bee-keepers bees are said to winter badly, even strong colonies often suffer greatly.—Seipz. Bztg.

### ITALY.

LUIGI VON SARTORI

Perhaps no other bee-keeper has distinguished himself in Italy to the extent that Luigi von Sartori has. His name is known not alone in Italy but also in parts of Asia and Africa. He was born in Primiero, Tirol, a province of Austria on the 24th of April, 1834, studied German apicultural literature and adopted the movable comb at an early date. In 1856 he had hundreds of movable comb-hives in his yards. The *Bienen-Vater* of Dec. 1905 an Austrian bee-periodical has not only a fine portrait of Prof. Sartori but also a picture of his apiary as it appeared in 1856. In 1862 he commenced to write for the press and in 1880 in connection with A. von Rauschenfels he wrote an extensive book on bee-culture which has been highly commented on and which

brought him many honors. The book is said to be the best and most extensive bee-book written in the Italian language. In 1869 the professor received a call to go to Milan where he established large apiaries from which he sent thousands of Italian queens and swarms of bees to nearly all parts of the world. He constructed a hive which has become very popular in Italy. Many distinguished men, men of no ordinary standing came to him for instructions in apicultural matters. In 1880 the Russian minister, Boutouchin, engaged him to establish a number of modern apiaries in different parts of Russia. He also went to Egypt for similar purposes. The King of Italy, as well as Emperor of Austria, conferred great honors upon Sartori for his meritorious work, the advancement of apiculture. — Condensed from *Bienen-Vater*.

### SWITZERLAND

AN INTERNATIONAL BEE JOURNAL.

A new publication of apicultural matters has just come to the desk of the gleaner of this. It is styled "European Apiculture" and is edited by A. Straeuli. In his introduction the editor says that modern apiculture like other progressive work is not a national but an international affair and that he intends to show apiculture of Italy, France, etc, but particularly of North America as the influence of modern American apiculture has long been felt in European lands. It seems Straeuli has been encouraged by many bee-keepers of Europe, especially Germany, to inform the German speaking public of "what is going on in America." This is very flattering to the bee-keepers of the United States and gives us great satisfaction, in view of the fact that the Yankee bee-keeper has been looked down upon by the Germans for many years. American Queen-rearing and Baby-nuclei is the first topic the editor brings in the new publication.

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**DISCOUNTS:** On continuous insertions we allow the following: Three months (3 times) 10 per cent. Six months (6 times), 20 per cent. Twelve months (12 times), 30 per cent.

**HOW TO ADDRESS.**

The home office of The American Bee-Keeper is at Falconer, N. Y., and all matters relating to subscriptions, discontinuances, changes of address, advertising or other business should invariably be addressed to the Falconer, N. Y. office.

Matters relating to the editorial department—manuscripts, photographs, or correspondence in any way referring to articles that have been or are to be published, should be addressed to The American Bee-Keeper, Fort Pierce, Florida.

**DISCONTINUANCES.**

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

**SUBSCRIPTION RECEIPTS.**

We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered. The date printed upon the wrapper label of your paper indicates the time to which you have paid. Our subscribers will confer a favor by observing the date, as noted, and promptly renewing or requesting the paper discontinued at expiration of time paid for, as may be desired.

A critical Massachusetts subscriber, who takes and reads all the bee journals, and who speaks commendingly of THE BEE-KEEPER in general, writes: "There is more crudity in the articles found in the bee journals than in any other magazine that I have ever read." Verily, the sparkling of some of the literary

gems (?) in beedom's periodical array, is less brilliant to others than to those who do the polishing and are dazzled by the splendor of their own handiwork.

In an address before the National Bee-Keepers' Association, Mr. Herzhiser claims the discovery of the principle of alternate pressing and soaking of slungum under boiling water as the true one for the extraction of wax. It seem to us that we have somewhere heard that the associate editor discovered that and has a patent on a wax extracting device working on that principle.

Grant Stanley says "the banking trust shuts out Postal Savings Banks." This is news to the writer who has been connected with banks for over twenty-five years. Better stick to bees Brother Stanley.

In using chaff hives Mr. Stanley says he was greatly annoyed by brace and burr combs on top of the top-bars, but since he discarded chaff hives. Was it simple coincidence, or what? Tell us?

The Worcester County Bee-Keepers' Association will hold its next meeting at Horticultural Hall, Worcester, Mass. April 14, 1906.

**Wax Adulteration.**

The following quotations may be of value to bee-keepers generally:

"The most common adulterations are as follows: Admixture of water to increase weight, which is readily recognized by the rough fracture and by slowly heating to the melting point and cooling, whereby the water separates, the quantity being determined by weighing the cooled wax. Additions of pulverulent substances, such as yellow ochre, brick meal, pea flour, heavy spar, clap, litharge, etc., are also detected by melting, whereby they separate. Stearin, resin, and vegetable waxes increase the specific gravity.

"Pure yellow wax shows the same phenomenon in a fluid of 0.955 to 0.965 specific gravity prepared from 1 part of alcohol and 3 parts of water. Adulterations of wax with the above-mentioned substances would cause the wax to sink, while sophistication with paraffine, ceresin, ozokerite, etc., would make it float upon the surface. Generally speaking, the principal adulterations of wax are with yellow ceresin for yellow wax and white ceresin, for white wax. Paraffine, respectively ceresin, etc., is recognized by heating a sample of the suspected wax with fuming sulphuric acid in a porcelain dish. Pure wax is thereby entirely decomposed and converted into a black jell-like mass, from which the paraffine is separated in an unchanged form after cooling. Tallow—By pouring spirits of sal ammoniac over scraped wax in a test tube, and heating, the fluid does not become turbid, as is the case in the presence of tallow. Stearic acid is detected by dissolving a small quantity of wax in ten times the quantity of chloroform and adding lime-water. Pure wax remains dissolved, while in the presence of stearin a granular precipitate of stearate of lime (lime soap) is formed. Resin—Boil the wax with concentrated nitric acid; and in the presence of resin the fluid acquires a reddish color. By adding water to the fluid after cooling and freeing it from wax, it becomes turbid and the resin separates as a yellow, flaky precipitate, which dissolves with a reddish brown color in caustic ammonia. Japanese Wax—Boil about equal parts of borax and wax with fifteen to twenty times the quantity of water; with pure, yellow wax the milky turbid mixture separates gradually into a clear yellowish fluid and with pure white wax into a clear fluid, with the wax in both cases floating on top. In the presence of Japanese wax the whole remains milky, and, according to the quantity of adulteration, thickly fluid or jelly-like and rigid."

#### Death of Mr. John M. Hooker.

Mr. John M. Hooker, for many years prominently connected with the British Bee-Keepers' Association, and who has been an occasional contributor to the AMERICAN BEE-KEEPER, died at Philadelphia, Jan. 31, 1906. Mr. Hooker took a lively interest in apiarian matters, and was a warm personal friend of Mr. E. L. Pratt, of Swarthmore, as well as a friend of the AMERICAN BEE-KEEPER.

John Marshall Hooker was born in Kent, England, April 26, 1829. He loved country life and his time was largely spent in the country about London where he was for many years engaged in the profession of architect and builder. Many a handsome suburban estate was planned and entirely laid out at his direction.

Mr. Hooker's first lessons in bee-keeping were from his father who was a clever scientific man and an advanced bee-keeper. The Hooker estate consisted of considerable valuable landed property in Kent and Sussex. Bees were always kept on the place and considerable honey taken yearly to market.

From 1874 to 1889 Mr. Hooker served on the committee having the honor to so largely promote modern bee-keeping throughout Great Britain through its successful shows, instructive literature and helpful organizations, especial attention being given to cottagers. As a memento for his valuable service in the interests of the British Bee-Keepers' Association the bee-keepers of England recently framed a handsome illuminated address and sent it, with a purse of some size, to Mr. Hooker, at his Philadelphia home. During his visit here last year Mr. Thos. W. Cowan appended his signature to the parchment, thus completing the paper which now includes the names of many of the best-known bee-keepers of England.

It was Mr. Hooker who suggested the first movable dummy. He was awarded medals for the best hive on the tiering

plan. Took many a prize for the largest yield from a single colony. Invented an uncapping device. His mechanical knowledge enabled him to make many improvements in appliances of all kinds—the Hooker-Alexander hive was at one time considered the best in England. In 1888 Mr. Hooker published a book called "Hooker's Guide to Successful Bee-Keeping," which was up-to-date in every detail.

After the death of his wife Mr. Hooker came to Philadelphia to reside with his son, Dr. Samuel C. Hooker, a chemist of international repute. From Philadelphia he made extended trips West and South and called upon all the prominent American bee-keepers within reach.

He became a member of the Philadelphia Bee-Keepers' Association, and was active in its work up to the time of his death. He has written many columns for nearly all the bee journals, in which writings he showed himself to be keen and alive to the improved methods of this later day.

He was a gentleman of refinement and good taste and had a most affable disposition which endeared him to all who knew him. His loss will be keenly felt both in England and America.

In the Rural Bee-Keeper for February Grant Stanley says of locations for an apiary that a western slope is poorest of all. Perhaps in his part of Pennsylvania, but not always so.

The double-walled, well packed hive used to be "all the go" in Germany. Of late the single-walled hive is coming to the front.

Two German bee-periodicals have decided to discontinue: The Imkerschule, of Weigandt, and Bienenfreund, of Kvanchev.

A "bee-line" is often a very crooked affair, but is always the line of least resistance, says Allen Latham; and Allen is right,

### Apiary Notes of Unknown Europe.

BY FELIX J. KOCH.

Fond as are the people of central Europe of honey, along the East Adriatic it is seldom, if ever, encountered.

At Sissek, Croatia, under the pent roof of the houses, the hives are always seen, house architecture being modeled to accommodate them.

On the way from Sarajevo, in Bosnia, toward Budapest, in the great rain belt of Europe, bee-hives are innumerable, and in constant sight of passengers on the trains.

Honey constitutes one of the important items of storage in the great warehouses on the outskirts of the Magyar capital.

To the north among the Tatra, at Poprad, honey is gathered in large quantities for export.

At the neighboring Ice-Caverns the familiar rounded German hives are employed, the people here being of Saxon decent, though surrounded by an ocean of Wagyars.

At Tarta-fured, in the Carpathians, the fences are built of stone pillars joined by boards, on the top of which there rests an oblong roof, sheltering the bee-hives.

One of the curiosities of the royal chateau at Terpsichdor, in Servia, is the wax flowers, kept in slanting cases. The death-mask of one of the murdered Serb kings, likewise of wax, is preserved nearby.

A feature of the annual agricultural exposition at Bucarest, is the exhibition of bee-hives of most approved pattern. Such is the poverty of the Roumanian peasant, however, that he cannot buy if he would.

### QUALITY QUEENS

Are the best Italians yet. Send for circular. H. H. Jepson, 182 Friend St., Boston, Mass.



### Different Kinds of Fools.

Cincinnati and San Francisco is the home of a monthly journal bearing the benign title, "The National Humane Educator," a marked copy of which has been sent to us by a New York subscriber. The paper is edited and managed by a bunch of well meaning women, so we shall dwell not upon the ignorance or stupidity of the management, but reproduce the article as an example of some men's foolishness. Some people who constitute the source of the newspapers' supply of raw material are foolish; some are fools and still others are so much so that they are not fittingly described without the use of a qualifying adjective. Ike Hubbard, as may be noted, belongs to the latter class. This is the article:

#### CALLS BEES IDLE

Dedham, Me.—"There are several popular errors about the ways of bees which need rectifying," said Ike Hubbard, a honey hunter. "The average bee, instead of being an example of industry, is about the laziest thing that flies.

"Even in the busy season in midsummer no bee will quit his hive until after the sun is well up and has taken off the heavier part of the dew and as soon as the sun slants toward the hills in the afternoon every bee will come flying home and go to his roost, though darkness is four hours away.

"Then there are few bees that will hunt for honey from flowers so long as they can find corn syrup or brown sugar to steal. This fact is so well known to apiarists that many bee-keepers buy corn syrup at 50 cents a gallon and pass it along to the bees, which resembles honey, and still sells for honey, but is not the genuine product of the hives. When a man can buy syrup for 50 cents a gallon and then sell it back to the trader as honey at \$8 a gallon he can get rich right away, provided he has enough bees.

"The greatest mistake that is made

about bees is the belief that they follow straight lines when carrying home their loads of honey. I assure you that the bee line one reads about in books does not exist.

"When a laden bee is going home with a big load of honey in its stomach and great wads of pollen on its hind legs it takes the easiest course, regardless of any line. In our hilly Maine country no bee will rise in the air to surmount a hill when it can go around the obstruction.

"When a sharp rise lies between my honey box and the bee tree every bee flies away on the arc of a circle, so as to avoid exerting itself by rising. In such cases I place my box on either side of the hill and make my triangulation nearer the apex. If one were to go chasing after a bee that was flying around a hill his calculations might lead him to China.

"The bee-keepers tell us that white clover honey is the best, but I do not agree with them. Domestic honey, such as gathered from white clover, buckwheat and other cultivated plants, is too sweet.

"To my mind wild honey that is stolen from the blossoms of dogwood and basswood and wild thyme and mints and nettles is far better than anything bought in the stores. It has a gamy flavor about it that suggests wild woods and great trees and singing brooks and everything that lives out of doors and away from the contaminating taint of mankind."

Do not judge a trade journal by its subscription price. Judge by its contents.

### HONEY AND BEESWAX MARKET.

Kansas City, Mo., Dec. 7.—The supply of honey is good. The demand is fair. We quote our market today as follows: Comb, \$3.25 per case. Extracted, 6c and 6½c. C. C. Clemons & Co.

Buffalo, Dec. 6.—The supply of honey is only fair and more needed. The demand is good for fancy. We quote our market today as follows: Comb, fancy, 12-14, No. 2, 8-10c. Extracted, 6-8c lb. in 5 gallon cans. Beeswax 28-32c. Really

fancy one-lb comb is wanted, but lower grades move slow and have to be cut accordingly.  
Batterson & Co.

Boston, March 14.—The demand for comb honey continues to be good, with new stock cleaning up rapidly. Fancy white, 16 to 17c; No. 1, 16c. No more No. 2 on hand. There is still a good sized stock of old goods, but it is almost impossible to move it. Extracted from 6 to 8c.  
Blake, Scott & Lee Co.

Chicago, March 7.—Choice white comb honey is not plentiful and it sells upon arrival at 15c per pound. Other grade of comb are not in demand and sell at uncertain prices of 10 to 14c per pound. Choice white extracted, 6½ to 7½c; amber grades, 5½ to 6½c. Beeswax, 30c per pound.  
R. A. Burnett & Co

New York, Dec. 6.—Comb honey.—The demand continues to be fair for all grades. Prices practically remain the same. We quote fancy white at 14 to 15c; No. 1, 13c; No. 2, 12c; buckwheat 10c per lb. Extracted honey is in good demand, especially California, with large supplies. We quote white 6½ to 7c; light amber, 5c; buckwheat, extracted 5½ to 6c per lb. Beeswax, firm and steady at 2 to 30c per lb.  
Hildreth & Segelken.

Cincinnati, March 9.—The demand for comb honey has brightened considerably since we last reported; in all probability, by the close of April, the market will be bare of comb honey. This will be encouraging to the bee-keeper. Nevertheless, to advance prices is out of the question. We therefore, continue to quote fancy white comb honey in 24 section cases at 11 and 15c per pound. The demand for extracted honey does not come up to our expectations. We are selling amber honey at from 5½ to 6½c, according to quality. Fancy white honey in 60 pound cans, at 8c. For choice, bright yellow beeswax we are paying 30c per pound, delivered here.  
The Fred W. Muth Co.

51 Walnut street.

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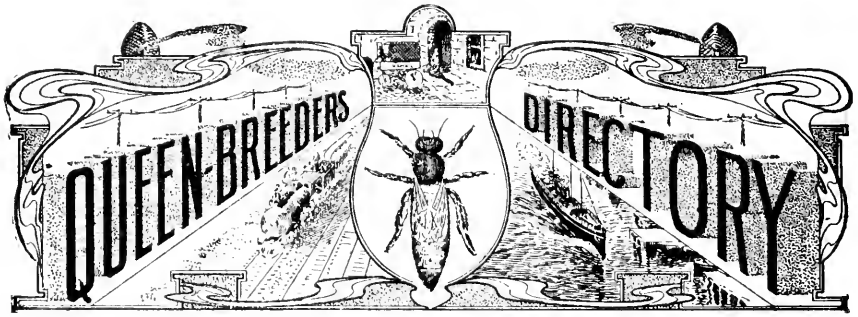
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**QUEENS HERE.**—We are still asking you to give us your trade. We sell Italians, Golden and Carniolans at 75c for untested and \$1.00 for tested. Prices on quantities and nuclei upon application. **JOHN W. PHARR, BERCLAIR, TEXAS.** Jan. 6

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## HONEY DEALERS.

### OHIO.

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# Advanced

## **Typographical Beauty.**

During the past year, Advanced Bee Culture has been re-written, enlarged, and beautifully printed in large, clear type, upon heavy enameled paper.

It is lavishly illustrated with beautiful, half-tone engravings, most of them full page, and it is no exaggeration to say that more perfect, artistic, bee-keeping pictures have never before been published.

The book is substantially bound in cloth of a soft grey color, and, from the lower opening in the letter "B" of the title in gold letters on the front cover, depends a green vine of clover, with a bee in gold sipping nectar from one of the dainty, white blossoms.

## **Diversified Experiences**

More important, however, is the simplicity and freshness, the inspiration and real helpfulness of its contents. It may have an egotistical sound, but I think it is entirely proper to mention the experience of which this book is the result.

For 15 years I was a practical bee-keeper, making my living in the apiary producing tons of both comb and extracted honey, rearing and selling thousands of queens, reading all of the bee books and journals, attending nearly all of the conventions and fairs, visiting bee-keepers, etc.

Then I began publishing the Review; still attending fairs and conventions; still visiting bee-keepers more than ever—going from the Atlantic to the Pacific, and from Canada and Minnesota to the Southern States.

In publishing the Review, and reading all the other journals and books, the views and experiences of the best and most progressive bee-keepers have been constantly before my eyes. Advanced Bee Culture is the cream of all

this experience. After a thorough and careful consideration of the views of the best men, in the light of my own experience as a bee-keeper, I have described, in plain, simple, concise language, what I believe to be the most advanced methods of managing an apiary, for profit, from the opening of the season to the end of the year.

It is impossible in the space at command to go into details regarding the subjects treated; but I will very briefly mention about half a dozen, simply as samples.

## **Good Stock**

Is second only in importance to a good location, and Advanced Bee Culture points out the characteristics of the different varieties of bees, their adaptability to different locations, and then shows how, having secured the best strain of the most suitable variety, to go on and actually improve this stock.

## **Choice of a Hive**

Must come early in every bee-keepers' life, and Advanced Bee Culture shows why a large hive is desirable for some localities and purposes, and a small one for other locations and uses giving reasons why, thus assisting the reader to choose intelligently.

## **Sections**

And their adjustment on the hives are often puzzling matters, and Advanced Bee Culture considers the different styles, and sizes of sections, different styles of separators, as well as the different kinds of supers, giving reasons for a choice of each.

## **Comb Foundation**

Is often used at a profit, but not always, and Advanced Bee Culture tells when and how to use it at a profit, and when it is more profitable to allow the bees to build their own combs unaided, and it gives the reasons.

# Bee Culture

## **Comb Honey**

And its production interest the practical bee-keeper more than anything else connected with his business; and there is one chapter in *Advanced Bee Culture*, that comes in after the discussion of locality, varieties of bees, hives, supers, sections, increase, feeding, comb foundation, etc., in which this subject is taken up from the beginning of the season, and the whole ground gone over briefly, showing the relation of these different features to one another, as they are employed in the production of comb honey.

## **Extracted Honey**

Production possesses an interest almost equal to that of comb honey production, and *Advanced Bee Culture* has a chapter telling how to produce a thick, heavy, well-ripened article with the least expenditure of capital and labor, and how to treat the product as to preserve its natural wax aroma.

## **Marketing**

Of honey is fully as important as its production. To raise a good crop is one thing; to sell it at a good price is another. To bend every energy to the accomplishment of the former, and then neglect the latter, is a mistake. Whether it is advisable to develop the home-market, and, if so, how it shall be done; whether the honey shall be sent to a distant market, and, if so, when, and which one; whether it shall be peddled, and how these, and many other points, are considered in *Advanced Bee Culture*.

## **Foul Brood**

Receives most comprehensive treat-

ment. With the descriptions, illustrations and instructions given; it seems as though one who had never seen foul brood could detect it and rid an apiary of it without serious loss.

## **Winter-Losses**

Are not always the result of the same causes. They may come from starvation; from poor food; from improper preparations; from imperfect protection; from a cold, wet, or, possibly, a poorly ventilated cellar, etc. Successful wintering comes from a proper combination of the different conditions. For clear, concise, comprehensive conclusions upon these all important subjects, read the last few chapters of *Advanced Bee Culture*.

## **Commercial Bee-Keeping.**

But there is not room to touch upon any more points. While every class of bee-keepers will find much, very much, of interest in the book, it is only fair to state that the spirit of commercialism pervades it from cover to cover. The leading idea kept in mind is that of keeping bees as a business, and making money out of them, and the bee-keeper who keeps bees with that end in view, simply cannot afford not to read *Advanced Bee Culture*.

## **The Price**

Is \$1.20 postage paid; or the Review will be sent one year together with a copy of the book, for only \$2.00.

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MAY

VOL. XVI

1906

NO. 5

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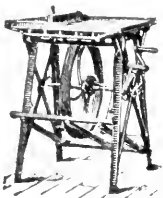
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**The American Bee-Keeper, Falconer, N. Y.**





Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVI

MAY, 1906.

No. 5

## Too Hard for the Editor.

### A List of Questions from a Rattled Tyro of the West Who Loses His Bet of Twenty Cents.

JOHN R. RAGLE.

AS I AM IN a bee-keeping larval state I would like to ask some questions. I am working in the gold mines for \$90 a month. In becoming a "beginner" with bees I find that I have spent \$96.50, have six colonies "Italianized," but really hybridized with costly Eastern queens, a dozen modern hives, a lot of bee papers and three or four bee books:

1—Where did my money go? Who gets the profit in bee-keeping? Do you think I will ever make a good business man?

2—If you had spelled it "catalog" when you went to "spelling bees" would not the bright-eyed girl next to you have "spelt you down?" Wouldn't "cattlelog" or "rattlelog" look as well?

3—Talking about sermons in bee papers, did you ever hear this story? Gen. Scott once asked a bespangled Indian preacher how much pay he received. "Sometimes two-bits, sometimes noth-

ing," said the Indian. "Humph!" commented the gruff old general, "D—m poor pay." "Ugh!" returned the poor but simple Lo, "Dampoor preach!"

4—Do you think there is any danger of W. Z. Hutchinson ever writing a novel?

5—An old farmer to whom I offered two dollars for the first swarm from his box hive of "blacks," replied that his son Peter had sent back to Ohio for some dog-tail hives and intended to save the swarms himself, this year. Now, who in Ohio is putting out this new kind of hive? Can that farmer ever be educated into a bee-keeper? What will you give me for his name, that you may send him your paper? Could he read it?

6—If the thermometer stood at 100 and your bees were demanding attention and you were getting stung at the rate of 90 a minute, which would you rather do, or go a-fishing?

7—If you were what you have always

wanted to be and never will be, viz: an immensely rich man; would you rather have 25,000 people pay you a dollar apiece or would you rather pay 25,000 people a dollar apiece?

8—The journals, books and "cattle-logs" confuse me greatly, and I would like to know if a-i-r-m 69 metre  $\frac{1}{2}$  box frames were in duplex hives and the end bars closed, so as to admit simplicity feeders with plain sections and rail fence separators wired with Hoffman frames; whether you would unite them with shook swarms on contracted honey boards and according to the Alexander method by always setting one hive on top of another and giving them a new one-dollar queen to prevent foul brood, or would you buy an observation hive for \$34 and a Swarthmore outfit for some more dollars and then wait for sundown to beat tin pans with a little tobacco smoke on the Sibbald (or is it the big low) plan?

9—Do "experts" make money keeping bees or by dealing in bee supplies and writing for or printing bee journals? Do they make more money than ginseng men and Belgian hare promoters? Do you think the next twenty years will develop any bee writers beside the same old writers who apparently have been writing in exceedingly bad English and some mixed German, and saying the same old things on the same old topics for the last twenty years? Is it a fact that bee-keepers are a lot of old grannies, holier-than-thou, and too lazy to work except when the bees compel them to do so? Is the whole business chiefly a "sell" for the benefit of those who have things to sell? Will you print these questions? Will you accept a bet of twenty cents that you won't?

If I keep on with bees I may write to you again.

Stent, Calif.

If a farmer had no more faith than some advertisers he would become crazy at seeing good sound corn going into a hog.—Agricultural Advertising.

## NEWSPAPER NONSENSE.

THE FOLLOWING is a sample of the newspaper rot now going the rounds as a result of the recent Caucasian boom instituted by the agricultural department at Washington and boosted along by Gleanings:

### A HONEY PRODUCER WHICH WILL NOT STING HUMAN BEING.

The introduction of the Caucasian bee will take away all fear of being stung.

There are gentle things in the caucasus, says Winifred Cook, in Farm and Ranch, even if recent dispatches from that quarter of the world would lead one to believe otherwise. Although neighbor to the Syrian or Holy Land bee, which has a record among bees for temper, and the ancestors of which, according to the writer of the Pentateuch, chased the ancient Hebrews with all the animosity of the Amorites, it is the most amiable of all known bees. While provided with a sting as all bees should be if they are to be worth anything as honey producers, it is almost impossible to make it sting the human being. It is being introduced in the United States.

It was seen by the leading bee-keepers of the country for the first time in September at Jenkinstown, near Philadelphia, at their annual convention. As soon as the supply is large enough it will be possible for the most timorous to take up apiculture without fear of being stung.

The introduction of the Caucasian bee in this country is one of the beneficent works of the department of agriculture. In 1902 Frank Benton, the apiarist in charge of the government hives at Washington, D. C., bought a number of mated Caucasian queens and brought them to this country. After the manner of queen bees, upon their arrival here they proceeded to lay eggs by the

thousand. In a short time the government had a number of queens and thousands upon thousands of gentle honey gatherers. They were studied most carefully. It was found that almost nothing a human being could do would persuade them to attack him. Their hive could be shaken. One could run them off the comb with the unprotected hand and they were not disturbed in the least. The only times they showed any irritation were on cool mornings when the hives were severely jarred or where they had been robbed by other bees. With the exception of the testy Cyprian bees, they were found to be equal to any bees in the gathering of honey. It is believed they will revolutionize the honey business. A number of queens have been distributed, but the only imported queen bee of the race in the apiary died a short time ago, and as it is impossible to secure more at present from the Caucasus, where Mr. Benton has gone, owing to the uprising there, no more can be distributed this year.

It will take a long time to eradicate from the American mind the fear of a bee. They came over in a tubby vessel of the seventeenth century. For two centuries they held their own and were distributed from the Atlantic to the Pacific. In comparison with other races now known they have nothing to recommend them. For all this bee was a spiteful creature. It poorly defended its supplies of honey against other bees and was lazy in the matter of gathering honey, anyway.

Just as soon as the supply of nectar began to decrease and a little energy was required in order to find it, the bee gave up the effort. It did not multiply rapidly, so the hives at the beginning of the harvest were likely to be as short handed as a Kansas wheat farm. Therefore, when in 1860 the comparatively gentle, prolific and industrious Italian bees were imported, the bee-keeping world became much excited.

Fabulous prices were paid for queens. Then a score or more of years later came the Cyprian bee, from Cyprus. These bees were hustlers in the matter of gathering honey, one colony having a record of one thousand pounds in one season. But they were veritable devils. Nothing could subdue them. Occasionally they were out hunting for trouble. A story is told of one of these swarms of bees which drove an entire family into the cellar and stung every living animal in the neighborhood, including horses, cows and chickens.

These were followed by the large gray bees from Alpine provinces of Carnolia, Austria. These bees were gentle and also good gatherers of honey.

Last of all has come the Caucasian bee, which one can handle practically with no more danger than if they were so many flies.

#### Chaff Packing—Swarming Symptoms.

EXTRACTS FROM a letter of F. Kingsley, Hebron, Neb., writing of chaff packing, says:

“Mice will creep in while small, work up and nest in the chaff and eat bees, wax and honey; and I have found the largest mice I ever saw imprisoned in these hives.” Further on, referring to the effect of preparedness on wintering he says: “One spring in May, after a hard winter, I took a colony from a wolfe hole on the prairies where the northwest wind blew freely into it and where the sun could not look in it. The colony hung not over a foot from the mouth of the hole. The bees had their own time and way in preparing for the cold.”

As an indication of the swarming fever he notes a listless condition and a different sound from the normal.

The next convention of the National Bee-Keepers' Association will probably be held at San Antonio, Texas. Dates will soon be announced.

### Is it Theory or Practice?

IN THE AMERICAN Bee Journal for January 25 "York Co. Bee:Keeper" is quoted as saying in regard to tarred paper for winter protection: "No siree for an old fashioned Canadian winter." Wonder if he ever tried it? He will perhaps pardon our scepticism but it has long been the custom for the "scribes" to condemn what seemed to them to be poor. Also we would remind him that the use of tarred paper was not advocated for the far north — trial there only in a limited way, was suggested.

### For Benefit of Honey Producers.

To our many new readers we wish to state that the AMERICAN BEE-KEEPER is published for the benefit of the honey producers. We have no axes to grind and our columns are always open to frank and courteous discussion of all subjects pertaining to apiculture. In the past we have fearlessly assailed policies and practices which we believe inimical to the best good of the craft and we shall continue to do so when ever the occasion demands such action.

To control the drones of undesirable or unproved queens it is necessary not only to keep a trap or drone guard on the stocks containing such queens but also on other colonies, for when the undesirable drones gain freedom by the opening of their hive they will go into any colony that they may chance near. Remember this or you may have no end of trouble.

The customary size for brood frame-parts all through Germany, Austria and Switzerland is 7-8 inch in width. Very few recommend more than this, or about one inch; metal spaces are universally in use.

A man is judged by the company he keeps.

### CAUCASIAN BEES.

I deeply regret that the government has undertaken the distribution of these bees without further test of their suitability for the general purpose of bee-keeping, and I hope that no one will get any of them unless he is prepared to take the fullest precautions to prevent their mixing with other bees. So far there appears to be much stronger testimony against them than for them. In fact, about the only claim made for them seems to be the comparatively unimportant one of gentleness. It may appear at first sight that the proper way to test them is to distribute them and let the public decide as to their merits. But there is an important difference between bees and other things in this respect. If the department of agriculture distributes a worthless variety of radish, for instance, no one is greatly harmed. No one is likely to plant them a second time or to raise seed from them, the bad results of the experiment do not extend beyond the experimenter, and disappear entirely in one or two seasons. But the one who introduces a worthless variety of bees into a bee-keeping neighborhood may do his neighbors hundreds of dollars worth of damage which they are powerless to prevent, and the bad effects of which they may not be able to get rid of for a number of years. The worst feature of the business is that those who are least capable of properly testing them and judging as to their merits are the very ones most likely to undertake it.—J. A. Green, in *Gleanings*.

## Moldy Combs in Spring.

Evils of Their Presence in the Hive Made Plain.

ALLEN LATHAM.

UPON MORE THAN one occasion I have seen inquiries from beginners, relative to moldy combs, answered by the expert after this manner: "There is no harm in the moldy combs; the bees will clean them up as they need them."

The reply has caused me more or less surprise, and has made me question the observational powers of the apiarist offering the reply; for from my earliest experience in the matter it has seemed to me that moldy combs are not only undesirable but a source of actual loss. It is my purpose in this article to point out the losses sustained, and to offer the cause and the prevention of moldy combs.

If there is no other loss, the labor loss alone would warrant all the care needed to keep the combs free from mold. It is perfectly true that bees will clean up combs as they need them, and that this comb-cleaning is done at a season when there is no harvest to engage the activities of the workers. But it is a pretty well recognized fact that a bee's age is reckoned in labor units, not time units. It is therefore folly to age one's bees by giving them unnecessary labor. If a hive is filthy with its dark combs, thousands of young bees must labor many hours to get these combs fit for use. When the profit-yielding season opens these bees die sooner than they ought.

Not infrequently combs become so rotten with the mold that the bees find it necessary to cut down not only the cell-walls but the septum as well, renewing portions of the combs completely. Thus an extra delay is brought about, more work called for, and wax consumed in comb-building which never

ought to take place. It generally happens, too, that this renewed comb comes through the process transformed from worker, into drone-comb.

The losses already named are serious enough, but they are in sum total less than the single item of loss which will now engage our thought. This loss is due to delayed increase of brood-nest at a season when it is manifestly desirable to have the brood-nest grow with the utmost possible celerity.

A normal colony with clean combs builds up during April and May in a way to gladden the heart, but the colony with the moldy combs is constantly cramped for breeding space. The queen is filling all the available cells, to be sure, but the ratio of increase is so small that few young bees can be spared to clean moldy combs. Inch by inch the brood-nests grows, with its moldy margin ever encircling it, till the time finally comes when a sufficiently large number of bees emerge to form a cleaning battalion to sweep and polish the remaining combs. Yes, this time of cleaning does come, but usually two or three weeks after clean colonies have taken possession of all their combs.

One might well ask whether the moldiness can be a wholesome condition for the colony. I doubt if any specific disease can be traced to this mold, but it would not surprise me in the least to learn that the vitality of the bees was impaired. Bees are not maggots that they can fatten and thrive under such rotten conditions.

Recognizing long ago the harmfulness of moldy combs I was always on the alert to get at the cause and to

seek a means of preventing the evil. The cause was easy to find, and moisture must answer for this curse as well as for others. Since moisture is the cause, then get rid of the moisture.

One of my early efforts to overcome the evil, and one marked with success, was not in the line of getting rid of the cause, but rather of getting away from the cause. In ancient times little effort was made to combat a plague by getting at the cause and removing the same. Flee it, all who can, was the rule. Thus I removed five of the combs from each hive and left the colonies to winter on four combs each, filling the extra space with wide frames covered and stuffed with absorbent material. In the spring as the removed combs were needed they were replaced in the hives. By this method I got rid of five-ninths of the mold for a certainty, and, as it turned out, the other four ninths for the most part. The bees covered the four combs so completely that they were kept dry and free from mold.

That work was done some eighteen years ago, when I practiced packing my bees on their summer stands, allowing an entrance that half a lead pencil would close. I had not then learned all the evils of contracted winter entrances. That method of wintering was economical of honey, and brought the bees through in very fair condition and I should be practicing it today if I had not found a superior method.

Ample ventilation, whether the bees are put in the cellar for winter, or left on the summer stands, is the great preventive of moldy combs. Ventilation for the removal of moisture is as important to the good health of the bees and the cleanness of the combs as any other of the several states and conditions, which go to make up a profit-yielding colony, is to the welfare of the bees.

One is inclined to overestimate the excellences of those things he likes and

to magnify the evils of those which he disapproves of, and it is quite possible that I see moldy combs and their attendant evils in a very dark light; but whenever I notice the rapidity with which a colony with good clean combs pushes its brood-nests in April, taking possession of whole frames of combs in a day, I feel amply repaid for all my efforts toward ridding my hives of mold.

Norwich, Conn.

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### FARM BEE-KEEPERS.

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#### A Mysterious and Deplorable Neglect Pointed Out.

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GEO. W. ADAMS.

IT IS A CONSTANT wonder to me why more farmers do not keep bees, and also why the few who do keep them do not make better profit. It has been my privilege to know the Massachusetts farmer very well indeed, to know him in his home and his business; and the more I came to know him the more I was impressed by his integrity, intelligence and industry. Now, the reasoning power, the ability to think and form conclusions, in short, to study the subject, is a characteristic of all successful bee-keepers, and this the farmer has in a marked degree. As to the industry, the farmer and the bee can meet on common ground.

Must we conclude the farmer is too shrewd to keep bees? Perish the thought.

Now it is demonstrable that a small investment in bees will yield 100 per cent profit averaging one year with another and allowing hay-making wages for every hour spent.

I have a neighbor who for years paid the tax on his house and lot and also paid the expenses of a trip, which he and his wife took every fall, to visit friends in Connecticut, all from a few stands of bees. This man was a shoemaker living among farmers. Why

didn't they do as well?

A few years ago I was asked by a good farmer friend of mine to "fix our bees"

"Why, what do you mean by fixing them," was my natural inquiry.

"Oh, do things to them to make them pay, and you may have any price you ask. We have had no honey for three years."

I undertook them at half the net profit and cleared up about a dollar per hour for my working time. The third year it seemed so much like robbery to continue, that I advised them to "keep the water out of the hives and give them supers when needed," which was about all I had done, but within a year they had run out and in two, were gone, yet these people were doing very successful work with poultry.

A shrewd farmer and a very successful one, came to me two years ago saying his bees were in bad shape, and he wanted advice. I told him my experience had been that the bee-specialist was rarely called in until the patient was dead, but I would look them over. They were in very poor condition but I told him they could be saved, and offered to take them on shares. "Not a bit of it," said he, "bees can be made to pay, you make 'em pay and I'll pay you." The end of the season gave him nearly \$30 above expenses from five colonies, and three swarms gone to parts unknown. He had a good investment in his bees and was keen enough to see it, but had never made a cent before.

I admit it is a puzzle, but I believe that with the up-to-date, simple hives and fixtures, any farmer can make ten dollars a year on an investment of ten dollars if he will give the same common sense management to the bees that he gives his poultry.

Enough good practical advice is printed every year in the AMERICAN BEE-KEEPER to keep the farmer in the way he should go, and however complex

the study of the bee may be, the production of comb honey is neither difficult nor laborious, if the number of colonies is kept within the scope of the man's time.

Rowley, Mass.

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### THE REFORM MOVEMENT.

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Secretary of the Jefferson County, New York, Association Explains.

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GEO. B. HOWE.

DEAR EDITOR:—It seems to me that it is time the bee-keepers understood more fully what the New York State bee-keepers' societies are doing.

In the first place, the committee on supplies got wholesale prices for the members. The A. I. Root Co. seeing a bone of contention tried to get the W. T. Falconer Co. to withdraw these prices. Failing in this, the Root Co. forbade the Falconer Co. selling their patented goods at less than retail prices to New York members. And yet the Roots tell us they are our friends. Now, shall we members of New York state bee-keeper societies let this outrage go unnoticed, or shall we stand by our obligations and show the A. I. Root Co. that we are a class that resent such an insult? Let us give co-operation serious, sober thought.

Now, as it is, we pay the manufacturer, jobber, wholesaler and retailer. Is it necessary to have so many middlemen? I say "No, a thousand times no!" The agent takes an order of the bee-keeper and sends it to the nearest wholesaler, who packs the goods and ships them direct to the bee-keeper. The agent never sees these goods and yet he gets his fee just the same. Now, with the numerous catalogues and price lists, why could not the bee-keeper order these goods as well as the agent and save all this needless expense? Can the Roots make any sane

bee-keeper believe that the difference on freight between car lots and smaller orders will pay the agents' salaries? No one will believe this except the shiftless, slipshod bee-keeper who waits until the last minute before he orders his goods. If you are one of that kind of bee-keepers, get out of the rut at once as it is one of the most expensive ways of doing business.

In conclusion, I will say that the W. T. Falconer Manfg. Co., and no other, is entitled to credit for these reduced

### SHALL WE FEED SUGAR ?

L. E. Gateley.

SINCE THE beginning of the present wave of popular agitation a great deal has been said in favor of discontinuing, under all circumstances, the use of sugar for the purpose of feeding to bees. I protest against such teaching, for sugar, if rightly used, is a safe and perfect bee food.

If, in the autumn the brood chamber should be stuffed to its utmost capacity



APIARY OF SENOR JUAN LANDETA. (See Editorial columns.)

prices on supplies. Now let us show them in a substantial way that we are worthy of their kindness.

GEORGE B. HOWE,

Sec. Jeff. Co. Bee-Keepers' Assn.  
Black River, N. Y.

Little Miss Bee she swung in a tree  
Sipping the nectar so sweet

When along came a swallow

And the moral doth follow :

Don't be a bee on a tree when you eat.

with sugar syrup, there might be a chance of some of it remaining into the ensuing summer and causing trouble. As it is hardly probable, however, that any bee manager would be so injudicious as to feed in that manner the danger is entirely eliminated. When the proper amount of food is given to carry the bees through in the best condition, what may remain of winter stores will be consumed for brood rearing long before the time when surplus room should be given. A suffi-



cient amount only in spring feeding, is given to meet the demands of the bees from one day to the next; in fact, it would be harmful to stuff the brood combs at this time. The only time harm could attend the practice would be while the bees are actually at work in the sections and feeding is then unnecessary.

With the price of sugar and honey very nearly on a level, not taking account of the sugar lost in getting it into the sections or the time and labor put into the operation, it is safe to say that there are few persons in this county financially able to carry on to any protracted length the production of sugar honey on a commercial basis. Were they, the article would come under the ban of our pure food law.

Where it is more convenient to use sugar for either winter or stimulative feeding, use it by all means; but it will be found quite if not just as expensive as honey. If the latter is on hand it will be more profitable to use it.

Fort Smith, Ark.

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### WHY MISREPRESENT?

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J. E. Johnson.

ON PAGE 58 of THE BEE-KEEPER for March A. C. Miller seeks to defend his antagonistic position, by directing ungentlemanly remarks against the League.

He begins first by condemning the 24-page pamphlet issued by the League, on the "Wiley Lie," and tries to defend Wiley's statement by bringing forth the overwhelming evidence that one man told him that in the seventies of the last century he had bought artificial comb honey.

In the first place, the League did not issue the pamphlet referred to at all, and the mere statement that one man told him that thirty or forty years ago he had bought comb honey, does not warrant such assertions.

I have heard many honest, intelligent

men say that comb honey is being made in large quantities by machinery, but this is not true. Nevertheless, Mr. Miller is now defending Mr. Wiley, against the interests of the bee-keepers, which is not in accordance with the former views of the editor of this paper.

I also notice editorials antagonizing the National Bee-Keepers' Association and its officers, on the following page. This association is a bee-keepers' organization, and is doing much good; but, perhaps, there are not enough offices to go around; hence the officers chosen by the people become subject to criticism, but such sarcastic reflections react to the detriment of the would-be critic, rather than injure his victims.

I believe the readers of this paper will agree with me that it is entirely wrong to try to tear down bee-keepers' organizations. If in your opinion they are not as they should be, why not suggest means for improvement. It requires the help of many to make any organization perfect, but no special skill is required to tear down. That is generally the work of the unskillful.

Williamsfield, Ill.

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### Did You?

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When you're talking 'bout your neighbors

And the foolish things they do,  
Did you ever think that someone else  
May be criticising you?

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### Not a Honey Producers Organization

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We notice that one of our contemporaries continues to advertise the Honey Producers League. We would call the attention of our readers, particularly the newer ones, to the fact that this body is not composed of Honey Producers and is distinct from and should not be confused with the wide spread movement now under way among bona fide honey producers.

## Bee-Keeping in California.

### Ten Years Record of One Boy in the Golden State.

L. L. ANDREWS.

ON PAGE 202 of the October AMERICAN BEE-KEEPER is a picture which, when only taken at a glance, one might think, was the contents of a "Child's Noah's Ark," or other toy fancier's collection.

Did you ever stop to think how true that might be of a picture, taken of all the fixtures, "fixin's" and appliances that the average bee-keeper will make or buy, try, and cast aside, in the first ten or twelve years of his bee-keeping experiences? And, finally, as Dr. Miller says, "go in for the most money" with the least amount of fussing, and let those with more time try those new things forever being cast on the fraternity. Ten years ago I came to Southern California from Oregon, and having considerable leisure time at my disposal, devoted some weeks to bee-hunting, and from the caves and trees managed to secure enough for 24 good colonies. These, together with their increase and others bought from time to time are now in four apiaries numbering over four hundred, which, with some city property and an alfalfa ranch on Magnolia avenue, are all directly or indirectly the result of the bees; showing what can be done with these little fellows, by giving them the attention they deserve.

While I consider this a good showing, considering the fact that in that time we have had, here in California, but two full crops of honey; two half crops, one one-third crop, and five failures—a record unprecedented for poor seasons.

I think, with an average series of prosperous seasons, such as we might expect, taking the rainfall reports of years past as a criterion, this record could be very materially improved on.

Of course, to make it a financial success and be able to lay by a little for a rainy day, one must keep an eye on the bees through the dry years and those months when there is no surplus coming in, seeing that they are well housed, covers tight, no skunks eating up the weak colonies, and that those very light have occasionally a comb from their more prosperous neighbor; all probably requiring only a day once in a fortnight or even once in a month, but nevertheless a prime necessity to the life and continuance of the apiary and laying the foundation for a good honey crop when a season for nectar does arrive.

Nature will surely, sooner or later, provide a harvest, but the man behind the gun must provide the gathers, and he that cared for his bees through the dry years and winter months will surely reap the reward. And the balance of his time should be turned to other pursuits such as all men, suitable for successful apiarists, are able to turn a hand to.

Turning to the heading of this article, I find in looking over those "Ten years of bee-keeping," there are many things tried and turned aside, and I have come to the conclusion that, for my business, for a purely profit-rendering proposition, devoting as I do my undivided attention to the business, during the honey season, and only occasionally a day otherwise, that the ten-frame Langstroth hive, two stories, fitted for extracting, top stories left on until late in the winter, if season is unfavorable, and not taken off at all if season looks prosperous, with full outfit at each apiary, is the most satisfactory to me.

Last season I harvested twenty-four

tons extracted and two thousand pounds of comb, with the help of one man three months. This does not include help of wife and family, as in many cases I find on investigating, is a big help toward cutting down expenses. Also about 700 pounds of beeswax not counted in the crop, as I usually consider the wax will pay for all new hives and foundation, and the increase at a fair valuation much more than pay running expenses, leaving the honey as clear gain.

Corona, Calif.

### PLEASED WITH THEIR ORGANIZATION.

Cincinnati, April 6, 1906.

Editor AMERICAN BEE-KEEPER:

This association has made every effort since the new legislature met, to make the Ohio foul-brood law mandatory, which finally ended in grand success, due to the hard work of the committee on law, of this society, consisting of Mr. John H. Kroeger, Mr. John Sommers, Mr. John Hoffmann, Jr., Mr. J. G. Creighton and Mr. C. H. W. Weber, all practical bee-keepers of Hamilton county.

The Hon. Thomas Hunt, senator of Hamilton county, presented the bill in the senate, and it is due to this gentleman, who took a deep interest in its passage, that it passed the house of representatives.

Mr. Henry T. Hunt, a brother of the senator, and Mr. Eugene Adler, both representatives of Hamilton county, in conjunction with their colleagues, deserve all credit this association can give them, for their moral support.

Attorney G. R. Werner, an honorable member of this association, to whom every respect is due, revised the bill in its present form, and bent every effort to call the attention of the Ohio law makers to the necessity of its passage. This gentleman, though no practical bee-keeper, takes a deep interest in everything pertaining to the

welfare of the honey-bee. In fact, the day may come when he will find sufficient time to spare from his legal duties to keep several hives of our little honey gatherers to make a thorough study of the wonderful doings of Nature. This is the opinion of his well wishers.

Now that the law is passed by both houses, this society being a state bee-keepers' association, urge every county in our great state of Ohio to organize bee-keepers' societies, for the promotion of fraternity among all men and women who keep bees.

The Ohio foul-brood law does not pertain only to this dreaded disease, but to other diseases of the honeybee also. Further, it provides for the appointment of an inspector of these diseases in every county where bees are kept, whose duty it is to see that all bees are kept in movable comb hives, which is a great stride toward the improvement of the honeybee in every particular.

Wishing all bee-keepers success, and hoping that the next season will bring to each and everyone a bountiful honey harvest, we remain, Yours truly,  
THE SOUTHWESTERN OHIO AND HAMILTON COUNTY BEE-KEEPERS' ASS'N.

HENRY REDDERT, Secretary.

### MEETING OF CONNECTICUT BEE-KEEPERS' ASSOCIATION.

The Spring Meeting of the Connecticut Bee-Keepers' Association was held at Hartford, April 11, from 10:30 to 3:30. The time was mostly taken in discussion of problems brought out in the question-box. The most important facts and suggestions made were as follows:

Though a majority of the members have been using the Parker foundation fastener, nearly all were captivated by a hot-plate fastener shown by E. H. Dewey, of Great Barrington, Mass. This fastener does most neat and thorough work with a minimum of melted wax.

No one offered a best way to prevent swarming, though such helpful suggestions were made as furnish good ventilation, plenty of room, and above all get the bees early interested in putting honey in the sections. It was agreed that colonies which get the brood-chamber cleared of honey at the opening of the honey-flow rarely swarm.

Mr. Rexford of Winsted showed a swarm-catching device or self-hiver,

were other enthusiasts, however, who believed that plenty of honey in the brood-chamber was a good thing at all seasons.

As to "best way to increase," natural swarming and driven swarming received the most attention.

Second swarms should be treated in the same manner as will be hereafter described of first swarms.

All members but one reported good



FOUR GENERATIONS OF THE TIPPER FAMILY. (See Editorial columns.)

which was not unlike in principle one written up by Alley a few years ago.

Large hives were most in favor, though strong argument was brought out for a brood-nest which should be no larger than the queen could occupy. For, it was argued, if there were sealed honey in the outer frames, or near the top-bars, the bees would increase the sealed honey in the brood-nest at the expense of the section honey. There

wintering. That one said that his bees had suffered from depredations of malicious persons.

Sections after removal are well kept in shoe-cases or other thin-walled boxes. Should not be closely packed in case, but left an inch apart to allow of circulation of air and freedom from wax-worms. Cases should be kept in warm dry room, well covered from dust.

The divisible brood-chamber found no

supporters among the members of this association.

To the question, "How manage the old colony after the first swarm leaves?" the best answer seemed as follows: Set the old colony one side. Hive swarm on old stand in temporary hive. Leave both 48 hours. Replace old colony on its stand, and drive swarm into same. Bees will cut down cells, and will go to work with renewed energy. Rev. D. D. Marsh stated that this plan never had failed with him.

L. C. Root said that he at one time successfully ripened extracted honey by letting it dribble along a board over a tortuous path, the board being set in a good circulation of drying air. He thought the ease of extracting unsealed honey made up for the labor of ripening the honey, to say nothing of time saved to the bees.

The association passed important resolutions relative to the present high

prices ruling for bee-supplies, and showed a determination to cease buying their supplies, from members of the "combine," and to buy from such sources as offered reasonable prices. This determination was that strong that a committee was appointed to look after the matter, and to take steps to form a stock company for the manufacture of bee-supplies if the present prices continued.

Officers chosen for the ensuing year were Allen Latham, Norwich, president; Rev. D. D. Marsh, West Hartford, vice-president; J. Arthur Smith, Box 38, Hartford, secretary and treasurer; J. C. Barton, Hartford; George W. Smith, Hartford; S. J. Griffin, Bridgeport, executive committee; the president, secretary and H. W. Coley, Westport, committee on supplies.

The meeting was said by several to have been the most enthusiastic on record, and the large attendance was most encouraging.

## Early Spring Swarming.

### An Interesting Account of California Management.

C. W. DAYTON.

**I**N THE SPRING I keep right straight ahead, building the colonies up as strong as possible, without turning aside to clip queens, tear down cells or shake swarms. Of course, where one colony is weak and has a good queen and another is so strong as to be in advance of the season I sometimes exchange combs of brood, but where the colonies go into winter with young, vigorous queens there is seldom much of this to do. Yet there is considerable attention required to get all the combs solidly filled with brood. Overabundance of stores of honey in the brood nest, a solid comb of pollen, or an old or moldy comb which the bees are tearing away may be in such position as to retard the depositing of eggs by the queen.

The first swarm which issues is hailed with gratitude, and with many colonies of near equal strength there will be more soon to follow. How to treat these swarms and the old colonies from which the swarms issue accounts for a large share of our success. The requisite amount of surplus receptacles and clustering space should be on the hives and the swarms should be placed back where they came from. If the swarm issues, 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 they have been

in this box 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 five or six hours, I raise one edge of the screen slightly to allow the bees to get out slowly and return to the 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 what we want. If the old queen is returned with them they will sulk and swarm again, and the queen would not lay enough eggs to amount to anything if preserved.

Seven days later the issue 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 wanting also. 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 first swarms having old laying queens issue and both kinds cluster together it facilitates the work, as the bees will immediately ball all strange queens. And all queens will be strange. The queens can be easily picked out of the balls and caged or destroyed. While we will have a somewhat merry time considerable of the day, we can devote the time quite steadily to other work, as it requires only an hour or so to take care of ten to 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 substituted in place of the screen to retain any remaining queen should there be one

which I did not find by search. The bees usually 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 issues, and while the bees are clustering, I go to the hive and destroy every queen cell. Four or five days without a queen, or any larvæ with which to rear one, divests them of all desire to swarm. Then introduce a young laying queen or insert a ripe queen cell, and they are in condition to proceed to the end of the harvest.

Extra hives and supers are not needed. All old colonies; all full of bees, and all at work in the supers all the time, except for a few hours, and that few hours of idleness a real advantage. There are eleven days during which the swarmed colonies must remain queenless. There can be no system but that the queen must slacken the speed of egg-laying for several days. If the colonies are caused to rear an equivalent of eight well filled combs of brood before swarming the fertility of the queen is so much exhausted that she is of little account for the rest of the season. Hived with a swarm she is only able to maintain a colony sufficient to utilize a brood chamber. True, work progresses swiftly when the swarm is first hived, but that is the energy of the bees, not of the queen. The work of the bees is of more account in the hive from which they came than anywhere else. The advancement becomes less and less as the old bees of the swarm die of old age. Some old queens when first hived will get up a considerable amount of brood, but that is what I choose to call a dying effort; later there will be less brood and the colony will hardly be worth wintering. We might as well try to get a good second crop of peas on old vines, or make hens lay eggs in August, as try to get a profitable quality with a queen which has once reached the height of her lay-

ing capacity. If she does much after hiving it is nearly always because her laying was restricted before swarming.

If the honey harvest lasts two months or more, or comes late, as in the buckwheat localities of New York, it may give time to increase the colonies and get all in shape for the harvest. But even in such locations it will require but a short time until the number of colonies will reach the extreme limit the locations will support.

When increase by natural swarming is desired, queens of first swarms are caged and the cage left with the confined bees, but the queen excluder is put on in place of the screen as previously. If the queen still retains a good measure of laying ability the bees will stay, but if the queen is not of much account nearly all the bees will return to the old hive. Such swarms are not worthy of 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 a

trick by coming out and going to the woods.

My retaining screens are adaptable to any screens in the apiary.

That the lower story may be entirely occupied with brood, a half-depth story is used over the brood chamber which contains the winter store 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.

Instead of watching for swarms by eyesight I depend upon hearing nearly all the time, using homemade amplifying horns, which increases the ordinary hum of bees into the roar of a railway train at a distance of 40 rods. Swarming is distinguished by the pitch rather than by the volume of sound. Out of sight and hearing of the apiary a cheaply constructed telephone line is necessary, with horns arranged at the outlying points of the apiary.

Near the center of the apiary I have a bee house, into which I accumulate all kinds of work, which can be done while I am needed there to watch for swarms.

Chatsworth, Calif.

## Worcester County Association

### Bee-Keepers of Massachusetts Will Hold Three Days Free Exhibition Next Fall.

**T**HE WORCESTER County (Mass.) Bee-Keepers' Association have arranged for a three days exhibition of bees, their products and bee furniture, to be held in Horticultural Hall, Front street, Worcester, Mass., next fall. The exhibition will be held three days, either in the last week in September or in the first week of October. The exact date will soon be published.

#### CONDITIONS OF EXHIBITION.

1. The exhibition is strictly free to all. There are no entry fees. There

are no charges for space. The exhibition is free to the public.

2. The purpose of the exhibition is three-fold: To bring together for competition and display the products of bee-keepers. To bring together for display the products of manufacturers, publishers and tradesmen. To educate and instruct the public.

3. Limit of competition.—Competition is limited to exhibitions called for under numbers 1 to 24 of the schedule below. A first, second and third prize

(consisting of a ribbon) will be granted in each scheduled exhibition. A series of special prizes are being arranged for and details will soon be published. An "award of merit" will be granted all worthy displays by manufacturers, publishers, tradesmen and others whose exhibit is not provided for by numbers 1 to 14 of the schedule.

4. The hall is central, large, well lighted, and fully equipped with tables, covers, dishes, elevator, etc. (For special conveniences communicate with the committee in charge of arrangements.

#### SCHEDULE OF CALLS.

Honey.—In numbers 1 to 5 competition is restricted to residents of Massachusetts. Others may display their products and worthy displays will be awarded diplomas. In all cases the product must be that of the exhibitor.

1. For the best five pounds of comb-honey in section boxes.

2. For the best crate of comb-honey packed for market. Neatness of package will be considered.

3. For the best two frames of comb-honey for extracting. Weight, color, quality, as well as general appearance will govern.

4. For the best display of chunk honey.

5. For the best display of comb-honey in general. This is open to the taste and discretion of the exhibitor.

6. Extracted (or strained) honey.—For the best five pounds of extracted honey in glass. Color, quality and general neatness will govern.

7. For the most attractive display of extracted honey.

8. Vinegar.—For the best display of vinegar, made from honey. Sharpness and clearness will govern.

9. Beeswax.—For the best pound of beeswax. Softness and color will govern.

10. For the best display of beeswax.

Bees.—All bees must have been raised by the exhibitor. If syrup feeding

must be done while upon exhibition, it must be done at night or concealed within the structure of the hive. This is imperative in order to avoid giving the public any chance to believe that bees are artificially fed. Nos. 11 to 15 are to appear in single frame nuclei. Each nucleus must contain a queen. Nos. 15 to 17 may be shown as the exhibitor desires.

11. For the best Italians.

12. For the best black or German bees.

13. For the best Carniolian bees.

14. Varieties not scheduled.

15. For the best display of bees.

16. For the best display of queen bees, ready for shipment, etc.

17. For the best display of a queen rearing outfit, showing cells in different stages of development.

18. General display.—For the best display of bees, honey, wax, bee furniture, etc. The exhibitor is given full freedom to display whatever in apiculture he desires. Products and bees must be of his own raising. (Please make written communication to the committee chairman in order that full space may be reserved.)

19. Cookery. — For the best cake made by the use of honey. Recipe attached.

20. For the best cookies made by the use of honey. Recipe attached.

21. For the best display of cake, cookies and confectionery made by the use of honey.

22. Photography.—For the best photograph of a swarm of bees.

23. For the best photograph of a New England apiary.

Displays not scheduled above are solicited. Meritorious exhibits will be awarded a diploma. Manufacturers, publishers and tradesmen are urged to make displays. Free space will be allotted to each applicant. Points of merit are neatness, instructiveness of display, perfection of workmanship, as well as the general effectiveness of the



display. Worthy displays will be granted an "award of merit."

Please communicate with the committee on arrangements as soon as possible. The following is the committee and their respective addresses:

F. H. Drake, East Brookfield, Mass.

C. R. Russell, Locust ave., Worcester, Mass.

William Jacobs, Hudson, Mass.

Alvin H. Hixson, secretary, Horticultural Hall, Worcester, Mass.

BURTON N. GATES, Chairman.

10 Charlotte St., Worcester, Mass.



FRANCE

NAPHTHALINE.

Mr. Montjovet says that a ball of naphthaline put in the smoker with the ordinary fuel will subdue the most ferocious bees, even the Punic. — La Revue Eclectique.

(While the thought is occurring to me, I might say that if I am not mistaken Mr. Hewitt has been shipping only virgin queens, that is in the majority of cases: so the so called Punic that have come under observation, are such hybrids as might be produced by whatever drones the queens may have mated with. This may account for the result obtained. — A. G.)

QUEEN OR MOTHER.

A correspondent of the Apiculture somewhat inclined toward the hair-splitting business wants to know why the "queen is" called "a" queen and also asks whether she is really the mother in the hive. To give more weight (?) to his argument he says that we certainly consider the hen that sits on the eggs and takes care of the chicks their mother, though each egg may be from a different hen. How the argument would hold in case of a hen hatching a lot of ducklings seemed to have escaped his attention altogether. — L'Apiculteur.

BRAZIL.

STINGLESS BEE.

Mr. Blondet a French apiarist living now in Brazil, gives a description of the stingless bees of that country.

The Melipones and Trigones all live in tropical countries. A large number of the different kinds are found in Brazil. About fifty have been studied and described but there must be considerable more. The largest species are of the size of the common bee or a little larger, the smallest only the size of a small gnat.

All are stingless but on the other hand, their mandibles are not only a tool to perform their work, but also a powerful weapon. An apiary established near a peice of woodland where some kinds of Trigones were very numerous was completely destroyed by them. Some years ago, two of Mr. Blondet's colonies were destroyed by some of the Trigones that he had in his apiary.

The Melipones build their nests in hollow trees and in the crevices of rocky places. A few species build under ground. Some have been found occupying the same nest with white ants. Some Trigones construct their nests in the open air and "cover" them with "vegetable scraps glued together

with some matter secreted by themselves.

The Melipone's nests are not like those of the bees, but rather like a wasp nest turned upsidedown. The combs are placed horizontally, and have only one row of cells opening above. The combs are placed one above the other with short columns or pillars between them. The whole is surrounded by walls built in a very complicated way making the access to the nest quite difficult, something like the passages to an ant-nest in a rotten piece of wood. The honey combs, or rather honey cells, are in the shape of an urn or acorn; their size depends on the kind of Melipone or Trigone that built them. Or rather their size. Those of the Melipone scutellaire are as large as a pigeon's egg. Those of the kind called by the Brazilians, "Jatay Mosquito", are only of the size of a pea.

These cells are attached outside of the brood-nest, close together, some are filled with honey, some with pollen. They are carefully capped as soon as they are full. When the honey flow becomes insufficient, one is opened and used. Then another; there is never more than one opened at a time. Only a small opening is made.

Nearly all the different kinds of Melipones and Trigones are peaceable. Among those gathered by Mr. Blondet only two are dangerous. One called in Brazil "Abelha-cachorro", attacks the imprudents who go too close, by getting in the hair, the beard, the ears or the eyes making a considerable buzzing biting and emitting a strong odor. There is nothing to do but retreat otherwise the whole colony would take part in the proceedings.

The other kind, called there, "Abelha caga fogo", is far more dangerous. Like the others they aim to get in the hair, inside the clothing everywhere and bite unmercifully and unremittingly. The odor they emit is so strong and nauseating that there is danger of

fainting. Their saliva is quite poisonous, and every bite leaves a very painful mark which lasts as much as two months.

None of the different kinds can stand the cold. They do not know how to bunch themselves together to keep warm.

Mr. Blondet has in his apiary three colonies of stingless bees. Like the ordinary bees, they stop up all the cracks, but while the common bees rarely change the entrance, these do. The first hive occupied by one of the Trigone kinds has constructed a sort of channel about 5 inches long by  $1\frac{1}{2}$  in width. About 30 bees remain in this passage to keep guard. In case of an attack they close the channel entirely keeping up the building behind as fast as the assailants demolish it in front. The material used contains a large proportion of wax.

The second hive is inhabited by a colony of Melipone. The entrance is closed by a block of clay with an opening just big enough to let in only a single bee at a time. A single bee guards the entrance and moves aside to let in the coming bees. Their flight is exceedingly rapid and they get right straight in the opening. As quick as lightning the guard dodges and comes back when the field bee is in or out.

The third hive is occupied by a colony of Trigone flaveola. Their entrance is like a split or vertical crack made into a kind of wall built with something like propolis. A guard inspects carefully the incoming bees.

Other kinds have the entrance in the shape of a funnel. One kind, the Meliponr genicutela closes the entrance every night with a thin wall of wax.—L'Apiculteur.

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#### SLUMGUM.

What we call here, the slumgum, or the residue left after the wax has been extracted from the combs, is bought by several firms in France and Germany.

Their process is to macerate the slumgum in spirits of turpentine, leave it until all the wax is dissolved. Then a distillation of the turpentine leaves the wax in the alambic and the turpentine is recovered in the upper part of the apparatus. —L'Apiculteur.

#### AN ALCOHOLIC TEST.

In some parts of the Balkan mountains a curious custom exists. When a young man wishes to marry, he is requested to stand a certain length of time, his mouth open, before the hives. If he is not stung it is all right; if he is it is believed that the smell of beer or whiskey from his open mouth has angered the bees. —L'Apiculteur.

#### AUSTRIA.

##### FLOW OF BUG JUICE

Bassler of Trag, in speaking of the remarkable honey season of 1904, says in Seipz. Bztg., that nearly all the trees produced quantities of honey; spruce, pine and beech furnished his bees honey from four to nine in the forenoon and the same in the afternoon every day for a long period, so that he had to extract the combs from his best colonies eleven times. This honey was nearly black and unfit for the bees as winter food. It had to be taken out of the hives and sugar syrup fed in its place. This kind of honey is stored by his bees every year more or less and he has made it an unfailling practice to winter on sugar syrup. Tests made with the black honey always had proven fatal with him. His 23-year practice of wintering his bees on sugar had not produced any deterioration of the bee as far as one could discover; he therefore should continue sugar feeding.

##### GLASS PACKAGE FOR HONEY.

The Central-Verein for Bohemia is about to adopt a special package for extracted honey for the use of the members. Manufacturers are making

special low prices on this glass package providing the members will agree to use no other. Three sizes are proposed holding approximately one-half, one and two pounds. The glass jar is convenient for removing the honey. The two-pound jar has a height of about four inches; the one-pound, a height of three and one-half and the smallest three inches. These jars are about as broad as they are high, and the opening is the full size of the jar. The glass cover is made to fit snugly by a circular piece of parchment paper which is crowded in, I suppose, between cover and jar, the former overlapping the latter and making a perfectly smooth joint over which a strip of paper with the producer's name is securely glued, thus being a guarantee that the package has not been tampered with.

##### CORK HIVES.

Prof. Wallisch speaks in glowing terms of Cork as material for bee hives in "Deutsche Imker." He says cork is produced in Algeria, Spain, Portugal, France and Austria. It is the bark of the cork oak and regularly stripped off from the trees as often as it forms anew. Its porosity and resisting power against moisture and its being a poor conductor of heat fits it admirably for the purpose. G. Kotschwar, in Reichenberg has succeeded in constructing a good, servicable hive of this material and is offering same for sale. Price is not mentioned.

##### GERMAN APICULTURE.

According to the census of 1900 Germany had 2,605,350 colonies of bees, or about 4 1-2 to every 100 inhabitants. A little more than half of them were in frame hives. In certain localities apiculture is flourishing more than in others. In Oldenburg and Mecklenburg there are about eleven colonies kept to every 100 inhabitants: in Sachsen less than two, in the districts of Hamburg and Bremen only 2-10 and 3-10 respectively.

T H E  
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**DISCONTINUANCES.**

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

**SUBSCRIPTION RECEIPTS.**

We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered. The date printed upon the wrapper label of your paper indicates the time to which you have paid. Our subscribers will confer a favor by observing the date, as noted, and promptly renewing or requesting the paper discontinued at expiration of time paid for, as may be desired.

If the efforts to have congress remove the tax on alcohol, when the same is "denaturated" or made undrinkable, are successful, bee-keepers with others, will be greatly benefitted, for, by furnishing a cheap and excellent fuel, it will enable them to have "motors" where hand or horse power is now used.

**Preaching vs. Practice.**

Among the misinformation and mal-advice furnished bee-keepers by some of their pseudo friends has been the strenuous advocacy of the need of "first quality" stock for the making of supplies. The persons who have most persistently so taught have as steadily used such presumed need as an excuse for advancing prices, but they have not been to so much pains to use "first quality" stock. This may have been due to a desire for larger profits, or from a misconception of what "first quality" pine really is. For charity's sake we will call it lack of knowledge of what constitutes "first quality."

The writer has some seventy-five hives made of the so-called "first quality" stock. These have been in use for five years, and, notwithstanding the fact that they have been kept well painted, hardly one of the lot is now sound, and most of them are full of splits and cracks, technically called "shakes." The price paid was for the best, but the quality furnished was along somewhere in the fifth grade, or worse. And this is not an exceptional case. No wonder the masses are rising in self-defense. At the same time their action will benefit those manufacturers who have been furnishing really first quality stock and workmanship.

**Organizations**

Mr. Aiken writing in the "Rural Bee-Keeper" for February on "Organized Effort," deplores the multiplicity of organizations, arguing for fewer and stronger ones. If he means fewer bodies of national scope we can heartily endorse him but if he means fewer bee-keepers' societies of local influence then we disagree. We say multiply the local societies and let delegates from these form the larger societies as is now done in the state of New York. In such union there would be strength which would be so placed that an interested few could not successfully meddle.

### The March of Progress.

A short time ago one of the American bee papers noted the fact that no special subject seemed to be attracting particular attention from the press, and that apiarian matters were running along very smoothly—something on the plan of thick honey through a small funnel. That is to say slow—monotonously slow.

The year 1906 witnesses a very different state of affairs. There is a distinctly audible rattle among the dry bones of beedom. Energetic champions of the cause of apiculture have abandoned the circular, muddy course that bee-keepers have been traveling around and around for twenty-five years and which leads nowhere, and are blazing a new trail through the jungles of Blarney and blind submission to the open fields of the modern, progressive business world. Their object is to lift the apiarian industry from the slough of sophisism, in which it had been all too long mired, and put it abreast with the marching ranks of modern enterprise, where a fair reward in financial returns and a merited dignity accrue to its progressive pursuers.

Reflecting upon the history of all reforms that have come to bless the world, it is not particularly remarkable that these progressive workers in beedom's cause should meet with determined opposition. Much of the opposition, however, comes not from enemies of the industry, but from well-meaning friends, from whose eyes the scales of unthinking submission have not yet fallen. In every act not perfectly in accord with their cherished and adored A B C book, they recognize the intent of a traitor. If one becomes so bold as to say that which has not been said before, he is, to the old-school bee-keeper, a "Smart Aleck." He must chant the same old chant with proscribed accent of reverence for the old instructors, or he is denounced as a willful, wayward sacrilegist.

Even though those who are working with us for the betterment of our pursuit should proceed in a manner somewhat different to our own notions of the better way; even though they think contrary to ourselves, and say and do things not according to our own way of thinking and doing, does the reader believe it wise to denounce them as enemies of the cause, and as wilful destroyers of the industry?

This office has recently received a number of letters from a gentleman in the West who is a devoted worker in the apiarian vineyard. He is evidently sincere in his efforts to do that which is for the welfare of American apiculture, but he is evidently wedded to the established order of things, and mistakes progression for antagonism. He asserts that THE AMERICAN BEE-KEEPER is opposing the interests of the pursuit which is its excuse for existence and to which its life work is pledged. He says we are tearing down the work that it has taken years to build, and are working untold injury to our patrons. His letters indicate that in his mind Mr. A. C. Miller is of the Faust type, with horns, cloven hoofs and flaming spear, stalking up and down through the land with no other object than that of overthrowing the bee-keeping industry of the United States. He laments the attitude of this journal deeply, and foresees dire calamity for its promoters. He has severed his connection and all business dealings with one so avowedly opposed to his interests as THE BEE-KEEPER.

The writer has never had the pleasure of meeting Mr. Miller, but for many years he has recognized in him the very elements of which our industry has stood sadly in need—the elements of a reformer; a progressive, studious, powerful mind, with the independence and courage that must assert itself before the bee-keepers of America will be permitted to reap the reward which is theirs by moral right. Every reformer must pass through the unpleasant stage

to which Mr. Miller is now subject, at the hands of a few. We are, however, gratified to note that his work is bearing fruit, and the senior editor contemplates with no small degree of satisfaction his good fortune in having elicited the interest and able assistance of this earnest worker. Hundreds of letters from our readers everywhere attest the general appreciation with which his work is received.

Let us not oppose those who so willingly assume the burdens. Give them encouragement and speed the day when the producers' interests shall stand first in all our apiarian organizations. If the supply manufacturers desire to organize for their own interests, let them do so under true colors, and not seek to effect the same end indirectly through the organizations of the producers. Stick to the bee-keepers' champions, everywhere.

#### **Senor Juan Landeta Drowned.**

We are advised that the body of Senor Juan Landeta, of Matanzas, Cuba, was recently found floating in the bay near that city. Mr. Landeta had left home in the morning to visit his farm, and the cause of his drowning is a mystery.

Mr. Landeta was one of the most extensive bee-keepers in the world, as at one time he owned at least a part interest in about eight thousand colonies of bees. He was a friend of THE AMERICAN BEE-KEEPER, and frequently took occasion to inform us as to interesting phrases of Cuban apiculture.

In this number we show a picture of one of the many apiaries in which Mr. Landeta was interested, consisting of 400 colonies and located at Guanabana, nine miles from Matanzas, and owned by the Landeta & Woodward Company. This particular apiary has for some time been under the management of Mr. E. M. Storer, an old bee-keeper from Florida and Jamaica; and, though at times badly affected with foul brood, has been very successful.

#### **Honey Producers Getting in Line.**

Beginning with the honey producers of the state of New York, and rapidly spreading, is a new form of cooperation which is proving effective, simple, and fairly free from friction. It bids fair to be of immense value to the honey producers of the whole country, both by lessening the cost of supplies and by eliminating the self-appointed dictators who have so long been manipulating things apicultural for their own advantage and to the honey producers' cost.

The history of the movement is, briefly, this: The steady and long continued advancing prices of supplies and the decreasing price of honey has slowly made matters for the honey producers less and less endurable. Unions and associations of national scope have wrestled with the subject, but failed to bring relief, and the reason thereof only became generally visible when the National convention of two years ago tried to start a honey producers exchange. The failure of certain interests to get control of the Committee on Formation and the subsequent organization of the League by said interests is now a matter of common knowledge. The exposure of these resulted in the honey producers of the state of New York withdrawing from the National organization and urging others to do the same, with the end in view of the formation of a national association of honey producers, to membership in which no manufacturer of or dealer in supplies, or publisher or editor of a bee paper or their agents or employees should be eligible.

Fully realizing the difficulties of establishing and running a plant for the manufacture of supplies and a special bureau of information, they selected a firm of supply manufacturers in whose goods and methods they had full confidence, and arranged with them to supply their members with needed goods at special discounts. In lieu of a special information bureau they selected an in

dependent paper (THE AMERICAN BEE-KEEPER) as their official organ and formally indorsed it. So far as we can learn this action has met with the hearty approval of all honey producers to whom it has been submitted, and the societies of Pennsylvania and Connecticut have already followed the lead of New York. The movement has also been endorsed by the Rhode Island Society.

Naturally, the movement has been opposed by dealers not fortunate enough to have been favored by the honey producers. At the Pennsylvania meeting every possible effort was made by certain manufacturers and their agents to prevent that society following the action of New York; they even going to the extent of trying to have barred from the floor the most active member of the Pennsylvania society who was working for the honey producers, basing their opposition on the ground that the said member was a resident of New York. Their efforts failed. We are informed that some of the manufacturers and dealers and their friends have expressed surprise that they have not been favored by the honey producers after all they have done—or think they have done—for them. By way of enlightenment, and speaking for at least some of the persons who are behind the independent movement, we may say that their actions in connection with the League were one reason, that the steady pushing up of prices without any corresponding advantage to the users was another, and the persistent and extensive urging of persons to enter the bee-keeping industry was still another.

It may not be generally known that many thousands of dollars are expended in the public press to induce persons to enter into bee-keeping. The "ads" read like this, "Get The Bee Fever," "Money in Bees," etc., and inquiries are followed up with expensive catalogues and booklets. Yet the persons

who thus try to swell the ranks of bee-keepers, increasing honey producers and lessening honey purchasers, feel aggrieved because the honey producers do not accept with fervor the protestations of friendship for them.

These same persons, whose business practices are so opposed to the best interests of the honey producer, are taking pains to have their associates or agents become members of the local societies scattered over the country. It is hardly necessary to ask why, and it is but little more necessary to warn the honey producers to have an eye on these people. It may even be wise to reorganize the local societies and make all supply manufacturers and dealers, all editors and publishers and their employees and agents ineligible to membership in such societies. It is a fight for existence and the honey producers, by virtue of their greater numbers and larger interests must, of necessity and of right, take and maintain absolute control of their own affairs.

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#### Exonerated.

In the AMERICAN BEE-KEEPER for March, reference was made to a pamphlet which was a compilation of much of the unpleasant and discreditable matter that has appeared in the bee press in times past, relating to stories about artificial comb honey. This pamphlet we credited to the "League." Dr. Miller and Mr. Hutchinson hastened to inform us that that body was in no way responsible for it. As the pamphlet carried as a sort of title page, the Constitution and By-Laws of the League together with a subscription blank for membership, the natural and logical deduction was that the said League issued it. On subsequent inspection we find that the leaf bearing the Constitution etc., is not bound into the book but is only securely tucked into it. We are glad to make this correction and exonerate the gentlemen connected with the League. At the same time, it may

be pertinent to ask why, knowing such a compilation was made and its publication being considered, they made no effort to stop it or to enlighten the public as to its origin or purpose?

**The Whole Truth, Nothing but the Truth, etc.**

Some of our esteemed readers look askance at our frank statements of the facts connected with the history of artificial comb, saying that we are undoing all the work of some of our contemporaries for the past twenty years. Stated differently they blame us because they have accepted as facts, untruths or half truths and fear that a general knowledge of the whole truth, because it is contrary to their previously accepted doctrine, will prove harmful to the honey producers.

It has been taught that the manufacture of artificial comb was an impossibility and that Dr. Wiley's statements regarding it were without foundation. Now it is found that Dr. Wiley was right and the teachings were wrong. Such facts cannot be hidden and if the bee press does not publish them it will find itself in an awkward and absurd position when the public press does publish the facts, as it is bound to do sooner or later. The existence of artificial comb and the possibility of its being filled and sealed are facts beyond controversion. These facts were publicly known before we published them and sooner or later will be widely known despite any desire or effort of bee-keepers to the contrary. Such being the case we contend that it is only the part of wisdom for bee-keepers to acknowledge the facts and find and adopt efficient means to prevent harm therefrom. Denying the existence of artificial comb and railing at Dr. Wiley has never done any good, for the public still believe that artificial comb honey is made and is still on the market. That line of procedure has surely had time enough to prove its

folly and uselessness and the sooner we drop it the better.

Tell the people the truth, the whole truth and nothing but the truth. Artificial comb honey has been made and can be made, but it cannot be made to pay. We have seen that line of argument used and it convinces the purchasing public.

**An Australian Bee Editor.**

We have pleasure in presenting in this number of THE BEE-KEEPER a picture of the venerable editor of the Australian Bee Bulletin, of West Maitland, New South Wales, an independent journal founded by Mr. Tipper in 1892.

Included in the picture are four generations of the Tipper family: E. Tipper, age 70; Mrs. Graham, his eldest daughter, age 45; Mrs. Walmsley, Mrs. Graham's eldest daughter, age 24, and Master John Walmsley, age 4.

Mr. Tipper is a native of Bath, England, and has been for 14 years an enthusiastic and successful apiarist and publisher of the Island Continent.

In season and out of season work for the adoption of the Parcels Post for it will free you from the exactions of the express companies and will thereby lessen to you the cost of all merchandise you have to get from a distance.

Among others, Mr. H. S. Ferry, of New York, and Mr. Allen Latham, of Connecticut, have been and are still doing yeoman service for the honey producers. Stand by them, boys!

**COOKING GERMS IN GERMANY.**

Reidenbach says: it has long been proven that all spores are destroyed when subject to a temperature of 150° C. or about 300° F. Beeswax may be heated as high as this, he says, without damaging it, and all wax from foul broody hives should thus be treated before making use of it in the manufacture of comb foundation. Thalz. Bztg.



## HONEY AND BEESWAX MARKET.

Boston, March 22.—Our market is practically cleaned up of 1905 crop comb honey, leaving a fair stock of old honey still on hand, which ought to sell well now that the new is out of the way. The market on best grades fancy white, 16 to 17 c. with very little to offer. Extracted, from 6 to 7 c. according to quality.

Blake, Scott & Lee Co.

Chicago, April 20.—There is very little comb honey on the market and as usual at this season of the year the demand is very limited. There is no change in the prices obtained from recent quotations. Choice white comb will bring 15c when wanted; other grades are of uncertain value, ranging from 10c to 14c per lb. Choice white extracted 6½ to 7c amber grades 5½ to 6½c. Beeswax 30c per lb.

R. A. Burnett & Co.

Cincinnati, April 4.—There is no material change in the honey market since our last report. The demand does not come up to expectations, which in all probability, is due to the inclement weather of the past month. Continue to quote amber honey in barrels at 5¼ to 6½ c. Fancy white in crates of 2-60 lbs. cans at 6½ to 8½c. For choice, yellow beeswax we are paying 30c per lb delivered here.

The Fred W. Muth Co.

51 Walnut street.

Boston and Worcester, April 10.—Fancy No. 1 grades comb honey wholesale for 13c to 17c, No. 2 at 14c. Stock is cleaning up better than last year. Demand is excellent. There have been no full cars sent to Boston this year because so much was carried over from the previous season.

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New York, Dec. 6.—Comb honey—The demand continues to be fair for all grades. Prices practically remain the same. We quote fancy white at 14 to 15c; No. 1, 13c; No. 2, 12c; buckwheat 10c per lb. Extracted honey is in good demand, especially California, with large supplies. We quote white, 6½ to 7c; light amber, 5c; buckwheat, extracted, 5½ to 6c per lb. Beeswax, firm and steady at 29 to 30c per lb.

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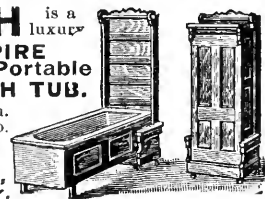
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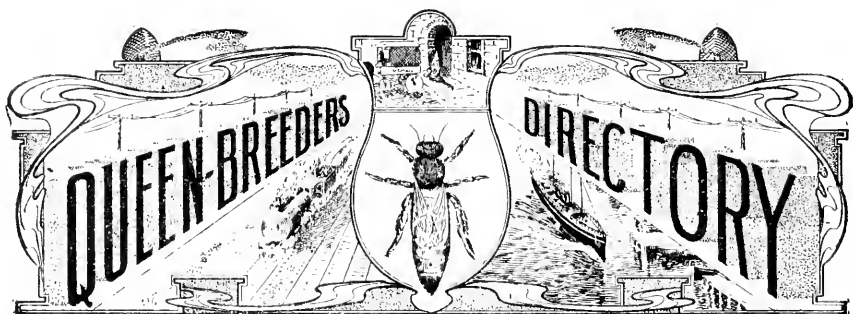
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JUNE

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NO. 6

VOL. XVI

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"The Celtric Model 1"

and the American Bee-Keeper one year for only 90c to every subscriber, old or new. The pen will be forwarded immediately upon receipt of the money. It is made of the best quality of hard rubber in four parts, and fitted with a guaranteed irridium pointed 14-k GOLD PEN. The "fountain" is throughout of the simplest construction and can not get out of order, overflow, or fail to supply ink to the nib.

**"A Fountain Pen is a Necessity of the 20th Century."**

It dispenses with the inconvenient inkstand and is always ready for use.

"THE CELTRIC MODEL 1" bears the manufacturer's guarantee that the pen is solid GOLD, 14-k fine. If it does not prove satisfactory in every way we will exchange it for another, or return the fifty cents additional upon return of the pen.

This is an unusual opportunity to secure, at a very low price, an article of superior quality that is coming to be essential to the comfort and convenience of every one. Remember this offer is for a short time only.

**The American Bee-Keeper, Falconer, N. Y.**



Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVI

JUNE, 1906.

No. 6

## Swarms and Swarming.

Influences and Conditions Having a Direct Bearing  
Upon the Subject.—Questions Answered.

C. W. Dayton.

MR. V. A. HANSEN, of Wisconsin, asks the following questions relating to swarming:

Q. How many colonies can you manage by your plan in one yard?

A. Never found the limit. I have had 225 in one yard and each colony swarmed twice. It required about one and a half hours per day. It takes about eight swarm boxes to the 100 colonies. The more they cluster together the better.

Q. How can you keep your colonies queenless after the second swarm is returned? There must be considerable unsealed brood in the hive and thus give the bees a chance to rear a queen.

A. The youngest larvae is supposed to be four days old or seven days from the egg—too old to rear a queen from. If the first swarm was to be delayed a day or two, by weather or other interference, it might cause the second swarm to issue in less than seven days

after the first swarm issued and then the queen might leave a few eggs and there would be larvae that would not be too old.

In the third paragraph there is this sentence which is not thoroughly correct: It says that second swarms are of large size because they include the bees of the first swarm. That expression has been stereotyped so often that it was penned without a ripple of thought. It is true in some cases but not always. The size of the first swarm is varied a great deal by the amount of reverence the bees possess for their old queen. A good one more and a poor one less, almost down to nothing. This is governed by her age and her ability to lay eggs for the future prosperity of the colony in the new home. If the queen has not been restricted in her laying she will have reached the height of her capacity some time previous to the issuance of the swarm. Such a

queen is of the highest value in the old hive before the swarm issues, but not of much account in a new colony. You might as well expect a man of 60 to have the working energy of a man of 30. He might have the resolutions and knowledge but he will be found lacking in physical strength. He has been at the top of the hill and is going down the far side. The bees desire to cast their lot with a queen that will improve with age. The bees of the first swarm have devotion or attachment to the old queen, but as soon as the old queen is absent a devotion is cultivated for the queens yet in the cells. And those bees which are nurses during the development of the young queens may have more devotion to the young queen than the field bees which ordinarily issue with the first swarm. From these assumptions it can be discerned how a first swarm may issue and leave the old hive well stocked with bees, or how a second swarm may issue and leave the hive well stocked with bees. It shows that there are two different conditions that bring upon the bees the disposition to swarm and that all the bees in a colony are not readily susceptible to the same conditions.

Now we come to these after-built cells and the queens. The queens from such cells are poor. When we remove the old laying queen and those queens also that come out with the second swarm we have the hive filled with bees that have very little regard for queens of so low a grade. There may be bees in the colony which have developed a swarming mania from some cause or other. These may try to "raise a rumpus" and excite the other bees to swarm, but usually only a quart or two will get on the wing until they begin to return to the hive again. Here is a disposition of bees that is opposed to the swarming mania. We may crowd the hive all we can and they will not swarm. But this disposition is seldom obtained by common methods; and when

it is obtained it is not noticed by the bee-keeper. He takes it for granted that the bees of such a colony are really non-swarmer and breeds queens therefrom for his whole apiary.

By the common method the swarm comes out and the old queen with it. If increase is not desired the swarm and old queen are returned to the hive from which they came; and their queen cells destroyed by the apiarist. But the bees belonging to the old laying queen have little regard for cells. They return to the hive only to swarm another day. In a couple of days the honey they took in their sacs is being converted into wax for the construction of combs in their new domicile. They have been out several times and loafed in the hive until they have lost all interest in the affairs of the old hive and cluster upon it merely to rest or for temporary shelter from the dews. It is like allowing a hen to sit ten days and then attempt to break her up and have her go to laying again, to try to get these bees to resume labor with old conditions unchanged. Even if the queen is removed now it would take considerable time to stop the secretion of wax and dispose their minds or instinct to resume work in the old hive. It must wear off slowly, in a length of time, and meantime the richest of the harvest is passing, and the bees are ageing rapidly. The old queen has spent her vitality to bring up the force of bees and if they do not work now all is lost beyond recovery. They may become consumers of the product of other bees' labor.

It is more commendable to handle one colony according to the rules of nature than to produce a whole car load of honey by haphazard management. Commendation may be the result of ignorance as well as knowledge, and in a swarming system I believe the disposition of the bees should be manipulated more, and the hives and fixtures less. The bees gather the honey; that is the

principal consideration, and as Doolittle says, they can store it in a nail keg if there is nothing better provided.

If we confine the hen in a box away from the nest she may get over her disposition to sit and start to laying again in a few days. So, also, if we confine a swarm of bees in a box their scare and separation from the queen rids them of all their former intention regarding swarming. They forget their queen, so that when they are returned to their old hive they readily take up with the work in hand.

As soon as a swarm alights on a bush the queen begins to travel through and through the cluster of bees leaving her scent on each worker she touches or travels over, and this is the main stimulus that causes the bees to seek isolation from the parent hive.

Chatsworth, Calif.

### SHADOWS ON THE BEE-HIVE.

Rev. C. M. Herring.

THE APIARY IS not all honey. There is a dark and rough side to the management of the hive.

Failures continually attend this business. The great majority of those who plunge headlong in this work are doomed to sad disappointment. They commence without counting the cost.

And then, the character of the bee is not all honey. It is not composed of the Christian graces. It is void of loveliness. It has no traits of a pure unselfish life. It is true from the bright side of the bee there are many things to call forth our admiration. The sweets of the hive and the wonders of the little kingdom have engaged the attention of historians, poets and philosophers from the earliest ages.

They dwell on the bright side of the bee, and leave its defects in the dark. Admitting all the good that can be said of this wonderful creature, still there are outs that should be considered before taking up the management of

bees.

It is said almost every form and variety of human crime is found among animals, and bees are no exception to the rule. Buchner, in his "Physic Life of Animals," speaks of the thievish bees, which, in order to save themselves the trouble of working, attack well-stocked hives in masses, kill the sentinels, rob the hives and carry off the plunder.

After repeated acts of this kind they acquire a taste for robbery and violence. They recruit whole companies, and finally they form regular colonies of brigand bees. These brigands, he says, can be produced artificially, by feeding the colony with a mixture of honey and brandy, by which they soon become ill disposed and irritable, losing all desire to work, and compelled by hunger they push the work of plunder. Nearly all bees, as a rule, are of quick temper—ever ready for a fight—and being armed with a sting, having a barbed point at one end and a bag of poison at the other, the bee at once becomes a creature of the human race.

To encounter one mad bee often puts the life of the master in jeopardy and every bee-keeper is destined to hold in his blood more or less acid poison which is injected by the sting.

Inexperienced bee-keepers will not escape this evil and swollen eyes, scars, face and hands will occasionally smart under the influence of this dreadful weapon and in some extreme cases death will follow. When enraged it is sometimes found that a whole colony will become excited to frenzy and fill all the air with terror. There is one such case on record and the calamity was dreadful.

The beginner in meeting this pointed weapon of the bee is liable to become disheartened and turn away from his enterprise. It is said of a man in New Jersey who was greatly elated at first with his large purchase of bees, but when he put his hand to their man-

agement and encountered the temper and sting of his pests, he became so disgusted with his dangerous subjects that he made a huge stack of all his hives and set it on fire. He had not counted the cost. The outs were not heeded and his folly appeared.

The beginner should begin in a small way and learn the trade little by little. This is the only way to success in bee culture.

To manage bees successfully is a trade that must be learned and the full price must be paid.

The bee master who understands his business has acquired his power by long and patient toil. He knows his bees and his bees know him. He visits them every day and is delighted in their company. He avoids all irritation and makes the harmony mutual.

Brunswick, Maine.

#### NATIONAL CONVENTION.

The National Bee-Keepers' Association will hold its annual convention for 1906 November 8, 9 and 10, in San Antonio, Texas, the dates occurring at a time when the Texas fair is in progress and low rates will be in force, locally, for several hundred miles out of San Antonio, and at the same time there will be the homeseekers' rates available from other parts of the country.

W. Z. HUTCHINSON, Secretary.  
Flint, Mich., May 2, 1906.

#### PLANTING FOR HONEY.

Swift River, Mass., Feb. 12, 1906.

Editor BEE-KEEPER:

I am sending herewith a picture of the apiary of Mr. M. P. Clark, of Hampshire county, Mass.

Although Mr. Clark devotes but a small part of his time to bee-keeping, he is well posted and successful. He advocates the sowing of alsike clover for bee pasturage, and has talked it up

with the neighbors and induced some of them to grow alsike for hay, thus benefiting himself and them also. Don't you think others might follow Mr. Clark's example with profit? Would it not be worth while, fellow bee-keepers,



MR. CLARK'S APIARY.

to arrange to plant some basswood trees this spring and have them growing? I have a few growing and intend to set out more.

Wishing yourself and all the fraternity much success, I am,

Very truly yours,

A. E. WILLCUT.

#### BANATIAN BEES.

The following was received from Mr. E. L. Platt, of Swarthmore, Pa.

Editor BEE-KEEPER:—Mr. Bassler, a Bohemian and director of a bee publication in Hungary has the following to say of the Banatian bees, or "Banats" as the Americans call them:

"The Banatian bee is related to the Carniolan: it is finer and more graceful than the German Black; like the Carniolans they are liable to be somewhat colored. Banatians are very active and prolific, but swarm less than Carniolans."

It seems to me that if we can find a bee with all the desirable points of the Carniolans with the added feature of not swarming we have a very desirable race of bees.



## Bees on the Farm.

### Neglected Opportunities With Detailed Instructions for Their Utilization.

GEO. W. ADAMS.

**A**FTER MANY years of practical experience and knowing the farmer, his needs and opportunities as I do, this subject appeals to me as one of considerable importance.

There are few fields of profitable labor unworked in these busy days, only last evening I noticed a heavily leaded advertisement for cast-off preserve tins, and the country side is scoured daily in search of bits of rag or metal. Profit from small things, utilization of waste, is the cry, yet the farmer, the most prudent and frugal of our citizens almost entirely fails to seize the opportunity of taking at least a dollar an hour for a little time to say nothing of the delicious and healthful food which he might so easily place upon his table through bee-keeping.

Now this is a "condition, not a theory." Not one farmer in a hundred has ever tried it, yet the few I have persuaded to take it up none have failed, and none will.

I have been sharply criticized by some apiarists for "inviting so many into the business." They feared competition. A moment's consideration will show there is no danger of this. The increased use of honey will help, not hurt the market. Make the use of honey as general as it was 100 years ago and the supply would not equal the demand, and besides, I do not advise the farmer to start an apiary. I tell him plainly that every colony above five is a damage to him. Up to that number their care will not interfere with his regular work, neither will he need appliances and material the purchase of which will for a time impair his per

cent of profit. Under this number he will not be likely to be troubled by the thousand and one things in the way of complications, entomological and otherwise, that always come to the bee-master.

Here is the plan: An investment that taken one year with another will pay 100 per cent net profit, and as no dealer or supply manufacturer has, or ever tried, to get a collar on me I can and shall say just what I mean.

First, buy a good book on the bee and I cannot recommend "Langstroth revised by Dadent" too highly—it fits every place and is as interesting as a novel—then subscribe for THE AMERICAN BEE-KEEPER, you will find it a great help and it will keep you "up to date. Read your books carefully and then decide on the kind of hive adapted to your locality, I assume you will produce section honey. Buy the best, I don't care what they cost if the workmanship and material are there. We are planning on 100 per cent returns, not on a fixed sum, and you must have lots of experience before you can use a poor hive profitably and then you will know better than to try. I use the eight-frame lock-corner hive as made by the Falconer Co., and Root.

While I find the eight-frame the best for my apiary, I should be inclined to advise the ten-frame size for the farmer, as they winter more safely and he will not lift, carry, or "tier up" enough to make the extra weight of any consequence.

In the matter of outer case, or chaff hive, there is the question of the amount of money you care to invest;

any one can make an outer case from old boxes, but the saving is not great and is often at the expense of the looks of the little apiary, which should be placed very near the house and be an ornament rather than a disfigurement. Also remember that it costs less than nothing to keep hives well covered with good lead paint.

Now buy a smoker, veil and gloves, the latter merely to prevent nervousness in the first work you do, after becoming accustomed to your bees put the gloves away for use in an emergency only, in ordinary work they are never needed.

You should also have a drone trap and learn its use in swarming. You will notice the out-fit is not costly, and there is not a patented article in it. The patent on the drone trap I am told has expired. I mention this to show the simplicity and cheapness of the stock in trade, not to advise making any of the appliances.

Now take a large piece of chalk and write upon the shop door, "I will try no experiments the first year;" and stick to that promise.

Next, you are ready for your bees, and two colonies will make a good beginning. Two, because one can help the other and save it should it get into bad condition from any cause except infectious disease.

It will be cheaper to start with two swarms rather than two colonies, and as your knowledge develops with the swarm, and as the examination of a swarm is less difficult than of a colony, and as a swarm stands moving better and is less irritated thereby, it would be my choice for a beginner. The returns the first year will however be as a rule, much less. In beginning be sure that every frame is movable, combs flat, free from drone cells and brace combs, and keep them so. Always have every frame so it can easily be taken out and examined.

You will do well to buy your bees of

a bee master. He will show you the interior of the hive, instruct you how to open and examine it, will give you valuable information as to the time to put on and take off your supers, and points on the requirements and conditions of your locality. He will probably charge you more than a farmer would and the goods will be worth more, but remember he is doing profitably many things (like the use of shallow hives) that it will not pay you to imitate. Study simplicity, and have absolute uniformity in hives and fixtures.

Learn to know your bees, go among them with slow and gentle movements, wearing when possible, light-colored clothing. Always use a little smoke and much common sense in handling them. Give the little people one one-hundredth the care you would give the same money in hens, remembering that the hen lives only to destroy and chuckles with glee over every successful effort to injure your garden, while the bee wears her little wings to tatters in her untiring effort to protect your harvest.

As to the best kind of bee, I assume that every practical farmer knows the value of well bred, gentle, stock,

I have not touched upon the great benefit to the crops owing to the fertilization by the bee—it is more than equal to the profit from the honey, and is a subject of great importance.

Rowley, Mass.

Later Mr. Adams will present special features of the Farm Apiary.—Editors.

#### **Bees Sting Farmer to Death.**

Carlisle, Pa., May 14.—Abram Whistler, a farmer, living near Newburg, was hauling a hive of bees to his home today, when a sudden jolt of the wagon knocked the top off the hive. The hundreds of bees thus released, attacked Whistler and stung him so severely that he died shortly after.—New York Tribune.

**A NEW FOUNDATION FASTENER.**

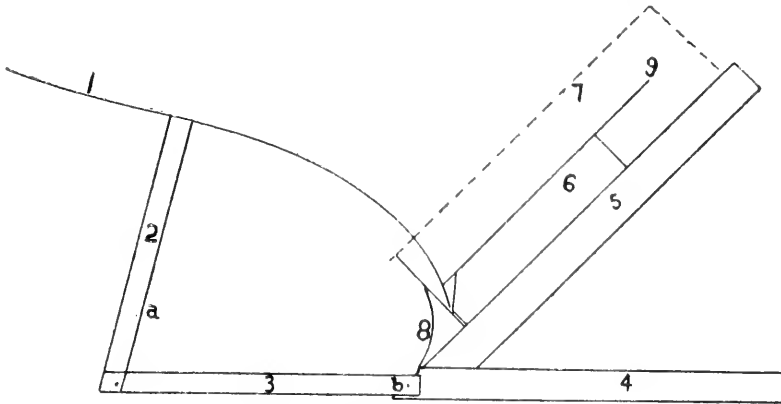
E. H. Dewey.

Editor BEE-KEEPER:—The enclosed photo is a very good likeness of my new foundation fastener. The drawing is supposed to represent the machine

that holds the section securely against the base of the guage.

The two rods that support and transmit the motion to the curved plate are 2 and 3. The movable table, 4, is loosely secured to 3 at B.

When the machine is closed the



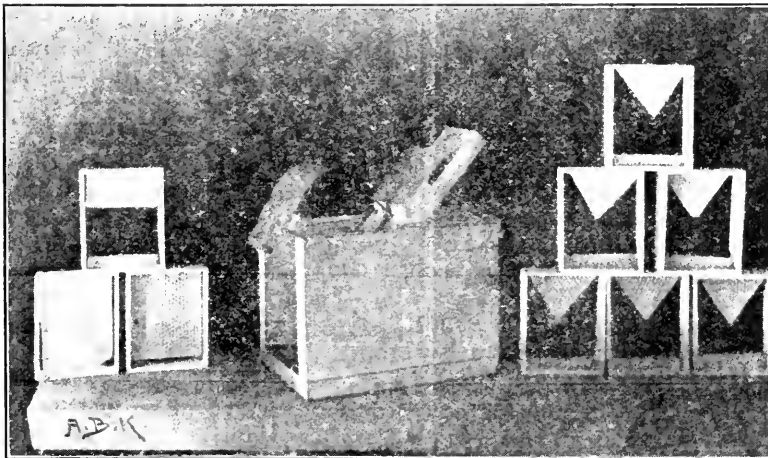
SECTIONAL VIEW OF DEWEY FASTENER.

when closed- the heated plate in particular.

It is the curved plate that reciprocates on a bolt at A. The dotted line is supposed to be the section in place; 9 is the stationary plate; 6 the guage and 5 the support; 8 is a yielding spring

starter is slid down the plate until it touches the heated plate when the pressure on the table is relaxed and the curved plate is automatically carried away from the section. The starter is then pushed to the section.

A wedge slipped between 5 and 6



DEWEY FASTENER AND ITS WORK.

will space the machine to center any section.

You will notice that the forward edge of the heated plate, when the machine is closed, does not come in contact with the section or any part of the machine at that point.

Great Barrington, Mass.

### HONEY PRODUCT OF NEW ZEALAND IS ENCOURAGING FOR THE FARMERS.

Burton N. Gates

THE ANNUAL REPORT of New Zealand department of agriculture for 1905 comes to hand after a most prosperous year in the history of New Zealand apiculture. The efficiency of the Division has been materially increased by the appointment of Mr. Isaac Hopkins, "the best bee expert in Australasia," as apiarist. Mr. Hopkins took his office in Wellington, January 24, 1905. During the year he has visited and given personal instruction to the owner of nearly every apiary in New Zealand. The yards are in the country, far from the towns in many cases, and have necessitated much travel. Nevertheless, of about five hundred colonies now in box hives and destined to the "sulphur pit" method of removing the honey, Mr. Hopkins expects within a season or two to have nearly all the owners of these antique hives converted to modern methods. The bee-expert, in his tour, visited 119 apiaries which represents more than 2,450 colonies.

Disease, "foul-brood," the expert found "decisive evidence of in most districts visited." All the bee-keepers were anxious to free themselves of it and to be sure that the other fellow, his neighbor perhaps, did likewise. Legislation was advocated and met with universal favor. Consequently a bill has been drawn up and will be presented to Parliament. The bill will be known as the "Apiaries Bill."

New Zealand has nothing but bright prospects in apiculture. The conditions there appear unsurpassed. Atmosphere, rains, climate, all favor luxuriant vegetation. The expert remarks, "our bee forage is second to none in the world. We produce some of the finest honey in the world; it fetches the highest prices in European markets of any foreign honey. There is an unlimited demand for it at remunerative prices. The local market, too, demands at present 600 tons per annum." This speaks well for the honey-bee in New Zealand.

Mr. Hopkins' report is illustrated with five superior full page half-tones of combs, normal, diseased, and worm eaten. Besides this report, annually, the Department has already issued several apicultural leaflets for distribution among farmers; others are in preparation.

From the Annual Report of N. Z. for 1905.

"One forward step, that gains sure foothold on the track,  
Is worth two steps ahead where one slides three steps back."

—Ruckert.

"Where thou know'st not the way,  
There take a guide to thee,  
But does the guide himself know it?  
Be sure and see!"

—Ruckert.

#### Denver Honey Market.

Denver, Col., May 18, 1906.—The supply of honey is nearly exhausted. The demand is fair, time of year considered. We quote our market today as follows: Comb, fancy white per case of 24 sections \$3.40. No. 2 per case \$2.40. Extracted, 7 to 7½c per lb for white alfalfa. Beeswax 24 to 25c. There is practically no comb honey in any of the western markets now, and the new crop should find a ready sale when it comes in.

THE COLORADO HONEY PRODUCERS'  
AS'SN., F. Rauchfuss, Mgr.

## The Caucasian Bee,

Once Created Great Excitement in Germany, But  
Now Forgotten.

OTTO LUHDORFF.

THERE SEEMS to be a great demand for more knowledge concerning the Caucasian bee. While I cannot say anything from my own experience, I have a little book written by reliable men, and a few extracts from the same may be of interest. The book is written in German and extracts are freely but carefully translated.

On the 10th of September, 1879, Dr. Buttlerow, of St. Petersburg, Russia, addressed the convention of the German-Austrian bee-keepers, at Prag, Bohemia, concerning the Caucasian bee. He says: "About two years ago I went to the Caucasus and found there these bees. They attracted my attention particularly by their color and gentleness. This gentleness was particularly remarkable as I generally handled very cross bees.

"I consider the Caucasian bee only as a race in the same way as other species, as for instance, the Italian is considered as a special race. There are no sharp lines between the black and yellow bees; but if we consider the origin we have to speak of races. I believe that we can speak only in this way of the Caucasian bee, as a race. The extreme gentleness was for me the principal point, why I paid particular attention to this bee. This trait of gentleness remains always constant, and also the property of building immense lots of queen cells, and much swarming. They told me that the Cyprian bees built also many queen cells. I show you here a comb which has on a single place about twenty queen cells. I did not select this comb specially. I simply took it out of one hive at random.

Regarding their quality of gathering honey I only can say that the Caucasian apiarists attain good results with them. Whether this bee is any better than other races the future may prove.

"When I learned the qualities of this bee, I secured immediately eight queens which I gave to a bee-keeper in Moscow on my return. I did not visit my apiary that year again, therefore I did not use the queens myself. This was in 1877. In the following year, 1878, three apiarists of Moscow said that the queens raised from those eight imported ones were all very gentle. I made now the proposition to the Russian government to let me go again to the Caucasus and import larger numbers of these queens.

"Finally I made the journey to Wladiskawkas, in the Caucasus, where the most extensive bee-keepers are located, and sent from there four queens to Mr. Vogel, and four to Mr. Gunther. I bought these queens from the most prominent bee-keepers. I learned here that some apiarists prefer black queens to yellow ones. I found also that the gentleness of these bees is phenomenal (very remarkable). I handled bees even in the evening extensively, without smoke without being stung.

"I went over the mountains into Asia to the coast of the Black Sea; the bees here are blacker than at Wladiskawkas and not so gentle. I am of the opinion that we should buy only those from Wladiskawkas, because we know good reliable men there."

At the same convention Mr. Gunther, who received four queens from Dr. Buttlerow, and tried them, sustains

the descriptions as made by Dr. Buttlerow.

Mr. G. Dathe-Eystrup received two Caucasian queens from Dr. Buttlerow direct from the Caucasus, as reported in No. 2, 1881 of *Eichstatter Bienenzeitung*. These queens were sent with small swarms and arrived in fine condition. He united them with strong German colonies, which was easily done without causing any fighting. He calls special attention to this, as he had some bad experience before with Cyprian bees, which killed all his German bees when he united them. He found the Caucasian queens as fertile as the best heath queens and Italian queens. They were also good flyers. He says: "Generally the Caucasian bee does not sting, but if she is irritated and provoked she can also sting." You may suppose that the Caucasian bee is phlegmatic because she does not sting, and would not defend her hive against robbers, but she is not phlegmatic, rather the contrary. She is quick and full of life. She flies quick from the entrance, and upon her return enters quickly. These bees do not hang much around the entrance; they are good defenders against robbers. It is peculiar that they do not hang much around the hives, even when it is very warm. As they are good flyers, they should also be good honey gatherers. According to my experience the Caucasian bee is a good race, worthy to be introduced into Germany. Whether she will winter well and will prove to be of great value, the future must prove. I will add one more point: It is not an easy matter to keep a foreign race pure. With other races, for instance the Italians, one can recognize the hybrids by their color. With the Caucasians this is not so easy. Therefore it is to be feared that in the future many queens will be sold as Caucasians which are only hybrids. The buyers must be very careful."

Mr. Fr. W. Vogel, Lehmannshofel,

reported at the same convention his experience with the Caucasians.

This gentleman says that the naturalist, Pallas, ordered by the Empress Catharina II., went to the Caucasus in 1773, from where he sent this bee under the name of *Apis remipes*; one specimen of which could be seen in the entomological collection in Berlin, Germany, in 1862. He learned from Dr. Buttlerow that the Caucasian bee is a special race which varies considerable in the color of the abdomen; they look similar to crosses of German-Italian bees, but in the neighborhood of Wladiskawkas they are at least as pretty yellow as he liked to see in Italians. Dr. Buttlerow offered him queens and he gladly accepted them.

Mr. Vogel received in May 1879 a dispatch from Dr. Buttlerow: "Sent you 12 queens yesterday." All queens lived, but some arrived daubed with honey; three were hurt. He sent four of these queens to Mr. Gunther.

In June, 1879, he received from Dr. Buttlerow a second lot of four queens. They were better packed; the boxes were specially made for the purpose. The difference between the two lots was that the first lot contained the dark Caucasian queens, and the second lot coming from Wladiskawkas brought the lighter colored queens similar to the Italian race. He made his report on September 10, and so had these queens about four months.

Mr. Vogel says: "The Caucasian bees are a special race although they vary much in color. In size they are a little smaller than the Italian and German bees, although hardly noticeable. The Caucasian bees are very gentle. When handling these bees smoke is not necessary. They do not even get excited when I blow against the combs full of bees. They are good defenders against robbers. The fertility of the queens is extraordinary. Of those queens received in May, two colonies built up to such a size as I have never

had or seen before. The tendency to build drone comb seems to be very great with this race and indicates much swarming, but my strong colonies did not swarm this year, although there were many swarms of others in my neighborhood. These bees swarm much in the Caucasus; Dr. Buttlerow reports that five colonies cast nineteen swarms. They build many queen cells here in Germany. It is not difficult to find 100 queen cells in a single colony of moderate strength.

"I do not know yet how they are in honey gathering, as nearly all the honey in my hives has been gathered by the old bees. Wherever my sweets were exposed the Caucasians were on hand, and from this I conclude they are also good honey gatherers. The next year will show whether the Caucasians will be of great value."

The above are extracts from the book, "Value of Different races of Bees," by Dr. A. Pollman, Leipzig, 1889; Hugo Voigt, Leipzig.

There are no more Caucasian queens offered today in the bee journals or catalogues in Germany. They seem to be forgotten, although in 1889 the papers were full of them. The principal races offered in Germany today are the common German black bee, the Italian and Carniolan. The Italian and Carniolan queens seem to be at the head of everything and liked the best.

The book mentioned above contains opinions of the best known apiarists of Germany and is of great interest, especially as it gives the opinion of each apiarist on each race, separately. The following races were tried in Germany and are described in this book: The German black or Nordish bee, the Heath, Italian, Egyptian, Carniolan, Madagascar, Cyprian and the Caucasian. The following well known men are the principal contributors: Von Berlepsch, G. Dahte, Dr. Dzierzon, G. Kleine, Fr. W. Vogel, Fr. O. Rothe,

Baron von Rothschutz and Dr. Pollman. Visalia, Calif., May, 1906.

### HOME MARKETING.

(Canadian Bee Journal.)

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

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

it is only two years ago since farmers commenced to raise it with success; likely there will be more of it in future.

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

JACOB HABERER.

Huron County, Ont.

[Buckwheat honey is used largely for manufacturing purposes by confectioners and tobacconists, and it usually finds a ready market, generally at a low price, but seldom at less than what you have been selling yours for. Some people like it for table use, and we have sold tons of it for this purpose, but it

is not likely to become a favorite. It seems to us less objectionable and sells more readily locally in its granulated form. Grocers in our city strip off the 60-lb cans or barrels and slice it with a knife. Here is a recipe for buckwheat honey ginger bread that we like in our house that you might try:

Stir one cup buckwheat honey, one cup butter,  $\frac{1}{2}$  cup brown sugar, one tablespoon ginger, one teaspoon cinnamon together to a light cream. Put on the back of the range until warm (not hot); then add one cup sour or sweet milk, two well beaten eggs, one teaspoon soda, four cups of flour. Bake at once.—Ed. C. B. J.

## Pollen-Clogged Combs.

They are Responsible for the Loss of Honey Crop.  
Some Remedies Suggested.

ALLEN LATHAM.

THERE ARE FEW bee-keepers who have not viewed with anxiety the crowding of the brood-nest with pollen, fearing lest the queen be deprived of cells wherein to lay her eggs. To offset our anxiety has come the reassuring note, from those who should know, that our worry is for naught; for, say those optimists, bees use an immense amount of pollen and will soon clear the combs.

The bearer of bad news is seldom granted a hearty welcome; and, when I announce that pollen may become a serious obstacle in the way of securing a good crop of honey, I doubt if the announcement will please. Still, he who points out an error and helps to mitigate an evil in so doing is sure to get eventually his just reward.

I freely concede that the brood-nest, though packed with pollen, is generally freed, under the influence of a vigorous queen, in a remarkably short time, but in bee-keeping a remarkably-short-time is often all the time there is. The pres-

ence of the pollen in those brood combs, if there at certain periods, may be the wall between no crop of honey and a good crop of honey.

The early days of last June, in this vicinity, brought into the hives a vast quantity of pollen. Clover was in full bloom, but yielding poorly of honey, just enough to keep the bees busy trying to get it. Under such conditions, as everyone knows, a big load of pollen goes with every small load of nectar. Brood-combs, and in many cases sections, became heavy with pollen. Optimistic to the last I looked for the speedy disappearance of the surplus pollen; but in vain, for the field conditions remained the same and the pollen continued to come in as fast as it was consumed.

I took note of several colonies in particular, some of which had cast prime swarms in May, and others of which had been deprived of their queen and given ripe cells from the others. All were without laying queens the last



ten days in May and for a few days in June, during the very time, in fact, when pollen was coming in most freely. When those young queens started in to lay, early in June, there was scarcely a brood-comb which was not 75 per cent filled with pollen.

Had these combs been free from pollen, these vigorous queens, all from my best stock, would have supplied thirty to forty thousand cells with eggs before the 25th of June; but, as it was, the brood-nests were not well stocked till nearly the 10th of July. The fact developed that a queen dislikes to begin laying in a comb badly sprinkled with pollen. I observed in more than one case that the brood-nest, instead of being a unit was made up of different centres of brood here and there; in some instances a comb would occur filled fairly well with sealed brood, while the adjoining comb would have no brood at all, but two or three combs farther on would occur a patch of young brood and eggs. It was a condition of affairs most displeasing to watch and it convinced me forever that pollen can become a serious nuisance in the brood-nest.

The harvest came in July, 12th to 20th, the maximum flow occurring on the 17th. The flow was from sumach, rhus glabra, and as usual came and went quickly. The colonies mentioned above had not had their numbers reinforced by 40,000 bees, as might have been the case, and so stored only about 20 lbs. of surplus; while other colonies which had had laying queens during the pollen-gathering time, yielded from 50 to 75 lbs. each. It seems more than probable that the presence of the surplus pollen in those combs cut down my honey crop thirty pounds for every colony thus affected. The shortage of the crop was due to the shortage of bees; the shortage of bees was due to the failure to breed heavily when breeding was most necessary; and that failure to breed was due to pollen-clogged combs.

One might urge that other causes could account for the slow-breeding; but, since throughout June there was a dribbling honey-flow sufficient for strong colonies to store slowly in the sections, I can see no reason for cessation or lessening of brood-rearing. Thus I am forced, having watched the combs closely, to believe that excess of pollen was the only cause.

It follows, therefore, that, though excess of pollen may not permanently injure a colony nor at times interfere with a honey-harvest, it unquestionably does at certain times serve to diminish one's harvest very seriously. What, then, is the remedy for this evil?

Obviously the remedies are two in number; either we must prevent the pollen from gaining access to the combs or we must remove the combs after the pollen reaches them.

If one has a large number of extra combs so that he can remove pollen-clogged combs and replace with empty ones, such a plan might work; but it has serious objections, and I would therefore dismiss the second of the two remedies.

The first-mentioned remedy, though I have never as yet put it to thorough trial, appeals to my fancy. I will offer it, knowing that it may fail utterly when brought to the test, but feeling that it is worth trying since success with it would mean so much.

We have all seen how, when queen excluding zinc is over the hive-entrance, bees frequently lose their pollen-pellets while passing through the narrow openings. Especially is there much pollen lost if the zinc be put on with the openings running vertically; and it has been suggested to me that entrance guards thus placed would help materially in keeping out pollen. Unfortunately, the vertically placed zinc will never keep out even one-half the pollen, for when the worker passes the guard she turns sidewise and only the lower pellet is scraped off and frequently not

even that one. The opening must be such that, no matter what the position of the worker, the edges will surely be brought to bear upon the pollen-pellets.

Next spring I shall experiment with excluders having circular openings, making them by punching with a die of the right size, being careful to punch the holes all one way. I shall put the zinc on with the burr-edge out so that incoming bees will drag their posterior limbs across a ragged edge of zinc. It would seem as if all large pellets must be lost, only the small compact ones getting through.

Such zinc would doubtless prove too much of an obstruction under ordinary conditions, but since excess pollen-gathering takes place when the honey-flow is poor, the loss should not be much. More than that the presence of the zinc would be required only a few days in most cases. It would be desirable to place a Porter bee-escape leading outwards so that drones could leave the hive. Whether they ever got back would in most instances be immaterial.

It is quite probable, too, that colonies with such guards would get ill-tempered, and that work in the apiary would become less pleasant; but if at the same time the pollen was kept out and the worker population became thereby doubled one could complacently put up with some inconveniences.

I hope that others will experiment in connection with this matter of pollen-clogged combs, and report their successes (and failures). I should be pleased to have satisfactory proof that pollen, contrary to my present belief, is never a menace in the brood-nest.

Norwich, Conn.

### MYSTERIES OF THE HIVE.

Dudley B. Truman.

IT OFTEN REQUIRES a certain amount of pluck to speak of the finer or more subtle side of bee-keeping. To deal with those remote and peculiar

functions performed by bees, which are outside our ordinary ken, results in an appearance of speculative and fantastic reasoning. Hence, for what I am about to say, I ask your kindly indulgence and in case you disagree with me, your gentle forbearance.

First, let me explain the word, "Incompatible."

Suppose we mix together sugar and milk and tea. You know of course that no marked change is produced in any of these materials. If our taste is fine enough we can recognize each of these. In other words, the three constituents are "compatibles."

If, however, we mix, let us say, whisky and sulphuric acid, we do not get a mixture having either the properties of the acid or the whisky, but one having the name of "fusil oil," a material as harmful to a typhoid fever patient as the original substances are beneficial.

This is what in medicine we call an "Incompatible."

Now, the first mystery I would draw your attention to, is that bees never produce an incompatible.

This is a very wonderful thing. If we mix certain scents,—let us say essence of clover and essence of orange flower,—we do not obtain an agreeable mixture, but an odor that is like horse dung, an incompatible.

Yet the bees do not get such a result—at least not normally.

One way in which bees avoid it is by limiting their food area. If you Italianize one colony of a black apiary, you will be able to watch what plants it gathers from, and you will very likely find that at any given season of the year it works mainly upon one species of flower. Thus, the coral flower on my veranda here is mainly worked upon by one of Swarthmores golden-all-overs; other bees rarely touch it. One of my black colonies chiefly works upon cocoon blossoms, while my neighbor's "Florida Queen" works along a certain

plant in the hedgerows. Thus bees to a certain extent avoid "mixing their drinks," if I may be allowed the term.

But the mystery does not end here. Bee-keepers freely mix these honeys with their different scents. Indeed, they will take a tropical honey from Cuba and feed it to a clover gathering colony, or mix honey of four or five essences in a honey extractor, and yet seldom if ever produce an incompatible.

It seems therefore that there is some special chemical action, or chemical reagent in honey that prevents this awkward result; and if so, it may be possible that we have in our bee-products a substance more valuable even, than honey itself.

Let us turn to another mystery—the mystery of Lubbock's sixth sense. Lubbock, by a series of experiments with prismatic lights established the fact—a fact that seems to have been overlooked—that bees were sensitive to ultraviolet chemical rays. That is to say, bees can see chemical action.

If bees were inside a camera, they could see a sensitive plate reacting to its picture, they could see formic acid and salt combining and they could see the chemical action of a microbe, such as that of foul-brood.

What exactly is the use of this function, of course we cannot say. But one can well imagine that it might materially assist them in avoiding disease, and perhaps also in the chemical processes involved in the so called "ripening" of honey. It is certain that bees must be able to distinguished between a dead egg and a living one, and we can see that this would be an easy task if they could see the chemical nutritive changes going on inside it.

In this connection it may be as well to point out that the bees are conscious of the presence of a queen-larva in a sealed cell, know whether it is alive or dead, and can distinguish it from a larva in an ordinary cell.

This point is beautifully proved by

hiving a queenless swarm upon a single sealed queen-cell, a method that I have used for "making bees stay."

It seems to me that in this case the bees must obtain their knowledge of the queen-grub inside by one of two methods. Either they must be able to hear the larva, which, when it is at this stage, argues a highly microscopic sense of hearing; or else they must be able to see through the capping by means of some ray that, unlike chemical rays, passes through opaque substances.

Of these, the former hypothesis seems the more profitable. But in this case, their hearing power must not only be sensitive to this minute sound, but be able to distinguish it from that made by the larva of a drone or worker; for, as you know, sealed workers have exactly the opposite result—that of making the bees desert.

Just one word more, for I cannot resist it. Picture to yourself the hive as it appears to the bees. Thousands of cells, each ablaze with chemical rays—a perfect palace of electric light.

Nassau, Bahama Islands.

#### OVER CONTRACTION.

(D. M. M. In Irish Bee Journal)

WHEN THE swarming season is about over, if working with a large number of frames, it generally pays to contract the brood area when working for a late flow such as the heather. Taking as an example a hive with twelve or fifteen frames all well covered with bees, I would confine them to nine or ten with the object of securing the main flow to the supers. The contraction, if judiciously done, may help another colony along, because most of the frames withdrawn would be a solid mass of sealed and nearly hatching brood. Those less occupied would be left to give some work for the queen, and, if they are pretty well stored with honey, this would be very

quickly carried aloft to supers, thus helping the supers. The queen, obtaining room in this way, would prevent either herself or the workers from preparing for swarming until the period for natural swarms was past.

Over contraction, however, should be carefully avoided, because, even at a late date in August, over congestion may lead to queen cells being constructed. Further, with very warm weather and a meagre super space, the bees lie out in front of the entrance and loiter or sulk even with a flow on, while the small space given the queen practically ends her laying powers, or checks her ovipositing to such an extent that the colony goes into winter quarters short of young and lusty bees, which are the mainstay of the community in early spring when building up begins. Another danger is that the queen, cramped for room, may ascend and spoil sections by laying eggs, especially where she finds any of drone cell formation. The brood body being crammed with brood in all stages, stores are carried down from above, and the extra traffic gives a travel-stained appearance to the sections which no comb honey should possess. Often, too, the bees, having no clear space for extra pollen, carry it aloft, and thereby spoil the sections. This was particularly noticeable in sections worked behind a queen excluder in hives of the combination type, so that the practice has about fallen into disuse. The same occurs in sections worked over shallow brood bodies. The comb is so packed with eggs, brood and young bees, that there is no space for a store cupboard, and both honey and pollen have perforce to be consigned above.

The same danger or dangers become manifest where over contraction takes place with even ordinary queens who lay only fairly well; and, if so, then how much more with our best queens, who could more than double the amount

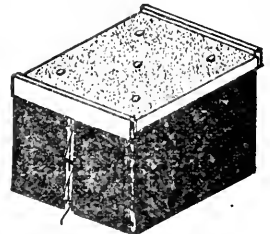
of ovipositing possible in the very limited space given. We do the stock a serious injury by hindering this egg laying, and thus lessening the population of the hive at a critical period, when this extra increase would be the salvation of the colony. But, too, we do the queen mother injury by thus cramping her powers at the very period when nature decrees that she should be most prolific. The little extra honey secured at the time is therefore dearly bought by the ill effects left, perhaps permanently, on the stock of bees. If the reasoning given above is correct, and I maintain, as the fruits of experience, that I have proved it to be so, then I would say that at no time should a strong stock be confined during the gathering or breeding period (or indeed at any other time) on less than nine standard frames. Of course I don't include nucleus lots, second swarms or casts, driven bees, or late swarms. All of these may be safely and profitably kept and wintered successfully on, say, six frames.

Too many frames in the brood body in the height of the season is also a serious mistake which often leads to loss of profit, but this must await further consideration.

## HIVE PROTECTION.

A. C. Miller.

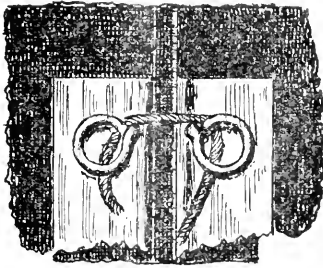
IT HAS LONG been the writer's practice to protect the supers during the honey flow. This has been done in various ways, sometimes by an outer case or a wrapping of cloth or paper. Recently a local concern the Pratt Fastener Co., has gotten out a very neat and convenient device for the purpose and also adapted for winter protection of the



brood nest on the writer's well known plan of a black wrapping. The device consists of a heavy grade of enameled carriage cloth bound at each end with metal and the metal strips bearing a unique fastener. One surface of the cloth is black, the other white, the

merely by pulling it against them and it is as readily released. The illustration will make it clear.

In parts of our country cool nights are often experienced during the honey flow and unless the supers are protected in some manner the bees leave them and draw into the brood chamber. On the other hand the sun often so heats the unprotected hive during part of the day that it is impossible for the bees to continue work therein. It is apparently to the bee-keeper's interest to protect his hives from the extremes of heat and cold. Even when known, such practice is often neglected, either for lack of a convenient method or on account of cost. The device above described is cheap, convenient and efficient. The manufacturers inform me that they will mail a sample wrapper post paid for 35 cents; the price in quantity being 25 cents, express or freight to be paid by the purchaser. The address is Pratt Fastener Co., Providence, R. I., or send to your local supply dealer.



SECTION OF WRAPPER  
SHOWING FASTENER, FULL SIZE

black side being for winter use and the white side for summer. A piece of string serves to fasten the wrapper in place. It takes but an instant to put on or take off the wrapper, the string being caught by the little ring clips



## The Bee-Keeping World

Staff Contributors:  
F. GREINER, ADRIAN GETAZ

Contributions to this Department are solicited from all quarters of the earth.



**GERMANY.**

WILL NOT "WALK THE CHALK."

Bee-keepers are not always successful keeping their hives free from ants. Liberal applications of salt or sulphur have driven them away from our hives. Editor Reidenbach says that powdered chalk has been effective with him.

**SOUND ADVICE.**

It has been customary among bee-keepers in Germany to devote a part of their colonies to honey production, the other to increase. The management

of each of the two classes had necessarily to be very different. Editor Freudenstein says it is all wrong to divide a yard, but advises to run all colonies for honey as much as possible. There will be more increase than that is desirable, and we may not make a miss of obtaining a crop.

**RECENT PATENTS.**

An improved wax extractor by F. Steigel, an implement for rendering comb into wax by E. Junghans, and a smoker by G. Heidenrich, have recently been patented. The wax rendering ma-

chine is provided with an easily removable double screen which holds the slungum down and allows the the wax to come up—Neue Bztg.

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ADVANCE OF SCIENCE.

Aristoteles, father of natural history, taught that wax was gathered by the bees from plants. This was believed till the seventeenth century, when it was discovered by Martin John, a physician in Frieberg, Germany, that the wax was secreted in shape of tiny scales on the underside of the bees abdomen. This discovery was confirmed later by Rev. Hoonbastel, of Hamburg, Thorley, of England and Huber, Switzerland.—Leipz Bztg.

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OBSERVATION MAY CHANGE HIS MIND.

P. Neuman thinks that Prof. A. J. Cook, having reported in the American Bee Journal that Germany's bee-keepers are behind the times and that they need a Langstroth to lead them out of darkness into light, may change his mind after he has had occasion to visit the bee-masters in Germany, as planned by the professor.—Leipz Bztg.

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MUST HAVE DONE SOME COUNTING.

The past winter has been as favorable for the bees in Germany as it has been in the Northern states of America. Ludwig reports in the Deutsch Bzcht. that his 68 colonies came out o. k. Their winter supply of honey was supplemented by feeding ten pounds of sugar syrup to each colony in the fall. Thus very little honey was consumed during the cold season and consequently but little brood was reared. On an average each colony consumed about ten pounds and lost 587 bees between October 26 and March 6.

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THE UNCAPPING FORK.

The April number of Deutsch Bzcht. brings an illustration of the process of uncapping sealed combs by means of an uncapping fork, which seems to be

popular among bee-keepers in Germany. The implement is about three inches wide, the tines about one and a half inches long. It seems to me that a beveled honey knife would work very much faster, but I have not tried the fork.

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IMBEDDING WIRE.

To imbed the wires into comb foundation the bee-keeper in Germany seems to consider it important to use heated wire-imbedders. The implement Gerstung illustrates in his bee journal has the little wheel fastened to a heavy piece of metal. This, when heated over a lamp or otherwise, holds the heat long enough to keep the wheel at the proper temperature to imbed three wires before it will become necessary to reheat.

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AUSTRIA.

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WOULD NOT BE HEAVY IN AMERICA.

In the year 1775 bee-keepers were granted freedom from taxes by the emperor of Austria. Of late years a tax has been levied upon the bee-keepers, which was objected to by them. It has been decided now that bee-keepers are subject to the income-tax the same as men following other kinds of business.

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RUSSIA.

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DON'T REPEAT THE NAME, PLEASE.

A new bi-monthly bee periodical is being issued by M. E. Durnoff in Moscow. Its name is said to be "Ptschelovodnaia Zschisn" and treats principally the methods as practiced in America.—Bienen-Vater.

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FRANCE.

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CALLS COMB HONEY "BEESWAX."

Under a vigorous protest by the importers, comb honey has been regarded as "wax" by the Parisian custom house.—L'Apiculteur.

## AUSTRALIA.

(From Australia Bee Bulletin.)

### QUEEN MATING.

Mr. Pender, a queen breeder of Australia claims that the drones from an apiary situated one mile away seldom mate with his queens, but he keeps plenty of drones in his apiaries, otherwise the result might be different.

The queens are mated in a separate yard. That yard contains the necessary nuclei and five colonies furnish the drones. The reason for having the mating done in another yard is that if it is done in the yard where the queen cells are raised, the young queens returning from their trip occasionally go in one of the hives instead of their nucleus and destroy the cells or give trouble. He carries the nearly matured cells from the main yard to the mating yard, and says that if it is carefully done the transportation will not injure the cell, that is, the queen within the cell.

### CONTROLLING SWARMING.

Mr. Bolton uses the Heddon hive. Two or three weeks before swarming time he goes over the apiary to apportion to each colony the right number of hive sections which its strength calls for, and any colony having two sections has the upper one inverted, thus securing the abandonment of any queen cells that may have been started. That means no swarming for nine days. On the ninth day another visit is made. The colonies have their upper sections inverted again, except those where the cells are sealed or nearly ready to seal. These are swarmed artificially by shaking the bees in front of a single hive-section, furnished with starters, on the old stand, and are giving their own super over an excluder.

The two stories of brood removed are added to weaker colonies. The same process is repeated every nine days as long as necessary. When all the col-

onies have been built up; the brood removed is used for increase, or put on top of the artificial swarms.

### "EVAPORATED" BEES.

Mr. Fackender's apiary is situated five or six miles from a smelting works. Occasionally the fumes from these works reach his apiary and cause a considerable mortality among his bees.

### GETTING RID OF ANTS.

Mr. F. Halloran had considerable trouble with a kind of small black ant. The best plan to keep them away was found to be simply putting wood ashes around the hives.

## HUNGARY

### QUEEN VS. LAYING WORKERS.

A correspondent gives the following process to introduce a queen in a colony having laying workers. Behead all the drone brood, smoke the colony thoroughly, take a laying queen from another colony, give her a few puffs of smoke and let her run down on the center combs.—The Magyar' Meh.

### HUGARIAN BEES.

The Banater or Hungarian bees, says Baron Bela Amboozy are an intermediate between the Italian and Carniolan in swarming proclivities, brood-rearing and disposition to crowd the honey into the brood nest. They are much inclined to rob, and to fly after nectar in bad weather, when numbers thus perish. The color is gray, with yellowish abdominal rings and down.—Magyar' Meh.

"He who lies once, a course of falsehood has begun,

For seven lies it takes to keep in countenance one." —Ruckert.

"Perfection is an end that mocks approach indeed,

But one that must be sought by struggling not by speed." —Ruckert.

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An early text book on bee culture was much self lauded, passed through many editions, contained quite as much error as truth and has been buried in oblivion. Does history repeat itself?

There are sins of omission as well as of commission.

Writing from Buffalo, N. Y., a subscriber says: "There is certainly some excellent matter in the May issue of THE BEE-KEEPER, as there is also in April and March numbers. In fact, of all the bee papers of my acquaintance, in point of interesting and instructive articles, the AMERICAN BEE-KEEPER is by no means second to any. I feel quite sure that I voice the sentiments of many fellow bee-keepers when I thank Mr. Allen Latham for his excellent article on 'Mouldy Combs in Spring,' as well as when I express my appreciation of the article by Mr. Geo. W. Adams, 'Farm Bee-Keepers,' in the May issue."

We are informed that Dr. E. F. Phillips of the U. S. Dept., of Agriculture has been assiduously cultivating the acquaintance of the honey producers on their native heath, which is to say in their homes and conventions, in order that he might learn at first hand their needs and the difficulties they encounter, to the end that he may intelligently aid them. In an aside way we may remark that the acquaintances thus formed oft proved a mutual surprise.

A gratifying evidence of the good fellowship and brotherhood existing among honey producers is given by the spread of the knowledge of the "Independent" movement among persons who are not readers of the AMERICAN BEE-KEEPER, those who do read it taking pains to pass the information along.

An interesting manuscript of 1670 describes forced swarming, hiving swarms on old stands and giving brood to weak colonies. And yet some of our contemporaries a short time ago hailed the practices as quite modern.

Spread the news of the twenty per cent discounts and get your local society to follow the lead of New York.



### Destruction Threatened.

There is sometimes a ludicrous side to very grave questions. None, perhaps, more so than the attitude of the lone individual who periodically bobs up with a threat to wreck an established publication by "stopping his paper," because he disapproves of some utterance of an otherwise satisfactory journal.

Since THE BEE-KEEPER discovered the truth in regard to the history of manufactured comb, it has received just three protests against publishing the truth. One from Pennsylvania, one from Illinois and one from Texas. Two of these seek to wreak their vengeance and wreck THE BEE-KEEPER by threats of stopping their paper. Out of, approximately, ten thousand readers the disapproval of two or three does not indicate a very alarming state of affairs.

The only guiding rule in the management of a journal of this kind is the judgment of its editors. If this rule is unreliable, the fault will soon be indicated by a corresponding failure of the enterprise. It is doubtful if any bee journal in the United States has achieved a greater success during the same number of years than now stands to the credit of the AMERICAN BEE-KEEPER. Each passing year adds to our encouragement and success. We have absolutely no reason to anticipate a reversal of our past and present progress. Continued and increased patronage, of course, are essential; and we are being favored with exactly this condition of affairs constantly, and we earnestly solicit the assistance of every independent, progressive bee-keeper in extending the circulation of the paper. We do not, however, ask, nor desire that anyone who feels that we are doing nothing but injury to himself and the cause of apiculture to patronize us for a single day. We shall continue, as heretofore, to grow and prosper.

If these threatening individuals would

really care to see just how badly they would be missed from the ranks of the progressive, and "whole truth" aggregation of our readers, let them wade out into the nearest mill-pond and stab the surface of the waters with a darning needle, then withdraw it and look for the hole. No, there's no hole—just a slight ripple for the passing instant.

### How to Get Rich This Summer.

Mr. A. I. Root, of Ohio, has been spending the winter in Florida, and in a recent number of his journal, *Gleanings*, he tells his readers that orange blossom honey is stored quite extensively in some parts of the state. He thinks the quality is hardly equal to the best white clover honey of the North, but comes very near it. He thinks, however, that in some of the big cities, if prospective customers were given a taste of the goods first, one might sell it at 50 cents a pound. According to Mr. Root's estimate of quality, our northern friends should be able to realize something more than a half-dollar per pound for their white clover honey.

The possibilities of bee-keeping, based upon this estimate, should be encouraging enough to stimulate a very active interest in the pursuit by the inexperienced.

Ninety-seven in the shade, no rain for nearly two months and everything dried up, is the report of a Buenos Ayres, correspondent in the *Irish Bee Journal*, dated Feb. 27. Such conditions are ideal for curing and handling honey; but not so favorable to the secretion of nectar.

Quite a number of bee-keepers this season report a crop of honey from orange blossom. This office, however, has failed to receive the promised samples; and we have never yet seen a barrel of "orange honey."

### Studying With Profit.

"Ponder on what you read." Simple isn't it? But not so easy as it sounds. Prejudice, conviction, settled belief, all unite to prevent a clear or fresh view of old subjects. It is difficult for most of us to grasp the other fellow's point of view, but it is worth much effort to achieve. One good method of getting value from reviews is to select one subject and follow it backwards sticking carefully to that subject and not being diverted by other interesting articles which may fall under one's eye. After all has been read try to sort out in your mind the vital points, classify them and then see if you can form a theory satisfactory to yourself which explains the results achieved under practices considered. So far all is comparatively easy and not much beyond the schoolboy sort of analysis.

Now comes the real delight to the diligent worker, be he in for money or for pleasure. With the bees' habits clear in your mind try to think of some other way to accomplish the same ends. Try the Chinese Way, backwards, the opposite of our own, the seemingly absurd, it may serve to show a simple solution to a previously obscure problem. It is very difficult to break away from custom, particularly of thought. Trying to put our acts in an absurd light, or considering the opposite of the seemingly correct and rational way is often the quickest and surest way to progress.

### What is "The Best"?

To a reader of current bee literature nothing can be more self evident than the fact that merit, with reference to apiarian appliances, is very largely a matter of personal taste or personal preference. Any specific device or system may appeal to one or a few persons, as possessing exceptional merit; and in their hands may, in fact, prove of inestimable value, while to the ma-

jority it may appear unworthy of a test; and if tested, may prove wholly ineffectual.

The disinclination of others to adopt or admire our pet hobbies does not necessarily imply lack of shrewdness, nor dullness of conception; but simply reiterates the established fact that men are different in tastes, temperament, ambition and in modes of achieving their respective purposes.

That is best which best suits ourselves.

### Caucasians Still a Live Subject.

Mr. A. I. Root, who has spent four months of the past winter in Florida, has been experimenting with a colony of Caucasian bees, and is very favorably impressed by his brief experience with them. As in other instances, however, "gentleness" is the captivating attribute.

In the American Bee Journal, Mr. Henry Alley discusses races, and, assuming that the United States government could have no pernicious motive in recommending these bees, thinks they must be good, and advises those who want these bees to try them for themselves. The advice is good if "those who want these bees" are in a position to thoroughly control swarms and drones. Acknowledging with all freedom that the department of agriculture is working for the welfare of bee culture, according to the best judgement of the department, THE BEE-KEEPER would supplement Mr. Alley's advice with a word of earnest caution.

It is indeed noteworthy, in connection with the remarkable excellence of this race, as seen by a few limited experimenters at this time, that the Caucasian has so utterly failed to establish itself in general favor even though it has been a candidate for thirty years.

The attention of the reader is respectfully invited to the situation existing in Germany, as presented in this number by Mr. Otto Lühdoft,

### Cuban Apiculture.

"La Republica de Cuba" is coming to the front in true American style, with its experiment stations and farmer's bulletins. A profusely illustrated bulletin issued in November last, entitled "Apiculture in Cuba," published in Spanish, is a most interesting paper.

The first bees were introduced into Cuba from Florida in 1774, and were the black German race. In 1902—four years after the war—the number of colonies there was estimated at 82,000, 80 per cent of which were in hollow logs.

The Cuban government has caught the Caucasian fever from our own agricultural department at Washington and is hopeful of great things in the future.

The editor of THE BEE-KEEPER was a pioneer in modern apiculture in Cuba, having established an Italian apiary on the south coast some twenty years ago and he has since constantly watched with intense interest the aparian developments of this most lovely and productive island.

Suburban Life, for May, has for its leading article, "Possibilities of Modern Bee-Keeping," by W. Z. Hutchinson. The article is of a descriptive and historical nature and will doubtless prove interesting to the public. Several excellent photographic illustrations, by the author, are given. "W. Z." is an expert photographer, an entertaining writer and a good apiarist, but one of the illustrations mentioned, wherein is shown Mr. Hutchinson himself in the act of uncapping a frame of honey for the extractor, leads us to surmise that there are "slicker people" with the uncapping knife. He has begun his work at the wrong end—starting at the top—and is apparently pushing the capping off, instead of using the regulation two-stroke method, from bottom to top and return. And the appearance of the work behind the knife would indicate that he is contending with thick

honey, a dry knife with a wire-edge and a burden of time upon his hands.

### Artificial Honeycomb.

Recent issues of the British Bee Journal, of London, contain very flashy half-page advertisements of "Smith's Patent Machine-made Honeycomb." Sample pound is supplied in shallow-frame or section-square sizes at three shillings, delivered. Such a radical departure from the established order of things may cause some of the brethren to rise in holy horror, but such a commodity may prove helpful in facilitating the work of producers in taking care of nectar-flows that would otherwise be wasted upon the desert air.

It is an experiment that will be watched with much interest. Its fragile, bulky nature is rather against its shipping qualities, it would appear, as compared with foundation.

Indirectly, though other publications, we learn of the death of Mr. R. B. Leahy, editor of the Progressive Bee-Keeper, Higginsville, Mo. No particulars are mentioned, other than that the "Progressive" has been sold to a poultry publisher in Kansas and that it will be consolidated with a periodical called "The Helpful Hen."

The March number of the Australasian Bee-Keeper, West Maitland, New South Wales, reproduces four entire articles from our January issue. Bro. Pender's excellent taste and judgement in the selection of interesting material for his readers, has long been observed, and is doubtless responsible for the marked success of his journal.

When philanthropic publishers insist on serving your interests, by asking you to merely "pay the postage" on their bee journal, bear in mind that 25 cents pays the postage on exactly 25 pounds of such matter. The crop of pure and wholesome philanthropy seems to be exceptionally heavy in some quarters this season.

Mr. James Heddon, the inventor, apiarist, author and ex-editor, is an expert angler. The fact is, much of his old-time enthusiasm in regard to bees and apiarian matters in general, has been superseded, by a no less strenuous interest in fishing—especially in catching the bass. When he was in Florida, a year or two ago, the editor's camera caught the veteran apiarist, with his son, W. T. Heddon, in pursuit of pleasure at their favorite pastime. A small reproduction of the scene is presented in this number of THE BEE-KEEPER. The picture will be of interest to the older bee-keepers who have followed Mr. Heddon's writings in years gone by.



MR. HEDDON AND SON IN FLORIDA.

#### HONEY AND BEESWAX MARKET.

New York, May 12.—The supply of honey is sufficient to meet demand. The demand is fair for extracted. We quote our market today as follows: Comb, 9 to 15c; as to quality, Extracted, 1½ to 6½. Beeswax 30 to 31c. Hildreth & Segelken.

Kansas City, Mo., May 12.—The supply of honey

is small. The demand is good. We quote our market to day as follows: Comb, 3.25 for white to 2.75 for amber. Extracted, 5½ to 6c. Beeswax, 25. Very little honey here. Looks now as if new honey would sell well. C. C. Clemons & Co.

Boston, March 22.—Our market is practically cleaned up of 1905 crop comb honey, leaving a fair stock of old honey still on hand, which ought to sell well now that the new is out of the way. The market on best grades fancy white, 16 to 7 c, with very little to offer. Extracted, from 6 to 7 c according to quality.

Blake, Scott & Lee Co.

Chicago, April 20.—There is very little comb honey on the market and as usual at this season of the year the demand is very limited. There is no change in the prices obtained from recent quotations. Choice white comb will bring 15c when wanted; other grades are of uncertain value, ranging from 10c to 11c per lb. Choice white extracted 6½ to 7c amber grades 5½ to 6½c. Beeswax 30c per lb.

R. A. Burnett & Co.

Boston and Worcester, April 10.—Fancy No. 1 grades comb honey wholesale for 13c to 17c, No. 2 at 11c. Stock is cleaning up better than last year. Demand is excellent. There have been no full cars sent to Boston this year because so much was carried over from the previous season.

W. H. Blodget & Co.

Buffalo, May 15.—The supply of honey is very light and mostly old and slow sale at low prices. The demand is very poor unless very fancy. We quote our market to day as follows: Comb, fancy 13 to 11c; Poor etc. 5 to 10c. Extracted, light supply 6 to 8c. Cannot advise sending honey at all now as berries are taking its place and very little business.

Batterson & Co.

Cincinnati, May 8.—The conditions of the market, at the present time, are not encouraging. Honey is offered from all sides, at prices, utterly regardless of the value of the article. At the same time, all indications point to an unusually good honey crop, which adds in making it a drag on the market. Offer amber extracted honey in barrels at 5 to 6½c. Fancy white in crates of 260-lb. cans at 6½ to 8½c. We are paying 30c per lb delivered here for choice, yellow beeswax.

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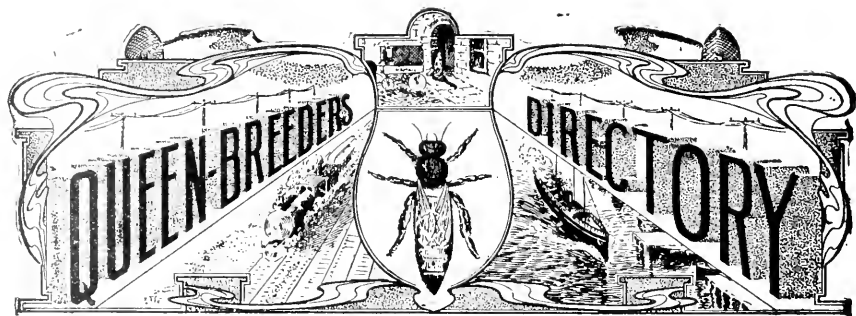
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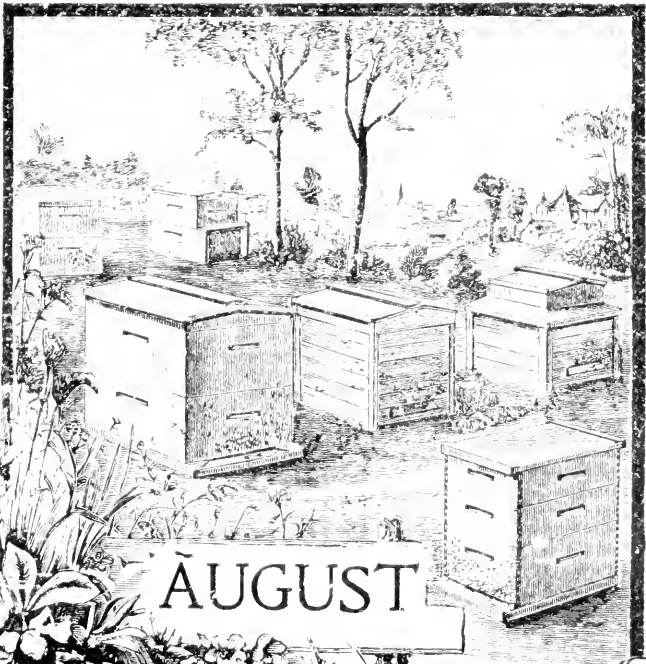
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AUGUST

VOL. XVI

1906

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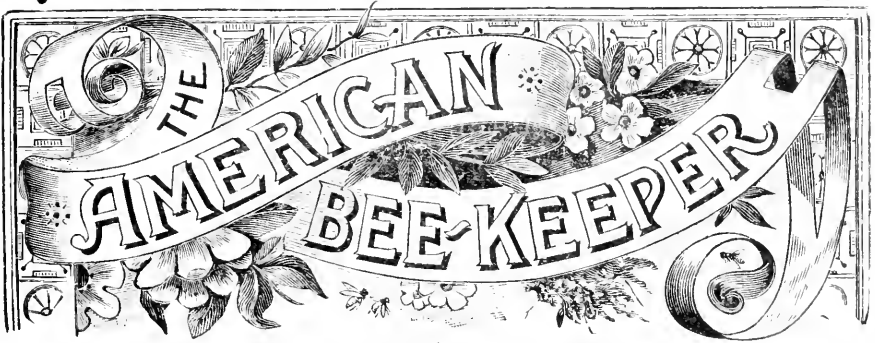
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**The American Bee-Keeper, Falconer, N. Y.**



Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVI

AUGUST, 1906.

No. 8

## New Jersey "In the Swim."

State Bee-Keepers' Association Falls in Line With New York, Pennsylvania, Connecticut and Others.

THE NEW JERSEY State Bee-keepers' Association convention was held at Jenkintown, Pa., June 26, 1906; President W. W. Case in the chair. The Secretary being absent, J. H. M. Cook was chosen pro tem. After the regular business, report of committees, etc., the following officers were chosen: President, W. W. Case, Baptisttown, N. J.

Sec-Treasurer, G. N. Wanser, Cranford, N. J.

The three vice-presidents same as last year.

1st. Vice-President, H. N. VanDuyne, Boonton, N. J.

2nd Vice-President, J. H. M. Cook, Caldwell, N. J.

3rd Vice-President, J. D. Craig, New Germantown, N. J.

Committee on programme, time and place of next meeting: W. W. Case and H. S. Ferry.

The following resolutions were read, approved and adopted:

RESOLUTIONS OF THE NEW JERSEY STATE BEE-KEEPERS' ASSOCIATION,

ADOPTED AT THE ANNUAL MEETING, JUNE 26, 1906.

Whereas, It is evident, and has been for some time, that an understanding, combination, or agreement of some kind, or nature, exists for the purpose of advancing and maintaining the price of bee supplies above a necessary and reasonable profit. Therefore

Resolved, That we, members of the New Jersey Bee-keepers' Association, of bee-keepers in convention assembled recommend and urge the members of this organization and all other honey producers not to purchase or use such supplies in part or in whole. Be it further

Resolved, That copies of this resolution be forwarded to the different county associations and as soon as satisfactory arrangements can be made that the members be advised where the supplies can be purchased at a reasonable price, and that this organization advise the use of such exclusively, and

Whereas, Provided such satisfactory arrangements cannot be made, the

Committee on Supplies are hereby authorized and instructed to take steps necessary for the formation of a stock company, composed of honey producers only, for the manufacture and sale of bee-keepers' supplies.

Whereas, An organization of honey producers should be composed of honey producers exclusively, and work for their interests, and

Whereas, We, the members of the New Jersey State Bee-keepers' Association believe that the National Bee-keepers' Association is largely controlled by other interests, be it further

Resolved, That we, the members of the New Jersey State Association of Bee-keepers in annual convention assembled, recommend the formation of a honey producers' organization that will promote and protect our interests in a businesslike manner, free from all entangling alliances.

Whereas, The President of the New York State Bee-keepers' Association informs us that if we, the New Jersey Bee-keepers' Association, are disposed to co-operate with the New York State Association, he would cheerfully aid us as far as in his power.

Resolved, That we, the New Jersey State Bee-keepers' Association in convention assembled, do accept this kind offer, and our secretary be ordered to inform Mr. W. F. Marks (address Clifton Springs, N. Y.) that we appreciate his kind offer and will be very pleased to have him make any suggestions that would aid or assist the New Jersey Association, and we, the New Jersey Bee-keepers' Association will try to work in accord with the New York State Association in a friendly way, and also the Pennsylvania Association has adopted similar resolutions and will work in harmony with Connecticut and New Jersey.

Adjourned subject to a call from the Committee, with view of having the next meeting just following the New York State meeting and see if we can

procure the same speakers for the New Jersey Bee-keepers' Association.

G. N. WANSER,

Secretary New Jersey State Association.

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### VACATION BEE-KEEPING.

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Allen Latham

SEVERAL YEARS ago I happened to pass through a region where a vast bloom of honey-yielding flowers was in evidence, but no bees, that is honey-bees, to be seen. I thought it a pity that so much honey should go to waste, so I put my wits to work to evolve a hive which would capture that honey in part. Suffice to say that I succeeded in getting a hive which brought success, and has brought about the result that I own numerous small apiaries each numbering from two to ten colonies in various desirable localities. Some of these apiaries I visit frequently, others I visit but once or twice a year.

The hive, which I shall not describe in detail, has twenty large cross-wise frames. The first eight frames constitute the brood-nest the remaining frames are a store-house for chunk honey.

I pass my summers, much of July and August, at the seashore nearly at the end of Cape Cod. Here the soil is all sand, and one would scarcely think it would be a good honey region. No bees were there, and so I took down a colony, which proved so successful that I now have a score or more there.

On Sunday, July 8th, I rode home with one of the natives near whose house I keep three colonies, thinking that I would peep in and see how they were. I had not seen the hives even since late last August (1905). Hive number one was packed with bees and honey. There was sealed honey in the 20th frame. That made me feel good, for there were about 80 pounds of honey there. Hive number two also had

worked in the 20th frame, but was lighter and had but few bees. I pulled out a frame, and there was a cell from which a queen had but recently emerged. Judging by the brood the colony must have cast its prime swarm about June 28th, and its second or third swarm a day or two before my visit.

Hive number three was about a quarter of a mile away from these two, over a hill, in a sheltered nook from which it has easy access to many acres of fall flowers. Farmer S. had said that he had seen few bees about this hive and so I was not surprised to find that it had been without a queen since late last summer. Probably they did not accept the queen which I furnished them at that time and their virgin queen failed them. Enough of the bees had survived to protect the combs, and there was considerable honey in the hive, but no new comb, and no sign of brood. The small handful of bees were apparently putting up a hopeless fight against some robber-bees which had discovered their hoard. Many bees were about the entrance struggling in their death throes. So I fastened a board over the entrance and started away. I had not gone four rods when a swarm of bees was about my head. Quickly getting their direction, which was toward the hive I was just looking into, I rushed back and beyond this. Soon, however, I noticed that the bees were distanced and so turned back, and was delighted to see the swarm hovering over the hive. I removed the board which I had just nailed over the entrance, and had the satisfaction of seeing the swarm enter the hive. The queen was a virgin, showing the swarm to be a second or third swarm from number two. The fighting was between the scouts of the swarm and the old guards of the hive.

The next day I removed the honey from the first two hives and found that instead of its being fall honey of 1905 as I expected, it was all honey of this

year's gathering, mostly from huckleberry bloom. Usually I am able to cut out a fine lot of goldenrod honey.

The same day and the following I went to another apiary where I left eight colonies last August. All had wintered safely. Number one had a drone-layer and there was no honey to remove. Number two had swarmed and had left only about 25 lbs. of honey to cut out. No. three had a prolific queen which had moved back into the store-house and there was a host of bees but little honey. Both numbers two and four had young laying queens. Number five was full of brood and honey, but the queen had bred in nearly every comb and so there was no nice honey, though there might have been 50 lbs. of available honey. The remaining three were in a cool and well shaded nook and were headed by queens from my pet stock. These three were a revelation. I wish that all my friends might have been present when I opened these hives.

These three colonies were started last summer. I had shipped by express some driven swarms in boxes. They were shut up four days and were in a bad condition when I finally hived them on a frame of brood and frames of foundation. I scarcely thought they would more than pull through the winter, and it was with some anxiety that I went to them. My anxiety was quickly removed when I "hefted" from the back. My! but one would think each hive loaded with brick.

Well, friends, I found in those hives great slabs of honey 16½ inches by 11. Beautiful clear honey of a rich amber hue from huckleberry, and rich golden from clover. Even the 20th frame was loaded. I cut out the honey from all but four or five of the rearmost frames for in these frames there was much unsealed honey, and left the hives with six and seven empty frames between the brood nest and the honey in the back. As there is at present a fine

flow of honey on, I think that those three hives have not told their whole story for this season.

These hives are in the back yard of a house right in the town of Provincetown at the extreme end of Cape Cod. They had had no care whatsoever for ten months. I cut out honey to an amount and left honey to an amount, to warrant my believing that those three colonies will yield 350 pounds of honey this season.

The story of the bees in the cottage is very different. My cottage is out in the open, right on the beach "where every stormy wind doth blow," and fog often hides from view everything far and near. I have wintered bees here for five winters, but have never got good yields of honey, though one colony did yield me about 30 pounds one season. They get strong through the summer and then nearly die in the winter. Last fall they got but little honey and three out of the five died. Their death was hastened by the presence of mice which climbed to the piazza roof and entered the hives, there to pass the winter in company with the bees. The two living colonies are fairly strong now and are building up rapidly.

Thus while I am away for the summer with my family at the beach I still make the bees help. The honey finds a ready sale with the summer cottagers there, and the sales help out mightily with the summer expenses.

This rather personal narrative is offered because scattered through it are things of interest, and it may contain suggestions which will help others who know of places where honey abounds, but where there are few bees to get it.

Norwich, Conn.

---

#### Yes He Do.

How doth the little busy bee  
 Improve each shining hour?  
 He crawls beneath your undershirt  
 And stings with all his power.

### THE SEASON IN IDAHO.

#### Swarming Not Held in Check by Trivial Manipulations—A Drone-Comb Proposition.

E. F. Atwater.

WE HAVE HAD a good flow from alfalfa and other clovers are continuing, so we are trying to "get alive" and keep up with the bees. Hope for a second crop also. Have had 156 lbs. from one hive (non-swarmers); while one colony of one-fourth Carniolan, three-fourths Italian has given 100 lbs. and been robbed of all its brood twice, to prevent swarming. Monday we go to our yard of 140, 36 miles from home, to extract.

The man who expects to prevent swarming by shade, ventilators, room in the comb, or any little manipulation, will GET LEFT in a season like this one. Nor is a forced swarm safe from a second attempt at swarming in such a season. A long time advocate of shaking on starters, I have this season made a failure of it by securing mostly drone-comb, even with queens only a year old; but how they do stack up the honey! As the forced swarms have been little less than colossal, I wish that A. C. Miller and Allen Latham would study the subject, please, and determine why, in an extra good season, with extra strong, forced swarms—even with queens less than a year old (not of the present season's rearing) so much drone comb is built. The results were equally poor if hived on starters only, below, or if one or more combs of unsealed brood and honey, a la Gill, were used. My assistant thinks that the stronger the swarm, the more drone-comb, but we can't afford weak swarms, and hiving on foundation or comb (we have practiced this extensively this season) results too often in another swarm in less than a month.

Bear in mind that there has not been a day, since willows bloomed in the spring, when bees would rob, while last year it was rob all the time.

Meridian, Idaho, July 7th, 1806.

## Sentimental Side of Bee-Keeping.

Business is Business, and a Money-Making Proposition  
Should not be Confused With Mere Pastime.

J. M. WEIR.

**M**EN'S OCCUPATIONS naturally divide themselves into the uncongenial and the congenial, the tedious and the amusing. It is unfortunate that they are not more often correspondingly profitable or unprofitable, as the fancy of those affected might dictate. The fact remains, however, that the mechanical trades and kindred occupations by which a large proportion of the population earn a safe and honest living are inherently distasteful to many who follow them. Strained positions, the heat of the sun, or the monotonous repetition of purely mechanical movements, force the most faithful workman to watch the clock with longing eyes and welcome knocking-off time as a release from work that has become almost hateful.

In distinct contrast are those vocations in which, amid pleasant surroundings, the attention is engaged, the interest is excited, the senses are charmed and work becomes delightful. Among the latter class bee-keeping appeals with remarkable force to many temperaments and so much has been said and written on the pleasure of apiculture that it is needless to enlarge on the subject. In favored localities good yields are secured, the bee-keeper is well repaid for his time and business and pleasure go hand in hand. Well and good!

Few of us have not seen the less pleasant picture. A man secures a few colonies of bees, has one or two good crops of honey and the bee-fever straightway claims him for its own. He overstocks his limited field, neglects other work, feeds, sweats, cusses and—buys more bees. It is easy to see what is the matter with him. Doolittle

says that while engaged at queen rearing, care and trouble are all forgotten, and he has found that it is true. The thousand and one patent fixtures and bee-keepers' jimcracks have found their way to his heart and he would rather putter with them than eat candy. He has known the joy of rendering beeswax on his wife's stove and afterwards scraping it up from the floor. He has the ABC book and six different cataloges and he spends his spare time figuring on the new fixtures he will buy as soon as he can afford it. He has gotten so that he does not mind the stings very much and—joy of joys—he has invented a hive of his own, which he intends to patent next fall. He knows that next season will be a bumper crop, and in every sense he is under the spell of the bees.

Seriously, is it worth while? He has his fun, it is true, but that will not pay the grocery bill or buy the baby a new dress. If his is not a good locality common sense would seem to dictate that he sell all but about a dozen colonies and turn his attention to something that will bring returns in dollars and cents, amusing himself with some hobby less expensive to maintain. But he hardly ever does. The devotion to the bees is often as real and ardent as his affection for his family. A very good friend of the writer is a skillful builder and is easily capable of making three or four thousand dollars during a season. Nevertheless he has several apiaries which receive a large share of his attention, though operated at a loss. His explanation is a striking illustration of the introductory paragraph of this article. While busy at the drudgery of his contracts he loses

health and strength alarmingly, and keeps the bees as a means of recuperation.

West Palm Beach, Fla., July 6, 1906.

### MOVING BEES

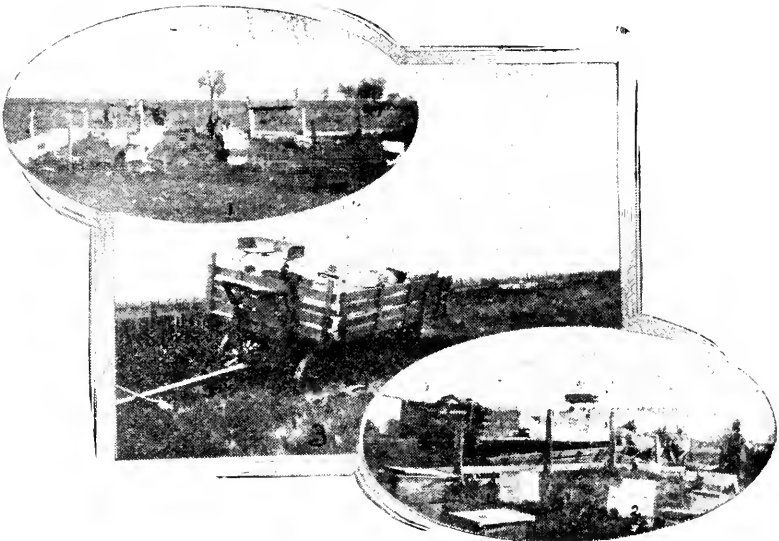
Otto Luhdorff

ABOUT FOUR weeks ago, George D. Mitchel and E. D. Vest, of Ogden, Utah, bought here some 185 colonies of bees. They moved them to the orange orchards 20 miles northeast and will ship them soon to Utah. I thought there was a good chance for getting some interesting pictures for the

ready to be pulled out the field. Mr. Mitchel is standing on the right side.

Picture No. 3. The wagon was started, but horses and wagon bogged down only about 100 yards from the apiary. This was the second bog-down. Two horses went down clear to the breast, and two wheels clear to the axles. The apiary can be seen plainly a short distance behind the wagon on the right side.

They had several more bog-downs, but considering the circumstances this apiary of some 75 colonies was successfully moved out of the field to the road a distance of 1-4 of a mile, within



AMERICAN BEE-KEEPER, as moving bees is generally connected with some troubles. So I took my camera and went with the teams early in the morning.

Picture No. 1 represents the plains of Tulare county with one apiary which Mitchel and Vest bought. G.D. Mitchel is on the right, head uncovered. The two other men are the owners of the teams to move the bees. This picture was taken just after men and teams arrived at the apiary, and was the beginning of the troubles.

Picture No. 2. The first wagon is now loaded with some 25 hives and

about eight hours. It took two teams with eight horses and mules, and four men to accomplish the work.

Once on the road it was easy work. The two wagons were loaded to their full capacity and started for the orange orchards, some 15 miles farther northeast, where the bees should be located for about one month to build up. The teams came back on the 3rd day. Everything had been well finished.

The horses had to be unhitched several times from the bogged-down wagons. Long ropes were attached to the wagons, so eight horses and mules could stand and pull on harder ground, the



wheels were dug out of the mud with shovels and the wagons started again.

The bees will be shipped to Utah in about one week.

Visalia, Calif., May 10, 1906.

### MEETING OF MUNCY VALLEY, PA., BEE-KEEPERS' ASSOCIATION.

**T**HE MUNCY VALLEY Bee-keepers' Association held its annual meeting July 6, 1906 at the home of O. C. Fuller. As Mr. Fuller lives some five miles from Muncy, the most of the members had considerable distance to go to attend this meeting. Notwithstanding this fact there was a fair representation at the meeting.

The company arrived about 10, a. m. The forenoon was spent looking about Mr. Fuller's well-kept premises. The apiary contains some 75 colonies, some 12 or 15 of which belong to Mr. Fuller, Junior, (Russel L. Fuller), an enterprising young man in his early teens.

In the honey-house the company was shown the foundation mills, in the use of which Mr. Fuller is no novice and with which he not only manufactures the foundation needed in his own apiary but also no small quantity for the bee-keepers of this section. In the shop many little ingenious devices were seen, which much interested the visitors, and proved that the man is bound to be a success in his vocation.

After a very enjoyable luncheon at the noon hour, the president, W. P. Merrill, called the meeting to order.

Among subjects under discussion, the report of the committee of the Pennsylvania State Bee-keepers' Association on supplies found a place. After discussing the subject at some length, a committee consisting of D. L. Woods and O. C. Fuller, was appointed to draft resolutions to be submitted to this meeting for their adoption.

While this committee was doing its work, the rest of the company went out to inspect the bees. In a queen-hunting contest between R. E. Merrill and Russel Fuller, the former won,

opening the hive and finding the queen in just one minute.

After the committee on resolutions had finished its work the association reconvened and the resolutions below were submitted and and unanimously adopted.

The Association proceeded to the election of officers for the ensuing year which resulted as follows:

President, W. P. Merrill; Vice president, O. C. Fuller; Secretary, W. E. Logan; Treasurer, F. C. Rickolt; Corresponding secretary, D. L. Woods.

The president appointed D. L. Woods and O. C. Fuller a committee on supplies.

After adjournment the visitors returned to their homes with a feeling that the occasion had been a profitable one.

D. L. Woods.

Sec. pro tem.

#### REPORT OF COMMITTEE ON RESOLUTIONS

Whereas, The Pennsylvanian Bee-Keepers' association in its annual session at State College, March 30, 1906, by a majority vote, declined to hold its next meeting in Philadelphia, and

Whereas, The recent Jenkintown meeting was called thus on R. R. orders: "Pennsylvania State Bee-Keepers' Association to be held at Jenkintown (Philadelphia, Pa.) June 26, 1906," and

Whereas, The meeting just mentioned was called and held under the management of a supply firm. Therefore be it

Resolved, That we, the Muncy Valley Bee-Keepers' Association, assembled July 6, 1906, express our firm disapproval of the use of the name of the State Bee-Keepers' Association in the interest of a private corporation.

Whereas, The committee on supplies appointed at the convention of the Pennsylvania State Bee-Keepers Association, State College, March 30, 1906, announces through the secretary of the state association that it "has been able to make arrangements whereby" certain supply companies "will furnish supplies to members of the Pennsylvania State Bee-Keepers Association (but not to persons who are not mem-

bers) at a special discount price which amounts to about ten per cent. off the list price." Therefore be it

Resolved, That we, the members of the Muncy Valley Bee-Keepers' Association, fail to see in this arrangement any advantage to the members of the state association (with which we are also connected), since, regardless of membership in the state association, individuals have been able to secure greater concessions from other firms than those mentioned in the report. And be it further

Resolved, Inasmuch as it is definitely known that much better rates for supplies were available elsewhere than with the companies named in the announcement of this committee's report, that we believe the committee of the State association must have been either misled or ignorant of these greater concessions.

Whereas, THE AMERICAN BEE-KEEPER has shown itself a loyal advocate of the interests of the honey producers, therefore be it

Resolved, That we, the members of the Muncy Valley Bee-Keepers' Association adopt the above paper as our official organ and urge all our members to subscribe for the same.

Respectfully submitted by the committee.

D. L. WOODS.

O. C. FULLER.

It is further resolved by the Muncy Valley Bee-Keepers' Association that a copy of these resolutions be sent to THE AMERICAN BEE-KEEPER for publication.

The foregoing resolutions were unanimously adopted by the association.

[We have received a photograph of a number of the members of the foregoing association, including the participants in the queen-hunting contest, which arrived too late for this issue, but which will appear in a later number.—ED]

See the special offer of THE BEE-KEEPER on page 178.

## DEALING WITH SWARMS ACCORDING TO NATURAL INSTINCTS OF THE BEES.

C. W. DAYTON.

“AS SOON as the swarm lights on a bush the queen begins to travel through and through the cluster of bees, leaving her scent on each worker she touches or travels over.” This is true sometimes but not always. It is governed by conditions existing in the old hive from which the swarm issued. If there are cells there from which young queens were about to hatch, or the issuance of the swarm had been delayed two or three days by unfavorable weather, the queen in the swarm would be in haste to get entirely away from the neighborhood of the apiary and her nervousness is readily imparted to the bees.

It is commonly supposed that a swarm of bees is only a swarm of bees, all as nearly alike as two peas, but there is really a difference, which is as varied as the numerous kinds of food upon our dinner tables. Let it be meat, potatoes or bread, it is made up or constructed of the same kind of molecules; and that is the same with one swarm or another. The individual bees are the molecules of the swarm. A swarm of bees possesses the power of self-removal. Each bee has a particular disposition which bears an influence on the swarm exactly in accordance with each individual bee's disposition, and this disposition is governed or modified by conditions or environments.

In order to understand food, a scientist studies the consistency and nature of single molecules; so, to understand a swarm of bees we must confine our study and observations upon the individuality of the bees of the swarm. Find out if bees think. And if they think, then how they think and what they think. When it is understood that bees have thoughts, and that these thoughts change at different times and

under different conditions, we will be able to provide for them in a way that will exactly coincide with their notions and our plans will work smoothly and more successfully.

Bee-keeping is not all, or nearly all, elbow work. In fact, it is nearly all something else, while the elbow part is merely the assistant. It is not only brain-labor, but to be somewhat exact, it is intensive brain labor. When we ordinarily see a swarm of bees, about the only thought at first is, "a box to put it in." But the more intensive thought is, will it stay in the box? And will it accomplish anything? What will be the conditions in its hive four weeks thereafter? These are the most vital points to be considered while the swarm is on the bush. It should not be put in a hive to wait to see what it will do. If we possess a fund of bee knowledge to lean upon and bear us out in our efforts we need not leave such things to chance.

To illustrate: toward the latter end of the honey harvest I was in the yard of a neighboring apiarist in friendly conversation when a great roar of swarming bees was heard thirty or forty rods down the road. It seemed to be several swarms traveling together as it was about ten rods long by five or six wide. By the time the leaders were opposite the gate we were prepared for them and gave them shovelfuls of sand and dust. They immediately whirled round and clustered on a bush, enough to fill two or three hives, supers and all. Now I did not want those bees. Even the smell of the cluster betrayed their condition. They were not worth putting in a soap box except out of regard for their usefulness which had gone before. When they were twenty rods down the road I knew they were not worth stopping. Their roar was too metallic and unmelodious to be a natural swarm. About one-third of the bees had no honey and the other two-thirds were

lightly loaded. They were demoralized and low in energy and also in vitality. Consequently when they were on the wing it was a different sound from that of a heavily loaded, happy swarm of bees. My friend filled three hives with them. In three weeks they had gone down to about one hive full, and by fall there were three measly remnants. With plenty of honey all along they had barely enough for winter; the little they had stored was a poor job. They were absconders; either because their hive had too small an entrance and they had worn their lives half out in fanning to prevent their honey from melting down or their brood from becoming overheated, or else their hive had been too small and they had been compelled to cluster outside in the hot sun; or else some apiarist(?) had extracted all their super and lower combs at once. From any one of these causes they would have become discouraged and deserted their hive to leave for parts unknown. Five swarms of this kind are not worth one of the normal kind.

Nothing short of actual practice can elevate the apiarist above chance and haphazard management. Uncertain management is nearly always much wasted energy, hopes and labor, not to say disappointments. And thus the business is robbed of the real measure of enjoyment it should possess. It requires several years to learn to tune a violin, and scarcely a less length of time to judge by the sound of a swarm of bees. That is the reason there are not many at the present day who are entering bee-keeping as a life work; but, as a get-rich-quick plan, rather. They will not spare the time and effort to dip deeply enough to secure a fund of bee knowledge which would pave their future path with constant enjoyment. Their enthusiasm is generally founded upon exaggerated reports or someone's sudden chance success. But a harvest of gold so sel-

dom comes by a chance process that barely one out of several but ends life a desperate failure.

In pocket mining there is a quantity of pay dirt, but it soon becomes exhausted. Then the proceeds are wasted in trying to locate another pocket. But bee-keeping is a mine which has no bottom to pay dirt. It has been worked for thousands of years, to the height of satisfaction, by those who understood the art of working it. It rests with ourselves mainly, or perhaps wholly, whether we are successful.

When an effort or undertaking does not come out an eminent success, at once, some view it as a failure and turn away into some other occupation, when, in reality, they only encountered

a common obstruction which is necessary and appropriate that they should surmount in order to become strong, courageous and resourceful to pass other obstructions. Indeed, to the unskilled there is nothing else besides obstructions; but to the skilled obstructions are enjoyed and are necessary to make the occupation more interesting.

It has been said that no great picture was ever painted with money as the object or incentive. Could it be more applicable to pictures than bee-keeping? Though every one may not become a distinguished bee master, does it not require a measure of the same quality to become an ordinary bee-keeper?

Chatsworth, Calif.

## A Birthday Present.

### A Veteran Pennsylvania Apiarist is Given a Surprise. Blacks and Italians Compared.

W. J. DAVIS, 1ST.

**DEAR BEE-KEEPERS:** As my good wife and children are out of town today and I had to stay at home to look after the bees, I thought it a good time to tell you about my birthday present. Well, it happened in this wise:

On the 17th of May last, our minister, who is a Methodist preacher, and like many a sensible man with a sensible wife and children, was fond of honey. I suppose he had read in the good old book, "My son, eat thou honey for it is good and the honey comb which is sweet to thy taste." Well, he got 30 or 40 of my neighbors into the secret of giving me a surprise. But owing to some important engagement, probably a wedding, he had it postponed until the 18th of May. And when the company were assembled at a place agreed upon, about 1 p. m. I received a call

over the 'phone that a swarm of bees had settled on a lilac in the next yard from where the company met, about 30 rods from my home. I rather wanted to investigate, so took my hiving box and smoker, and went to the designated yard and found a large swarm of hybrid bees, most of them black with some well-marked Italians. I gave them a few puffs of smoke and shook them into my hiving box and hung the box on a limb of the lilac and soon had them nicely clustered in the box.

While this was being done, the company were assembled at the next house watching me get the bees. As soon as they were sufficiently settled, I took the box in my hand and walked home. I hived them on full drawn combs that had not a cell of drone comb, and I reasoned like this: Here is an early swarm and they must have great vigor;

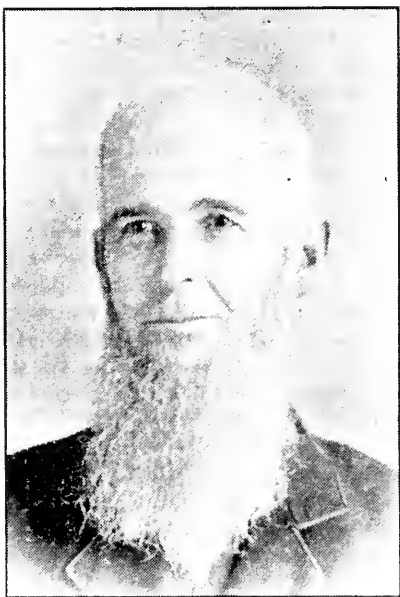
I will see for myself whether they work better than pure Italians. You know that story has been told so much that some people believe it.

Soon after I got home with the bees, another kind of swarm came. They didn't fly, but came on their feet with well-filled baskets of things good to eat. It is needless to add that a good social time and a good feast was enjoyed with about 40 of my good neighbors. And some of them suggested that I call that swarm of bees "a birthday pres-

honey, having the full benefit of the fruit bloom, and I thought of the possibility of their swarming, and as my laying queens of 1905 were all clipped I saw the possibility of Mrs. Black queen carrying out and leading away one of my Italian swarms. So I took out all the comb in search of the black queen. But I might about as well have hunted "for a needle in a haystack." Then I put an Italian queen with two combs of brood, and filled balance of hive with drawn combs and moved the black swarm to a new location, putting the prepared hive of same color in its place to draw off the field bees in order to find the queen. In three or four days I went for that black queen and killed her and gave the colony an Italian queen cell. I found the same disagreeable traits that the blacks had 40 or 50 years ago. If subdued to any reasonable degree they would run in wild confusion. They would volunteer an attack on me in any part of the yard (scolding bees, as Bro. Doolittle calls them) and when brought down by a quick spat of the hands, nine out of ten were black bees. In fact, there is as much meanness to the square inch in a hybrid bee as there is in a mule.

It is all nonsense to talk of crossing Italians with Carniolans or Caucasians to get a better bee than the Italians. I have seen poultry mixed, crossed and re-crossed until a flock of poultry would remind the bible reader of Joseph's coat.

I have got actually tired of reading in the bee papers of "how to prevent swarming." Here's how to prevent it: Give the colony a hive big enough and it wont swarm, and this rule will apply from the equator to the poles. (Excuse this digression.) I dont want any hybrid bees. Some say the Caucasians will not sting. Some say they will not work. Some say that if deprived of their queen they will start 100 queen cells. If I had an Italian colony that would start one-fourth that



MR. W. J. DAVIS.

ent." Well, I did not esteem the present very highly further than the added experience would be of benefit. My wife said, "Oh, do not bother with them; you have bees enough," which was probably true, but if they had located near, either in a hive or tree, they would be a constant trouble from their drones.

The spring being late and frosty, my Italians did not swarm until June 11th. By that time the blacks had their combs well occupied with bread and

number, I am sure the queen that produced such bees would not live her second year. I have not tried the Caucasians, but I accept the evidence of those who have tried them years ago.

Seventy-eight years have taught me that life is too short for each individual to experiment along the various lines of human industry and despise the experience of others.

Youngsville, Pa., July 7, 1906.

### BEES ON A POULTRY FARM

Victor D. Caneday.

AS I HAVE BEEN asked to contribute a paper for this meeting I will give you an outline of our very limited experience in bee-keeping and tell you why we choose to keep bees in connection with the breeding and rearing of our thoroughbred poultry.

About the middle of December, 1899, we bought three colonies of bees for \$6. The low price inducing us at that time to begin bee-keeping. We wintered them in our house cellar and following summer, although a very poor year and many around us had scarcely a swarm and no surplus honey, our three colonies increased to seven and gave us forty pounds of surplus. During the season of 1901 our seven colonies gave us nearly 800 pounds of surplus honey and increased to fifteen stands. Our banner hive that year gave us one hundred and five pounds of surplus from the first swarm and sixty-five pounds from the old hive itself, making a total yield of one hundred and seventy pounds of comb honey. We sold five colonies and began with ten last spring, which increased to eighteen and of that number we have fourteen left, the others having been sold. The honey yield with us this year was only about half what it was in 1901, the ten colonies of last spring's count, gave us a yield of only about six hundred pounds of surplus.

So far we have not lost a colony in any way, with the exception of two

which left for the woods without sufficient notice. With such good success as we have had from the very outset, you will not be surprised to learn that we are quite favorably impressed with bee-keeping as an adjunct to poultry raising and fruit growing.

Perhaps the one thing which most strongly influences people to keep bees is their fondness for honey and with us the supply of honey for our own table was the first consideration.

Bee-keeping is particularly adapted as an adjunct to poultry farming, as the heaviest part of the work among the bees comes at a time when the poultry work is comparatively light. On most practical poultry farms the hatching season closes with May and the work during the remainder of the season is comparatively light, while the work with the bees is most exacting from the last of May through June and July. If the poultry keeper chooses to bend most of his energies to obtaining fall and winter eggs, which are the most productive of profit, he is free to give them his entire attention, as the bees require very little of his time at these seasons.

The labor of both bee-keeping and poultry raising is comparatively light work and to one not overly strong and who feels the need of an open air life there are few occupations which are more attractive and fascinating and certainly few which require so little capital to be invested and yet are capable of furnishing one with a good living if not something besides.

In keeping either bees or poultry it is essential that one apply themselves closely to the work. Although the work itself is not heavy or particularly taxing on one's strength, it requires constant and systematic attention to insure best results. Perhaps anyone very much disinclined to stay at home closely would not find them congenial employments, owing to this particular feature. This, however, would prove no objec-

tion to the many who have a natural fondness for the home life and its rural surroundings. In fact, such would consider it rather a pleasure to stay at home and give these interests the care and attention they require.

Our farm consists of only ten acres and it is devoted to the breeding and raising of pure bred White Plymouth Rocks for breeding purposes. Our busiest time is during the fall and winter, with selling and shipping of breeding fowls and during the spring with the sales and shipments of eggs for hatching purposes. Thus you see our work with the bees comes at a time when other work is not so pressing.

We have quite an orchard of plum trees now well started on the farm to furnish shade for the poultry and incidentally fruit for our table and for sale. Bee-keeping has been taken up as a side line and has been found to interfere very little with our regular poultry work. The chickens are allowed to run among the hives to the mutual benefit, we believe, of both bees and chickens. From the fact that the chickens frequent the neighborhood of the hives so much and we seem to have so little trouble from the bee moth, we judge they catch many of the millers and I am quite certain they catch a great many drones although manifesting a wholesome fear of the workers. In many ways poultry and bees seem to be adapted to occupying the same ground.

The combination of poultry, fruit and bees is a unique one, each contributing to the well-being of the other. Shade is one of the essentials on a poultry farm and nothing furnishes any more desirable shade for the chickens than an orchard of plum or apple trees and either makes a most desirable location for the apiary, especially a plum orchard, for the trees are of a low growth thus preventing swarms clustering too far out of one's reach and in case of its being thought necessary to remove

the branch on which the swarm clusters plum trees are less liable to injure from the unseasonable pruning. It is generally known that fowls are of no small benefit to the fruit trees, not only in consuming many insect enemies of the fruit, but in the increased fertility of the soil over which they run. Fruit growers generally, I believe, recognize the value of bees in fertilizing the fruit blossoms and increasing their chances of liberal yields of fruit, so it will be readily conceded that the production of honey, fruit and poultry products can be profitably and economically combined. However we would not care to engage in the culture of small fruits and bee-keeping together, especially the raising of strawberries, for the heaviest work of picking and marketing the strawberry crop comes just in the height of the swarming season and both require prompt attention to be handled profitably.

Perhaps in the majority of cases where bee-keeping is carried on in connection with other pursuits, it would be found convenient to run principally for extracted honey. One of the chief difficulties with us has been the tendency to excessive swarming when run for comb honey, and by working for extracted honey this tendency seems to be materially lessened, as I believe is the experience of bee-keepers generally. We had one colony the past summer which did not swarm at all and otherwise than the presence of considerable drone comb in the hive we could not see anything to prevent them swarming. It was one of our best Italian colonies and was used to supply breeding drones for the apiary. We thought possibly the presence of so much drone comb had something to do with it, for our other colonies had swarmed more than usual, although the past season has been an unusually cool one, but they were practically without drone comb.

With proper care and the use of modern appliances there is both pleasure

and profit in "bees on a poultry farm."

[The above paper was read at a meeting of the Minnesota Bee-keepers Association, held at Minneapolis.]

### BEE-KEEPERS' EXHIBITION.

#### Worcester County (Mass.) Bee-Keepers' Association

Burton N. Gates, Chairman.

THE DATE for the display to be brought together under the direction of the Worcester County Bee-keepers' Association has been fixed as September 24, 25, and 26, in Horticultural Hall, Worcester, Mass. As mentioned in the schedule of calls, published in AMERICAN BEE-KEEPER, May issue, the hall is fully equipped with all materials to aid the exhibitor. All will be furnished gratis. The exhibition will also be free to the public, which factor will draw several thousand people per day. In this way we hope to educate the central Massachusetts public in honey and bees. Therefore we solicit every bee-keeper far and near to help make this show a success.

Already a large number of communications for space have been received. Specialists, manufacturers and producers have shown their interest, for which we extend hearty thanks.

The writer, in his visits among bee-keepers of New England, has seen the preparations, in many cases elaborate, which are being made by the honey producers. Some of the crops which have been taken off are a delight, and promise sharp competition. The bee-keepers have also shown the writer novelties and curiosities which they are arranging for display. It is evident on all sides that we will have a large, instructive, and, indeed, elaborate display the last week in September.

In order to reach everybody we would bring the matter to the attention of the bee-keepers again, and even ask

them, so far as possible, to aid us not only by displays, but would ask them to see that some notice is placed in their newspapers. This will help to spread the interest. Remember it is our purpose to help the producer to the end of helping himself. This we will accomplish by instructing and interesting the public in hopes of increasing the honey consumption and by directly helping the producer and bee-keeper to modern and better methods.

Please spread the interest and enthusiasm, send displays, come yourself and bring others, and communicate in regard to the Worcester County Bee-keepers' Association's exhibition of bees, honey, wax, and bee furniture, to be held in Worcester, Horticultural Hall, Sept. 24, 25, and 26.

Clark University, Worcester, Mass.

Summer address, Camp Asquam, Lake Asquam, R. D. No. 1, Ashland, N. H.

### THE SEASON IN CALIFORNIA

C. W. Dayton

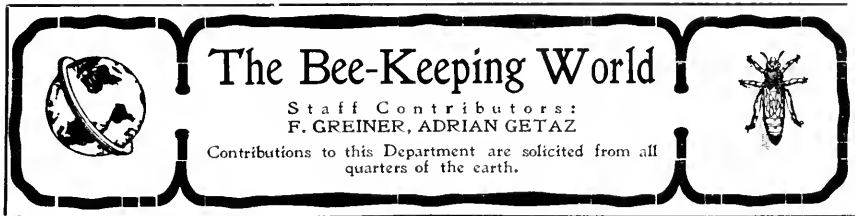
We have obtained about one-third of a crop of honey, nearly all from wild alfalfa, a mountain plant. The honey is a very poor grade, dark and ill-flavored. Alfalfa continued to yield about six weeks this year. Other seasons it comes and goes in a week. Sage yielded very little. Sumac is also yielding some honey and there are one or two plants yet to bloom. It takes about 30 to 40 days to fill a super of 25 pounds. There is considerable old honey in the Los Angeles market, mostly comb.

It is just the kind of honey (this year's) that the mixers like to get hold of. I saw some adulterated last season. It shows there is a tendency that way yet, after all that has been said.

Chatsworth, Calif., July 5, 1906.

Tell your friends of the special offer on page 178.





### FRANCE.

#### ONE RESULT OF FEEDING SUGAR.

An apiarist whose bees had been badly weakened by paralysis was compelled to feed them in the spring to build them up. Not having any honey he used sugar syrup. He made a small crop and sold it. The buyers got suspicious and had some of it analyzed. The honey was found to contain 50 per cent. of sugar, and the apiarist had to pay a fine for adulteration of honey.—*Le Rucher Belge.*

#### TRANSFERING EGGS.

In the *Rucher Belge*, M. N. Mercier has a long article on the sex of eggs, and whether the queen lays the males or females voluntarily or whether it is the compression of the cells that causes her to lay female eggs in the worker cells. He concludes in favor of the first supposition. Among the different experiments he made is the following: Drive a colony of bees in a straw hive or any kind of suitable box. Put it on a black cloth. The queen being full of eggs is compelled to lay them or rather expell them at least for some little time. These eggs can easily be seen on the black cloth. Take a needle, dip the point in the white of an egg—not a bee-egg, but a hen's egg. Now touch the bee-egg with the needle and it will stick to it. Furthermore it can be deposited in a worker cell and will hatch in due time. The fact in itself has no great value, but it occurred to me that instead of transferring larvae in queen rearing, it might be well to transfer eggs. An objection to transferring

larvae is that there is some interruption in their feeding; and while it may possibly never do any harm it would be better to avoid it.

While on the subject let me relate something that took place right here in Knoxville, Tenn., U. S. A.

A country bee-keeper had somehow or other got hold of something about modern queen rearing and transferred larvae and got enthusiastic about it. One day I met him and he told me all about it, but made several mistakes. For one, he speaks all the time of "transferring eggs" instead of larvae. I finally asked him "how do the eggs stay in the cells? It looks like they ought to fall out." He stood about half a minute silent, or rather dumb-founded, scratched his head and then all at once brightened up and said: "Oh, they put a little honey in the bottom of the cell and the egg stick to it."

After all why could it not be done?

### GERMANY.

#### LAWS GOVERNING ADULTERATION.

The honey producers in Germany are still waiting for the desired honey legislation, which has long been urged by the bee-keepers' societies. It seems so natural and just that the product of the hive should enjoy the protection of the law, and it is strange that legislators dare to refuse to enact so just a law. In the state of New York it is unlawful to offer for sale any compound under the name of "honey" If such a compound is offered it must sail under its own flag, and if real honey is an ingredient the word honey must appear

in the same sized type upon the analysis. This is a good law and every state in the Union and every foreign country should follow New York's example. If not, why not? \_\_\_\_\_

#### SEEKS TO EXCLUDE FOREIGN COMPETITION.

H. Schmidt says in Leipz. Bztg. that Germany imports yearly about five million pounds of honey (extracted) at about ten cents per pound. To produce this amount of honey would require the keeping of 250,000 colonies of bees at an average of 20 pounds per hive. His opinion is that Germany is already so well stocked up with bees that it would be impractical to increase the number by 200,000, not taking into consideration that the German bee-keepers would not be willing to sell their own product at such a low figure, in fact, could not do so profitably. He concludes that the only method to drive the Brazilian, Cuban and California honey out of the market would be to place a prohibitory tariff upon this product, which is not likely to be done. \_\_\_\_\_

#### BUT NOT IN IRELAND.

As a lubricator for the Rietsche foundation press (and probably for other foundation mills) M. Barthel discovered that potato water (juice) answers the purpose admirably. By way of explanation I want to say that in certain portions of Germany (Thuringia, for example) the people prepare a peculiar kind of "potato dumpling" (Thüringer kloesse). The raw potatoes are pared and grated, then placed in a coarse sack and put under press. The water or liquid from this pressing is full of starch, and it is owing to this starch that the foundation is released from the press when used as a lubricator.—Deutsch Bzcht. \_\_\_\_\_

#### SCHULZE'S MOTHER MUST BE A YANKEE

A. Schulze advertises in Kolonialwaren to sell a recipe for honey. Its principal ingredient is buttermilk. \_\_\_\_\_

#### BELGIUM.

[Le Rucher Belge.]

#### UNITING.

It is sometimes difficult to unite colonies without having them fight. The editor of the Rucher Belge advises to place in each of the colonies to be united a ball of naphthaline two or three days before the uniting. In uniting shake the bees of both colonies in front of their new home, dusting them with flour. There never will be any fight between bees thus treated. \_\_\_\_\_

#### PREVENTION OF SWARMING.

When a colony has begun queen cells, it is moved to a new location. Another hive is placed on the old stand and the supers put on it. In order to retain the field bees it is necessary to put in the hive a comb of brood. No swarming will take place in either during the next ten days, and further, the swarming fever will disappear. After ten days the original colony is returned to its old stand. The extra combs must be disposed of elsewhere unless both stories are used. As there is no queen on the old stand, these extra combs will have no brood. The queen cells have been destroyed in the old hive owing to the absence of the field bees. Queen cells have been built in the comb on the old stand, and the apiarist can have a new queen if he wishes. \_\_\_\_\_

#### BLACK BEES PREFERRED.

One of the bee-keepers' association of Switzerland sent to its members cards asking which race of bees they liked best. . . 1865 preferred the black bees, 147 the Carniolian, 48 the Italian, and 393 the hybrids. \_\_\_\_\_

#### STRONG COLONIES FOR SURPLUS.

A series of experiments made by Mr. Martin gave the following result: 1st. Small colonies of about 30,000 bees gave an average of 18 lbs. of surplus. 2d. Strong colonies of about

60,000 bees gave about 46 lbs. 3d. Extra strong colonies of about 120,000 bees gave 165 lbs. each.

#### INCREASE OF CHOICE STOCK.

Mr. A. Crousse gives the following process to increase the number of colonies of a superior stock. The process is especially adapted to the straw or box hives, but can be used with any kind. When the colony of choice stock swarms, hive it on the old stand, and move the old hive to a new place, but on the stand of another colony, this last one being placed on a new stand. Of course the choice colony receiving thus a full field force of bees will swarm again. When it does, repeat the same process as often as the colony swarms and there will be a number of strong colonies of choice stock in the apiary. Or the apiarist can drive the first swarm out from the mother colony if he prefers.

Mr. Crousse claims that the placing of a frame of foundation in the middle of the brood nest will prevent the bees from making further attempts to swarm.

#### BEEES AND RED CLOVER.

Mr. Emile Van Hay announces his intention of experimenting on the subject of bees and red clover. He is trying to create by selection a race of bees with longer tongues, and a variety of clover with shorter blossoms. He declares he will put in as many years as necessary (if he lives).

Measurements of tongue lengths of different colonies of black bees gave from 71 to 92 tenths millimeters, measured with the glossometer Charton. These lengths are not strictly the length of the tongues, but the distance a bee could reach the honey through a piece of wire cloth. Furthermore they refer to separate colonies, but not to individual bees. What difference might exist between the different bees of a

colony was not investigated. In a very dry year, he saw bees in quantity gathering honey on some red clover fields. He thinks that the dry weather prevented the flowers from growing to full length and thus made the nectar accessible to the bees.

#### JAPAN.

An English bee-keeper reports in the British Bee Journal as follows about the bee-keeping pursuit: Honey is in Japan principally as medicine. The most common hive used is a square box of a cubic foot with a hinged door at the back. When honey is wanted the combs are cut out, mashed (brood and all) and squeezed out. Little wax is produced, though much vegetable wax is used in the arts and mechanics. The native bees in Japan are smaller than the European bees, and do not readily take to our comb foundation.

After two years of experience the writer has concluded that it is cheaper to buy his honey than raise it, as the bees do not store honey to the extent they do in western countries. The bees also have many enemies, of which the most important are the wax moth, wasps and lizzards.

#### AUSTRIA.

##### TEST FOR EGG-MOVING

During the years past much has been written in regard to bees moving eggs. Few contend that bees ever do. A bee-keeper of Austria suggests in Deutsch Imker, to make the following test: Hive an after-swarm on five frames half filled with foundation. On the fifth day remove the queen; at the same time make an examination to be sure that no eggs have as yet been deposited in the newly constructed combs. Three days after this open the hive. Many queen cells will be found stocked up with food, but with no brood. Give the colony a frame of open brood and

eggs. After another three days the queen cells will be found to contain brood (?).

WHAT ABOUT MRS. BIENEN-VATER'S PILLOWS?

The Bienen-Vater recommends as a remedy for dandruff to dissolve one tablespoonful of honey in a pint of warm water. Wet up the hair before going to bed. A few doses will suffice.

SWITZERLAND.

AND THE MAJORITY IS SENSIBLE

One thousand Switzer bee-keepers are engaged in queen rearing. Of these 77 per cent favor the black bee (German or brown bee); 15 per cent prefer a hybrid bee, 6 per cent the Carniolan, leaving only 2 per cent for other races, which is a bad showing for the Italian blood.

DIRECT INTRODUCTION.

Dr. K. Bruennich is very much in favor of the direct introduction of queen bees, also called the Simmins' method and advocated by A. C. Miller. He says it is an infallible plan. The use of tobacco smoke is to be preferred. —Selh pz. Bztg.

CHILI.

Prosch, a German bee-keeper in Gorbea, says that Chili will hardly be much of a competitor as regards honey production. The climate is extremely favorable for bee-keeping but pasturage is lacking. The Italian bee was imported over 50 years ago and is the only bee kept.

Season in New York.

In certain localities honey is coming in quite fast here, in others but little so far. There have been severe storms and hail has done a great deal of damage. The hail-stones came with such force and of such size (from six to nine

inches in circumference) as to cut holes through the roofs and kill stock. In these sections there may be very little honey. One of my outyards (unfortunately the smallest) bees are doing well.

Yours,

F. GREINER.

Naples, N. Y., June 29, 1906.

WANTED:—by Chicago wholesale and mail order house, assistant manager (man or woman) for this county and adjoining territory. Salary \$20 and expenses paid weekly; expense money advanced. Work pleasant; position permanent. No investment or experience required. Spare time valuable. Write at once for full particulars, and enclose self-addressed envelope. Address, GENERAL MANAGER, 143 E. Lake St., Chicago, sept 6t

HONEY AND BEESWAX MARKET.

Chicago, July 9.—Market is practically bare of comb honey and while a little sells at about 15c per lb, for the best white grades there is little volume to the trade. Extracted in some demand at 6 to 7 c, for the sweet grades, but off flavors are about unsalable at 5 to 5½ c. Beeswax selling upon arrival at 30 c. per lb.

R. A. Burnett & Co.

Boston and Worcester, July 18.—Our market is entirely cleaned up on honey. We sold last lot at 15 c. Prices throughout season for good stock have been from 14 to 17c. There has not been any over-supply on the market, therefore conditions have been favorable for good prices. We understand there is to be quite a good crop next season but still we hope to have a good, fair market, although possibly not quite as high as this season.

W. H. Blodget & Co.

Kansas City, Mo., July 17.—The supply of honey is somewhat limited with demand fair and increasing. We quote our market today as follows: Fancy white per case [24 sections] \$3.00. Extracted 5½c. Beeswax none. No new extracted honey as yet.

C. C. Clemens & Co.

Buffalo, July 16.—The supply of honey is coming slowly, while demand is increasing. We quote our market to day: Fancy comb, 14 to 15 c. Extracted, 5 to 8 c. Beeswax, 28 to 30c. Strickly fancy is wanted but Nos. 2 and 3 sell slowly at 10-12c. Old unsaleable stock slow at 3 to 5 c.

Batterson & Co.

Cincinnati, June 15.—The demand for extracted honey has brightened up within the past thirty days. However, there is much of last season's crop still unsold, which tends to hold down the price. There is no material change in prices since our last quotation. Quote amber in barrels at 5 to 6½c per lb. No new white clover extracted honey on the market as yet. Find ready sale for new crop of comb honey at 14 to 15½c. For choice, yellow beeswax we are paying 30c per lb, delivered here.

The Fred W. Muth Co.

51 Walnut St.

New York, May 12.—The supply of honey is sufficient to meet demand. The demand is fair for extracted. We quote our market today as follows: Comb, 9 to 15c; as to quality, Extracted, 4½ to 6½. Beeswax 30 to 31c. Hildreth & Segelken.

THE  
**AMERICAN BEE-KEEPER**

PUBLISHED MONTHLY

**THE W. T. FALCONER MFG. CO.**

Proprietors

PUBLISHING OFFICE..... FORT PIERCE, FLA.  
HOME OFFICE..... FALCONER, N. Y.

HARRY E. HILL..... Editor

ARTHUR C. MILLER... Associate Editor

**TERMS AND PRICE OF SUBSCRIPTION:**

Fifty cents a year; three years, \$1.00. To new subscribers only, on trial, one year, 35 cents. Payment always in advance.

**ADVERTISING RATES:**

A limited number of strictly legitimate and acceptable advertisements will be inserted at the following rates:

Regular advertisements (agate measure) 15 cents per line.

Reading notices (set in nonpariel) 20 cents per line.

Special location, 25 per cent extra. Cuts inserted without extra charge.

**DISCOUNTS**—On continuous insertions we allow the following: Three months (3 times) 10 per cent. Six months (6 times), 20 per cent. Twelve months (12 times), 30 per cent.

**HOW TO ADDRESS.**

The home office of The American Bee-Keeper is at Falconer, N. Y., and all matters relating to subscriptions, discontinuances, changes of address, advertising or other business should invariably be addressed to the Falconer, N. Y., office.

Matters relating to the editorial department—manuscripts, photographs, or correspondence in any way referring to articles that have been or are to be published, should be addressed to The American Bee-Keeper, Fort Pierce, Florida.

**DISCONTINUANCES.**

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrears, if any are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

**SUBSCRIPTION RECEIPTS.**

We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered. The date printed upon the wrapper label of your paper indicates the time to which you have paid. Our subscribers will confer a favor by observing the date, as noted, and promptly renewing or requesting the paper discontinued at expiration of time paid for, as may be desired.

Reports from various parts of New England indicate an abundant honey crop, a veritable old timer. Some very fancy honey has been secured but some places report honey dew as abundant and as having darkened the "white" honey. New honey is already on the market.

At the recent meeting of the Pennsylvania Bee-keepers Association held at Jenkintown, Pa., one of the "exhibits" which created much amusement was an old man who went about introducing himself as "I am Blankety Branch" (we omit his real name) and seeming much surprised and disgusted if the recipient of the "honor" did not show due delight and adoration. His egotistical antics added much to the entertainment of the visitors. The boys who stay away from the conventions often miss rare enjoyment.

One of the greatest frauds perpetrated on bee-keepers was the exploitation of the eight-frame hives. Its chief object was to enable dealers in bees to sell for five colonies what, save for the addition of a queen and a hive together costing the seller less than \$1.50, had formerly constituted four colonies.

An officer of one of the Pennsylvania societies writes: "I must congratulate you upon the stand you have taken in our fight. Keep up the good work, and the time will come when the bee-keepers of this country will have their eyes open." Trust THE BEE-KEEPER, brother.

By the first of September nuclei and weak colonies must be strengthened if they are to be ready for winter, and the novice will do well not to put off after then the union of such. Late united nuclei do not make good colonies for successful wintering.

If you live in New England remember the Bee Show of the Worcester County (Mass.) Association. Prepare exhibits for it. Go see it. See an article by the Chairman in another column.

The wise honey producer will carefully sort out his honey, keeping the fine flavored by itself and the less desirable by itself. It pays.

**Requeening.**

If you wish to requeen any or all of your colonies now is the time to do it. The young queens introduced in August have ample time to stock their colonies with young bees before the cold weather, and if the introduction is made early in month their bees will be in the best condition to get the fall flow.

Dequeening and requeening means more or less interference with the work of the bees, hence it is to the evident advantage of the bee-keeper to perform such operations when the bees are doing the least gathering. Early August is, in the Northern states, the best season for such work, but it varies in the different locations with the varying flora, and also from year to year as the weather varies the production of the flowers. But bearing in mind the essential factors above alluded to each person can time the work to fit the local conditions.

**Amusing.**

Quite amusing is the spread-eagle exploitation of new schemes and methods in honey production, when said new schemes call for new appliances and contraptions which the exploiters may be able to sell to the inexperienced.

Less amusing but quite as illustrative of men and methods is the short shift these same exploiters give to new systems when they can get no coin therefrom.

The beginner will do well to be cautious about investing in the articles thus boomed. The veteran only has to look back through the files of his papers or in his lumber loft to see myriads of similar devices for getting between the bee-keeper and his money.

Owing, perhaps, to the protracted drouth throughout the Northern states, the queen trade is reported by some breeders as not being very brisk during the past season.

**The Independent (?) Press.**

Silence may be golden, but how about the silence of the bee press on the "independent movement" and the resulting lowering of prices of supplies? Save for the Rural Bee Keeper and the Apiarist, outside our columns, not a word has the avowedly independent press said as to where and how its readers may save twenty per cent in the cost of their supplies. Assertions of the non-existence of any "understanding," "agreement" or "combination" between the editors or publishers of those papers looks very dubious in the face of their eloquent silence on matters of such financial importance to their readers.

Mr. F. D. Look, Campbell, N. Y., an experienced bee-keeper, finds a number of sections, containing new honey, the centre of which is granulated, and he asks as to the cause. If the combs are of this year's building, we are unable to explain. If the honey was stored in combs carried over from last season, they probably contained a small amount of honey in which granulation was effected last winter. In the latter case, the process might continue in that more recently stored. If any of our readers have had experience along this line, a statement of same is invited.

Having all colonies headed by queens of the same age introduced at the same season of the year and reared from the same stock will result in more uniform work of the colonies, lessen the labor of the apiarist, and increase his profits.

The convention of the National Bee-Keepers' Association this year will be held at San Antonio, Tex., November 8, 9 and 10.

The Rural Bee-Keeper has reduced its subscription price from \$1 to 50 cents a year.

### The New Bee Journals.

The *Apiarist*, the bee journal recently started at Waco, Texas, is really making a very creditable start and displays considerable strength in its list of practical contributors.

Texas is a great state and within her borders are operated some of the largest and most profitable apiaries of the country. The *Apiarist* is conducted on independent lines, and as long as it adheres to this policy, and caters unwaveringly to the interests of the bee-keepers, and leaves the supply dealers and manufacturers to root for themselves, it is the duty of Texas bee-keepers to heartily support it. They should subscribe, advertise, talk, work do everything to place it on a substantial basis, and thereby have an independent mouthpiece of their own. Of course, if it ever unites with the clique and smothers everything excepting that which conspires to further the personal interests of a few who would dominate American beedom, they should drop it like a red-hot stove, and let it look for support to those whose interests it does defend.

A few short years ago the *AMERICAN BEE-KEEPER* launched upon the turbulent sea of apiarian journalism, and was tendered the sympathy of the old established journals. Of course it could not last long, and the effort was considered useless. It has won, and today would not hesitate to compare subscription lists with the oldest bee journal in America. and we are not done, for every day adds to its strength and influence. It is fighting for the bee-keepers, not exploiting any line of supplies.

### Scent at a Premium.

Where was Mr. A. C. Miller when the *AMERICAN BEE-KEEPER* for June was being edited? Mr. Dayton, on page 109 gives him some food for thought: "As soon as a swarm alights on a bush the queen begins to travel through and

through the cluster of bees, leaving her scent on each worker she touches or travels over, and this is the main stimulus that causes the bees to seek isolation from the parent hive." The words I have italicised open up a new "odor theory."

The foregoing is from a recent number of the *British Bee Journal*, of London. In reply we have only to say:

The editors of the *AMERICAN BEE-KEEPER* do not permit any preconceived ideas of their own to in anywise interfere with a free and full expression of the ideas of other bee-keepers. They make no pretense to holding a monopoly on useful ideas or to having "cornered" apiarian wisdom. They especially invite the expression of thought upon opposition lines, in order that the truth may develop.

The weakest kind of trade journal is that which declines to publish anything in opposition to the editor's grounded faith. "In a multitude of counsel there is wisdom."

### Bees North of the Arctic Circle.

Mr. W. S. Hart, who occasionally writes for these columns, and who is one of Florida's most progressive and prosperous apiarists and orange growers, travels extensively during the summer months. In a recent letter he says:

"Last year I noticed quite a lot of white clover bloom north of the Arctic circle, but no bees on any of it. I c'o not think they can stand the winters up there."

### Nine Till Six.

"My business belongs to me twenty-four hours a day. I belong to my business from nine till six o'clock. From six till nine I must be free. I can do more work by thus restricting my hours of business, and I believe I can do better work in those hours."—The *Business World*.

### The Move For Independence.

In this number appears a report of the Muncy Valley (Pa.) Bee-keepers' Association, including important resolutions adopted by that organization. Also a report of the New Jersey meeting at Philadelphia, which also passed radical resolutions bearing upon the matter of supplies at a fair price for the honey producer.

It will also be noted that the former society formally recognizes and indorses the efforts of the AMERICAN BEE-KEEPER in behalf of the real producers, as has already been done by the New York State Association.

No movement since the introduction of modern bee-keeping has taken a deeper hold upon the honey producers, nor so thoroughly agitated the fraternity as this matter of having their affairs dominated by interests which are obviously apart and distinctly at variance with their own; and the agitation promises to shake American beedom from centre to circumference before its abatement. It is a question bearing directly upon the interests of every bee-keeper in America, and its tendency is to effect a saving upon the part of the bee-keeper, with a corresponding decrease of profit to the manufacturer of supplies. The bee-keepers, we think are making no unreasonable demands—they ask only a fair deal for all concerned, and it is obviously the plain duty of any journal posing as the champion of the rights of the producing fraternity to espouse the cause and lend all aid possible in the achievement of equity in the business relations that are necessary between manufacturer and consumer. They ask to be permitted to control their own business affairs and organizations, and feel that they are actually competent to do this without the guiding hand of foreign interests which have amassed wealth and influence through their own labor, while they themselves plod wearily on from year to year with a meager sub-

sistence.

From Maine to California the bee-keepers are clamoring for an audience in this, their appeal for independent action among bee-keepers, yet the older and "leading" (?) bee journals have been, and probably will continue to be as mute as an Egyptian tomb upon these questions of such vital importance to the producing industry. Each successive issue continues to grind out instructions as to when supers should be placed upon the hive; and their readers are kept informed as to the latest and most expeditious manner of taking out combs from the hive when extracting. The wonderful results that may be or have been achieved by the use of Dooflicker's wonderful patent hive, to which an extra layer of paraffin paper has been added somewhere between the recently improved automatic sliding bottom-board and the wonderful lightning-proof cover.

Be it said to the credit of American bee-keepers that they are awakening to the demands of their business interests, which shall not be smothered through lack of a mouthpiece in heralding their plea abroad. The names of the few leaders in this important work shall live in the archives of beedom so long as history preserves the records of our industry upon the American continent.

### Stingless Bees in Philadelphia.

An educational field meeting was recently held at the apiaries of W. A. Selser, near Philadelphia, at which the public witnessed numerous demonstrations by practical operators. In its report of the affair the Philadelphia North American says:

"Chief of the demonstrations was that of the stingless bees procured in South America by W. K. Morrison. To obtain the two colonies he traveled 300 miles up the Oronoco river, and the insects are the first of their kind brought to this country.

"But what they lack in stinging



ability they more than make up for by scratching. They plant themselves on the face, hands and even in the hair of the nearest person, and will scratch until removed one at a time. Mr. Morrison and half a dozen experts who assisted him in demonstrating had more trouble than all the other demonstrators of stinging bees combined.

"When they opened the hives every one expected the bees to come out and be absolutely harmless. In spite of the veils which all the demonstrators wore, the bees soon got in their scratching work. For a time it seemed as if the stingless bees would drive the demonstrators from the platform, to the amusement of the crowd.

"Say," shouted one tormented demonstrator, 'take these bees away and send some up here that sting!' which was greeted by a hearty laugh. In his talk on the stingless bees Mr. Morrison explained that the advantage of the bee was not that it did not sting—he couldn't very well have said so, after the demonstration—but that it produced a superior quality of honey, and in larger quantities than the ordinary stinging bee.

"The honey cells resemble large cups, and the honey is easy to get. The colonies of the stingless bees are much smaller than those of the ordinary bee, there being only about 2000 bees in the former, whereas there are about 50,000 to 100,000 in the latter. An effort will be made to breed the stingless bee in the United States, and Mr Selser will at once obtain some for his apiaries."

#### Truth Stranger Than Fiction.

Even in bee-keeping the force of the adage "truth is stranger than fiction," is sometimes thrust upon us. During the bitterly cold days of the middle of May, an expert, in going his rounds not a hundred miles from where I write, found hives with all wraps removed and the frames entirely bare. The owner said he thought the bees "too warm"

when covered. Was Rip Van Winkle a creation of an imaginative brain, or is it possible that he was only a type of many who move amongst us, and who have just awakened from a twenty years' mental slumber to find that in ideas and knowledge their wide-awake contemporaries have completely outstripped them? It is hardly possible to imagine a bee-keeper, with half a dozen years' experience behind him, stating seriously, on a cold, spring day, that his bees were "too warm." Yet the fact remains, and it may be necessary to remind your readers of what Mr. O'Bryen impresses upon his pupils, namely, that "a hive is an incubator in which there may be sixty thousand eggs and young bees hatching out."—*Irish Bee Journal*.

#### Wiring Foundation.

Four or five vertical wires cut to short length, say, 7½ in., and embedded (roughly spaced) in the foundation before fixing, and one horizontal wire near the bottom of the frame itself, would, I think, give good results with foundation which showed signs of sag. The vertical wires would support the foundation during building, and the horizontal would support the weak spot in the completed comb.—*British Bee Journal*.

#### 1906 Honey Crops and Prospects.

The following is from a bulletin issued to members of the National Beekeepers' Association, by General manager N. E. France, which records the status of affairs up to June 25:

Southern California: Fair crop—better farther north in state.

Texas: Three crops; first two, failure; last, good.

Colorado: Light crop; some lost heavily their bees in winter.

Mississippi Valley: Not half crop.

Michigan, Ohio and Indiana: Half crop.

Eastern States: Mostly good reports. 1905 crop about all sold; market bare; demand good.

**Special Notice.**

We have in prospect some important changes, with a view to materially improving the AMERICAN BEE-KEEPER at an early date, and the editor earnestly desires that every subscriber shall be paid up and in advance, in order that ample funds may be available for the consummation of our plans. Therefore we have decided to make an unprecedented offer to our present and prospective subscribers:

During the months of August and September we shall receive subscriptions, to apply on future issues only, and for any length of time desired, at 25 cents per year. This offer is open alike to new and old subscribers; the only conditions being that all arrearages shall be paid up, and that the 25-cent rate shall apply on subscription beginning not earlier than August, 1906.

By this offer patrons are enabled to secure the AMERICAN BEE-KEEPER four full years for one dollar, and we trust many will promptly avail themselves of the opportunity. Better consult the wrapper label on this number, note the date to which you are paid, and write at once, enclosing the amount necessary to pay up for the current year and four years in advance. If you attend to the matter today, it will be done, and the regular monthly visits of THE BEE-KEEPER for the next four years will thus be assured. It is very doubtful if such a liberal offer will ever again be made.

By telling your neighbor bee-keeper of this special offer, and inducing them to join with you in sending in their subscriptions for even one year (at 25 cents) you will be rendering a great service for which we shall be truly grateful.

**Keeping Forty Million Bees.**

At the late Chicago Convention one item of the program read: "How many bees shall a man keep?" With Mr. E. D. Townsend's aid I work it out as

about 40,000,000! Mr. Townsend keeps 800 colonies at times. Giving each of these a population of 50,000 bees in the height of the season, we find his live stock should total up to the foregoing. But the gist of his article leads to the belief that he considers 100 colonies in one location the ideal number, and a total of 500 colonies as sufficient to make him "quite sure of depending on the bees for a living, and a little extra for a rainy day." We in this country are far short of this ideal, so it is no wonder our editors invariably warn enthusiasts on paper to "ca' cannie" in starting an apiary as the sole means of subsistence. Very few, even in America, I think, believe in keeping many colonies in one locality. I note Mr. M. A. Gill, who has over 1,000 colonies, has "eleven apiaries, containing a little over 100 colonies each." This may be taken as the "standard" sized apiary. —British Bee Journal.

**True, What There is of It.**

The Irish Bee Journal says:

The Americans are beginning to go for those publications that are run for ads., and to maintain the selfish interests of the owners. At a recent convention of the New York State Association, the president declared that the majority of the papers dealing with bee-keeping are run for private ends, and not for the good of the man who produces honey.

Our esteemed contemporary might have added in its comments that the same "recent convention of the New York State Association" commended and formally indorsed the policy of independence and fidelity to the interests of the honey producer pursued by THE AMERICAN BEE-KEEPER.

The American Bee Journal has treated itself to a new cover design that is both pretty and appropriate. It has also introduced a number of specially designed department headings, as well as a full set of "running heads," all of which contribute to the attractiveness of the paper. Typographically, the A. B. J. is now a "peach."

### One Cause of Excessive Sales Expense.

It is a good article, business is not flat and still it costs too much to sell. The results of the work of the sales force are not as satisfactory as they should be. Why?

Two to one it is lack of appreciation of the article among possible buyers. A man wants a thing and will pay for it, not in proportion to its merits but in proportion to his opinion of its merits.

But opinion cannot be made in a minute. Time is one of the ingredients of reputation. The high esteem of an article which is necessary to an advantageous sale should be created in advance. At the time the thing is wanted the buyer is preoccupied with the idea of the price and is not especially receptive to arguments as to merit.

Probably a third of the money now spent for selling ought to have been spent a year ago for reputation making by means of a printing press.

It is a pretty easy matter to sell a thing when possible buyers have been made to want it.—Selling Magazine.

### What is Horse-Mint?

Naples, Ont., Co., N. Y. July 2, 1906.  
Editor BEE-KEEPER:

I should like to know what is meant by horse-mint. I see by our town paper that a swarm in Texas gathered 1,000 pounds of honey from it in one season.

A READER.

Horse-mint is a nectar-yielding plant (*Monarda aristata*) which grows both North and South, but perhaps more abundantly in Texas than elsewhere in the United States, though Wisconsin has harvested some good crops of honey from this source. The big Texas yield referred to is, doubtless, the one reported some twenty and odd years since by B. F. Carroll, of Dresden, Tex. It is claimed by some, however, that Mr. Carroll had several colonies working in one super, through queen-excluding zinc.—Editor.

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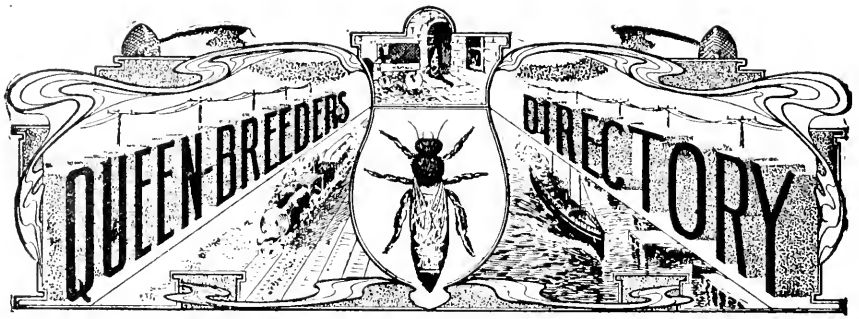
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**THE FRED W. MUTH CO.**, 51 Walnut St., Cincinnati, Ohio. Standard Bred Red Clover Three-banded Queens, Golden Italians and Carniolans. Safe arrival guarantee. Send for circulars.

**QUEENS HERE.**—We are still asking you to give us your trade. We sell Italians, Golden and Carniolans at 75c for untested and \$1.00 for tested. Prices on quantities and nuclei upon application. **JOHN W. PHARR, BERCLAIR, TEXAS.** Jan. 6

**SWARTHMORE APIARIES, SWARTHMORE, PA.**—Our bees and queens are the brightest Italians procurable. Satisfaction guaranteed. We are breeding the Caucasians absolutely pure from direct imported stock.

**W. W. CARY & SON, LYONSVILLE, MASS.**—Breeders of choice Italian bees and queens. Imported Leather and Root's Red Clover strains. Catalogue and price list FREE.

**MOORE'S LONG-TONGUED STRAIN** of Italians become more and more popular each year. Those who have tested them know why. Descriptive circular free to all. Write **J. P. MOORE, L. BOX 1, MORGAN, KY.**

**HONEY QUEENS AND BEES FOR SALE.**—I extracted 300 pounds per colony in 1903. **THOS. WORTHINGTON, Leota, Miss.** Aug 5

**THE A. I. ROOT CO., Medina, O.**—Breeders of Italian bees and queens.

**BREEDING FROM SELECTION MERELY** rejects the poorest. Long harvests, high mountains and deep blossoms improves the best. For queens bred along this line address for particulars, **C. W. DAYTON, Chatsworth, Calif.**

**W. J. DAVIS, 1st, YOUNGSDALE, PA.** breeder of choice Italian Bees and Queens. Quality, not quantity, is my motto.

**D. J. BLOCHER, PEARL CITY, ILL.**—Caucasian and Italian Queens reared in separate yards. Safe arrival of all stock guaranteed. Circulars and price list free. Jan 7

**COLLINGDALE APIARY—J.R. Rambo,** breeder of Caucasian and Golden Italian queens. Italians bred from stock received from Swarthmore. Caucasians bred from imported queen. Queens reared and mated in separate yards, 6 miles apart. Satisfaction and safe arrival guaranteed. Agent for The W. T. Falconer Mfg. Co's. bee supplies. Collingdale, Delaware County, Penn.

**JOHN M. DAVIS, SPRING HILL, TENN.**—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired. No disease. Circular free.

WE are now booking orders for Providence Queens for spring delivery. Cull & Williams, Providence, R. I.

**QUALITY QUEENS** are the best Italians yet. Send for circular. **H. H. JEPSON, 182 Friend street, Boston, Mass.**

**HOOPER BROS.' Italian Queens** reared in the West Indies are the most prolific and give the best results available any time of the year. Write at once for information to Kingston, Jamaica, B. W. I., Box 162 nov-6

## HONEY DEALERS.

WE are always in the market for extracted honey, as we sell unlimited quantities. Send us a sample and your best price delivered here. The Fred W. Muth Co., 51 Walnut St., Cincinnati, O. 5-5

## Cent-a-Word Column.

A. H. REEVES—Distributor of Roof's Bee Supplies for northern New York. Beeswax wanted. Perch River, N. Y. oct 6

**FOR SALE.—UNTESTED ITALIAN QUEENS** .60c each, two for \$1.00. Tested \$1.00 each. Mrs. J. W. Bacon, Waterloo, Seneca Co., N. Y.

**AGENTS WANTED**—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

**FOR SALE**—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. care American Bee-Keeper, Fort Pierce, Fla.

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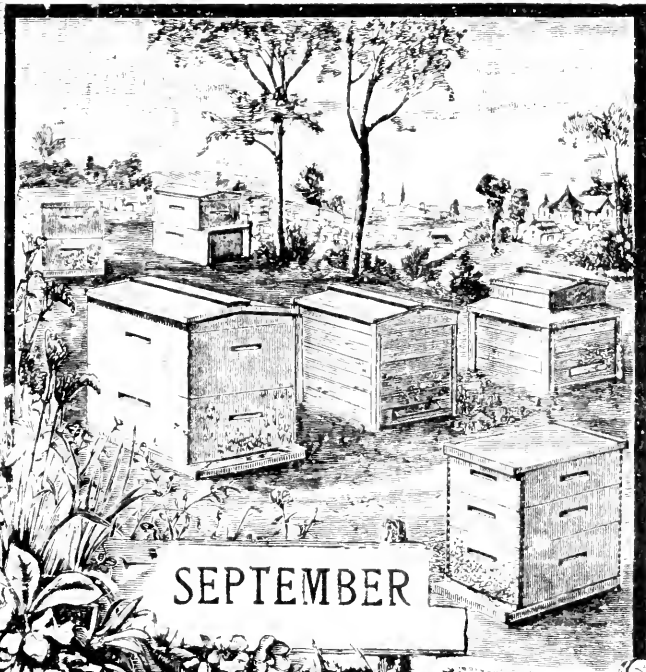
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SEPTEMBER

VOL. XVI

1906

NO. 9

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Vol. XVI

SEPTEMBER, 1906.

No. 9

## Massachusetts Bee-Keeping in 1644.

### Supply Manufacturing Before the Days of New-Fangled Fixtures.—An Interesting Record.

GEO. W. ADAMS.

**F**IND THE following curious account of municipal encouragement or "subsidy" which may prove to be the earliest recognition of bee-keeping as an industry in New England or the Colonies.

The town of Newbury, Mass., received its first settlers in 1635 but so few in number that their church was not finished until 1638 and the town government was hardly in definite form until nearly or quite 1640, yet in 1643 less than eight years from the landing of the first settlers in this unbroken wilderness, the question of bee-keeping had been considered officially and inducements had been held out to one John Eales, then living in what is now Hingham, Mass., to come to Newbury and enter upon the manufacture of bee hives, and to instruct the citizens in the gentle art of bee culture.

This "expert" came in August 1644, as the records have it, "To one John Davis a Renter of a farm there with ye

expectation of his doing service which the Towne was not acquainted with." A pretty clear statement that his coming was a municipal and not a private venture. (See Mass. Archives, Vol. L, pp. 4-5.)

It would be interesting to know something of the bees. Were the records not perfectly clear and definite it would not seem possible that there were any, for there are no native bees.

However, "municipal control of public utilities" was not a success, and a new board of selectmen may have withdrawn encouragement; at any rate our bee-master finding he could not make what the record calls a "livelyhood" (I like that word as applied to bee-keeping), tried to "swarm out" and get back to his former home. He was getting along nicely nearly to the place where now lives Henry Alley of queen bee fame, when the constable of Ipswich hived the poor fellow in the jail, and the court sent him back to Newbury.

There he was decreed to be a drone, and John Dowle and Edward Woodman in behalf of the Town petitioned the Great and General Court as our Legislature is termed, "To dispose of him."

In answer to this humble petition the order was made May 4, 1645 as follows "It is conceived John Eales should be placed in some convenient place where he may be implied in his

trade of bee-hive making and ye Towne of Newberry to make up what his work wanteth of defraying ye charge of his livelyhood." (See Mass. Colony Records, Vol. 2, p. 101.)

And so ends the history of the apiarian experiment of our old town and our first pauper, two hundred and sixty-one years ago.

Rowley, Mass.

## Bee-Hunting in the Antipodes.

### Olden Time Experiences in Far Away Australia and Tasmania Interestingly Described.

W. R. GILBERT.

THE INTRODUCTION of the frame hive and the general improvement in the methods of bee culture that it has led to, have caused bee hunting as a business to practically disappear. Bee-farming can now be carried out on such an extensive scale that it hardly pays anyone to go out armed with ax and bucket, looking for bee trees, when he can grow honey and wax at his own door. It was different though, I can remember, in Australia in the old days of the gin case or log hive, where the taking of the honey generally involved the extermination of the bees, and the liberal stinging of the depredator.

Once these hives had been taken it was necessary to commence the whole business of raising colonies over again, unless swarms could be caught in the woods, which was often the case. Now adays bee hunting is generally confined to the settler in the backwoods, who wants a little honey to add variety to his diet of Johnny cake and bacon and who perhaps has never heard of frame hives, or has not enterprise enough to invest in any of them if he has. The methods followed however, are very much the same as those of the old-time

professional bee hunter.

Of course the bee that is the object of pursuit in Australia is the English bee gone wild or rather returned to its natural habits of storing its honey in hollow trees. Before the advent of the white man there was no hive forming bee in Australia. The English bee, since its introduction, has spread until it has become almost universal.

The writer gained his experience of bee hunting in New South Wales and Tasmania and found that the methods followed in both states in locating bee trees were essentially the same.

At that time, some years ago, in the uninhabited country, bees were very numerous and bee trees were easily located. Bee hunting was not followed as a profession, most of the bushmen preferring to spend their spare time, or occasionally all their time in shooting lyre birds for their tails, but occasionally a raid was made upon a colony when a little honey was required for camp use. In the heavy scrubs and forests the bees must have found an abundance of honey yielding flowers as they were very seldom far from home and it was usually an easy matter to find where they went to.

The *modus operandi* was simplicity itself. A pool of water was visited about noon on a hot day, and about a dozen of the bees, which would always be found drinking about that time, would be carefully caught and placed in a match box with a little flour. A slight shaking of the box would powder the enclosed bees plentifully and render them very conspicuous objects. One would then be liberated and carefully followed until it disappeared. Another would then be let go, if it went in a different direction it was presumed to belong to a different colony, and no further notice was taken of it. If the second bee followed the line taken by the first it was followed until it was lost, and then another would be released and so on. Half a dozen bees would generally suffice to show the locality of the colony but sometimes, especially if water was scarce, and they had traveled some distance for it, the whole dozen would prove insufficient. Bees covered with flour always fly low and slowly and their pursuit through a country filled with lawyer vines, named from their sticking propensities, and swarming with snakes, makes it highly interesting. When the bee begins to rise into the air it is a sign that it is near home.

When the hive was found the first proceeding was to light a fire and cut a good supply of green boughs. Then axes and saws were got to work and the tree cut down, one of the party usually waiting by the fire to throw on the green boughs when the tree fell. The object of this was to raise a dense smoke into which all hands promptly retired when the bees, disturbed by the cataclysm that had overtaken their community, issued forth to see what had happened.

When they had settled down a little, the tree was chopped open if it had not broken up in its fall, and the best of the comb put in coal oil tins and buckets and taken home to be strained.

The honey as obtained was not attractive looking; it consisted very often of a considerable excess of rotten wood, squashed bees, and dead larvae besides ants, wood grubs and the incidental blow flies that got into it on its way home. It invariably had a peculiar taste, probably derived from the quantity of bee juice that it acquired during the process of straining and squeezing.

All bush honey, though, is not of this description. I once assisted at the taking of a bee tree, which "panned out" very differently. It came about, too, in a curious way. While the writer and two others were engaged in prospecting for gold on a small creek, a bee flew up and settled on the neck of one of the party. A vigorous flip sent it into the prospecting dish, and the next minute it would have disappeared beneath a shovelful of gravel had not one suggested that as there was more likelihood of finding honey than gold, we had better turn our attention to that. There were many bees drinking at pools on the little creek but the bee in the prospecting dish was the nearest at hand so it was captured, and as there was no flour a filament of thread from a time worn shirt sleeve was tied to its hind leg. After thundering about and turning summersaults on the ground for a few minutes, it took wing and flew up the hillside for a few hundred yards and then rose in the air and disappeared near a huge dead "woolly-butt" stump, about 60 feet high. Investigation showed that the stump was literally full of bees. They were flying in and out by hundreds at a hole near the top, while the whole trunk hummed and vibrated like a telegraph pole. The bees seemed very savage, too, which is generally regarded by bushmen as a sign that there is a lot of honey in the hive. Next day all hands turned out with axes and coal oil tins. When the tree was reached a fire was lit and a good stock of green boughs

cut, and when all was ready axes were got to work. After half an hour chopping the huge stump tottered and fell smashing into multitudinous fragments and liberating dozens of scorpions, centipedes and bull-dog ants, which stampeded in all directions. But the sight of what lay upon the ground was one to gladden the heart of the bee hunter. Tier upon tier of white virgin comb, filled with honey backed up by masses of brown comb, black with age.

No one waited to feast their eyes on the spectacle, however, for out of the broken stump there came clouds of the most vicious bees I have ever seen. They charged into the smoke and stung with fury. Even blazing branches did not deter them. One of the party took to his heels and as generally happens got badly stung. Those who stood quite still and let the bees dart at them came off best. Finally a fire was lit to the windward and when the smoke had driven the bees away the best honey was picked out. The tree yielded 16 gallons of pure virgin honey, and as much more was wasted. Shortly after the fall of the tree the bees clustered upon an adjacent bush and then went away.

Bees were very numerous all over Tasmania, and there was probably no part of the island where bee trees could not be found. On the Gordon river I saw a hollow pine limb which had broken off from the weight of honey stored in it. All round the border of the button grass plains bees are still very numerous, and in the spring traveling swarms may often be heard on still days.

Bee-keepers sometimes complain that the wild bees are so numerous, that they form a serious drawback to bee-keeping in a business way, as they completely empty every flower of nectar and prevent the domesticated bees from following their duties.

On the edges of the button-grass plains bee trees are sometimes very

easily found at sunset, as the bees flying in the sunlight with the dark belt of trees as a background become iridescent from the play of the light upon them. If the spot toward which the bees converge be carefully noted, the abode will always be found near it. A bee lit up by the slanting rays of the sun and flying against a background of leaves, upon which the shadows have already fallen, may sometimes be watched for half a mile, as it seems to get larger the further it recedes from the observer; once, however, it enters the shadow of the trees it vanishes instantly.

Once when shooting in Australia we came upon a splendid swarm of bees upon a low shrub. As my companion was a great bee-keeper, he wished to take the swarm and having nothing better at hand he took off his shirt, tied up the neck and wrists and shook the bees into it. He then tied up the bottom, shouldered it and started for home. Part of the route lay across about two miles of tidal lagoon, swarming with sharks and the means of conveyance was a little punt just capable of holding two men and the shirt full of bees.

About the middle of the lagoon the wriggling mass of bees burst a hole in the shirt, and they began to come out, a hat full at a time, darting about with the peculiar high-strung buzz which means mischief. The rest of the journey over the water was accomplished in brilliant time. To go overboard was out of the question. To throw the bees out would have made matters worse as the hole in the shirt was underneath, and any attempt to lift it would have plainly precipitated all the bees on to the floor of the punt. While I rowed, as never before or since, my friend frantically waved a vest in the air, and knocked the bees into the water. The journey across ended the bees were left in full position of the punt.

Medicine Hat, Alta., Canada.



## WHY DRONE COMB IS BUILT.

### A Discussion of the Subject in Reply to Mr. Atwater's Request.

A. C. Müller.

MR. ATWATER in the August AMERICAN BEE-KEEPER asks why "in an extra good season, with extra strong forced swarms with queens less than a year old mostly drone comb is built."

The question is suggestive of much interesting speculation. If I should answer it in conformity with general belief I should attribute the bees' action to their wisdom or reasoning powers, but I will not dismiss it in that off-hand way. I have never been able to get convincing evidence that bees reason, on the contrary I am strongly of the opinion that they are little if any more than reflex machines. We find that bees build several sorts of cells, namely, worker, drone or "store", queen, and "accommodation" or "transition" cells. These are classed according to common custom, but more properly we should combine queen cells with "accommodation" cells, and so have but three sorts. As "accommodation" cells, are but the result of extraneous forces acting upon the normal construction process we may, for the purpose of this article at least, consider honeybees' comb as of but two sorts of cells "worker" and "drone."

Worker comb is the first type built by a normal swarm and forms the greater per cent of all comb in a colony. The cause of the shape of the worker cell, hexagonal, has been explained by various writers and need not be repeated here further than to say that each building bee tends to construct a cylindrical cell.

Drone comb we find is built under any of the following conditions: after the first rush of comb building by a "swarm" has spent itself, hence the drone cells around the edges of the

combs and those combs at the outside of the cluster (i.e. the last built); in a colony having a failing queen; in a queenless colony; during an excessive honey flow; and during high temperature coupled with great humidity.

Obviously some general condition must exist within the colony under each of the above mentioned states. What is it?

A normal swarm clusters very compactly. Each comb builder is closely crowded by other comb builders, each is forced to work in a small radius, resulting in the constructing of a cylinder of a small diameter, i.e. the worker cell size. Do not misconstrue this into meaning that a single bee builds a complete cell. Each bee works subject to a certain external pressure and no matter what cell it works at it is circumscribed in its labors by that pressure. This close clustering may be called the normal or prevailing clustering.

When drone comb is being built we find that the clustering is less compact and that consequently each builder is subject to less pressure, and hence works in a wider radius. This radius is limited by the size of the bee. The comb builder, as we observe her within a glass hive, moves frequently and appears to work in a most desultory way, but we there see her freed from the normal pressure of the cluster. Under all of the conditions mentioned above as being productive of drone comb we find loose clustering, the cause thereof differing in the different cases but the result is the same. It is not necessary to analyze them here for any observant person can go directly to the bees and see.

The bee is a graving tool mounted on jointed levers. According as these levers have free or circumscribed movements does the graver, the mandibles, describe a greater or lesser arc, producing drone or worker comb.

The cause being known, it is up to

the bee master to so manipulate the bees as to secure the result he desires.

Providence, R. I., Aug. 10, 1906.

### Bee Inspector's Report.

County Inspector Bowen made a report to the supervisors last week. In his report he stated that several bee-keepers at Selma had refused to obey the law with regard to foul brood, and that they would not permit him to carry out the law. Now these bee-keepers say that Mr. Bowen does not know what foul brood is, and that he has in many cases destroyed bees that were not affected with foul brood. The law under which the bee inspector operates gives him too much latitude. He can destroy a man's property at will, whether there is any legitimate reason for it or not. And there is no recourse for the man whose property has been destroyed. We are of the opinion that these bee-keepers at Selma would not object to complying with the law if there were no question about the bees there having foul brood. It very often happens that where officials of this character are appointed that politics enter into the matter to a large extent, and as like as not men are appointed to positions to do work they know very little about. From what we have been hearing about the work done by Mr. Bowen and also by reading his reports, we have reached the conclusion that he could easily be replaced by a man who would be more satisfactory.—From the Kingsburg, California, Recorder, edited by P. F. Adelbach, formerly editor of the Western Bee Journal.

### Bees and Red Clover.

Mr. Frank Kelly, of Elgin, Co., Ont., is a farmer who makes a specialty of sheep and clover seed, and also keeps bees. He recently described an ingenious system of ensuring the fertil-

ization of the red clover blossoms. He pays the boys of the neighborhood 25 cents for every bumble-bee's nest they locate for him. This he then moves to his own premises. He inverts over the nest a funnel shaped screen, with a small hole in the top leading into a little box. By stirring up the bees he gets them all into the box, and then takes up the nest and transports bees and all to some convenient spot on his farm. In this way he has almost "cornered" the bumble-bees of his neighborhood. In winter he protects them from mice by putting over the nest an oblong hardwood box, say 20 inches long by 10 or 12 inches wide, and the same height. A small hole, protected by a peice of tin to prevent mice gnawing it larger, permits egress and ingress of the queen. As a result of his pains, Mr. Kelly grows large fields of clover seed, averaging 4 or 5 bushels per acre. Those living near him get good crops of seed.

Mr. Kelly related an interesting experience of one year when he had pastured with sheep a field of red clover, taking the sheep off June 15. The second crop blossomed beautifully and the neighbors declared it the finest they had ever seen. It was, however, a little too early for the bumble-bees, and no seed worth mentioning was secured.—Farmers' Advocate.

"One forward step that gives sure foothold on the track

"Is worth two steps ahead where one slides three steps back"—Ruchert.

### Florida Honey.

A sweet cargo was carried into Mobile by the coast steamer Tarpon which completed a round of numerous ports of call. Among the hundreds of items of cargo were fifty-one barrels of honey which had been collected from the various ports and which were consigned to parties in New York City. This is distinctly a Florida product.—Pensacola News.

## Caring for the Comb-Honey.

### Important Suggestions and Advice Relating to This Seasonable Subject.

ALLEN LATHAM.

IT WOULD SEEM as if the matter of caring for the crop of comb-honey after the removal from the hive had been given ample attention, and I rather hesitate to take upon myself the task of offering anything new. It chanced however that I not long ago viewed a crop of magnificent comb-honey (perhaps four weeks off the hive) in the process of deterioration from improper care. If the man capable of harvesting such excellent honey did not understand the proper care of it, then surely many a bee-keeper is in need of more knowledge about this matter.

This honey was in an upper chamber of an old building much shaded by large apple-trees. There was but one window and the room was damp almost to moldiness. I picked up a beautiful section of honey, which, as I turned it, dripped from the cells next to the wood. I called the attention of the owner and he acknowledged that the room was too damp; said he: "It has been so rainy that the room does not dry out. I shall start up that stove tomorrow and dry it out." The stove was a large oil-burner standing in one corner of the room.

I made no reply to that answer. I was too much astonished to reply. But I have thought much about it since; and I wish to show through the columns of the AMERICAN BEE-KEEPER the folly of the procedure followed by this bee-keeper.

In the care of comb-honey, or any honey, we must keep constantly before us the fact that honey very readily

absorbs foreign matter, as moisture and odors. A few days in a moist atmosphere will cause a saucer of honey to become as thin as newly gathered nectar, and a short exposure to smoke-tainted air will give the same honey a rank taste.

Thus it is imperative that honey be kept in a dry atmosphere, and it be kept in a pure atmosphere. It is not enough that one of these conditions be present; both are necessary for the well-keeping of honey at all exposed. Few honeys there are but will improve in weight and flavor if kept where the air is pure and sweet, and where the humidity is always low.

Too much stress has been laid on keeping honey in a warm place, resulting in making warmth rather than dryness responsible for good results. Warmth in itself is of no value at all in improving the flavor of honey. Honey, that is comb-honey, always improves in the cold months of January and February; months when the humidity is low, but months when we often get our zero weather. Honey is more than likely to lose its quality during July and August the hottest months of the year, but months when the humidity is often excessive. It is thus important that we get to the root of the matter, and understand that dryness and not warmth is the essential in the proper keeping of honey.

Yet it is true that warmth helps. Why is this? Permit me to explain. Air has a great affinity for water, taking it up at all temperatures, but not

equally fast at all temperatures. Air at zero degrees will take up but little water, while air at 100 degrees will take up a great deal. Warm air may be dry air while the same air with an equal amount of water in it will be wet if allowed to cool. At all temperatures there is a maximum capacity for water vapor, and when that capacity is satisfied the air has a humidity of 100 per cent, or has reached its dew-point. It will then give over moisture to colder objects.

Since warm air has a greater capacity for moisture it usually has a drying tendency. Hence it is that honey kept in a warm room tends to improve, for generally the cause for the warmth of this room brings about a condition of warm air with low humidity, but if perchance the warmth of this room is attained at the expense of this low humidity, and the warm air is humid air, then look out for the honey.

To return to the oil-stove. This oil-stove had no chimney opening outdoors as does a stove to burn wood. All the products of combustion, when this oil-stove was burning, simply poured out into the room. Suppose that the stove consumes a gallon of oil in heating the room. In doing this it will throw off into the air one and one-half gallons of water, probably more. The air will be temporarily drier because the extra warmth will raise its capacity for water but as soon as this warmth is lost the air is damper than it was before the stove was started up.

Never, never, undertake to warm up the honey-room by means of an oil-stove. Not only is the air caused to become more moist, but there will inevitably escape into the room gasses which will taint the honey seriously, even to the extent of rendering it so unpalatable that most people would prefer to go without honey rather than to eat it.

The honey-room may be heated with an ordinary stove, but if properly ar-

ranged this is seldom necessary. Let the room be so situated that its walls will generally be warmer than the outside air. A southern exposure, without shade will give this result. Almost as good results will follow if the room is adjacent to another room in which there is usually a fire. A room adjacent to, but not opening into, the kitchen which is warmed by the cook-range is excellent. This room should open out of doors by a screened window; a window into which only dry winds would normally enter, usually to the west. This window should be closed if a rainstorm should come from the dry quarter. Under these conditions there might be—would almost surely be, days when the honey would go back slightly, but the majority of days would carry it further forward than would the poor days take it back, so that ultimately it will improve. An experience covering over a score of years warrants my making this statement.

Under conditions such as were brought about by the oil-stove, the honey and other objects in the room would in the nature of things cool more rapidly than the air. The warm air would then be cooled by the objects in the room, and the honey would collect a dew exactly as does an object out on the ground at night. But under the conditions which prevail in the room whose walls are warmer than the outside air, far different things would happen. The cooler air would then come against the warmer honey, and would take moisture from it rather than give moisture to it.

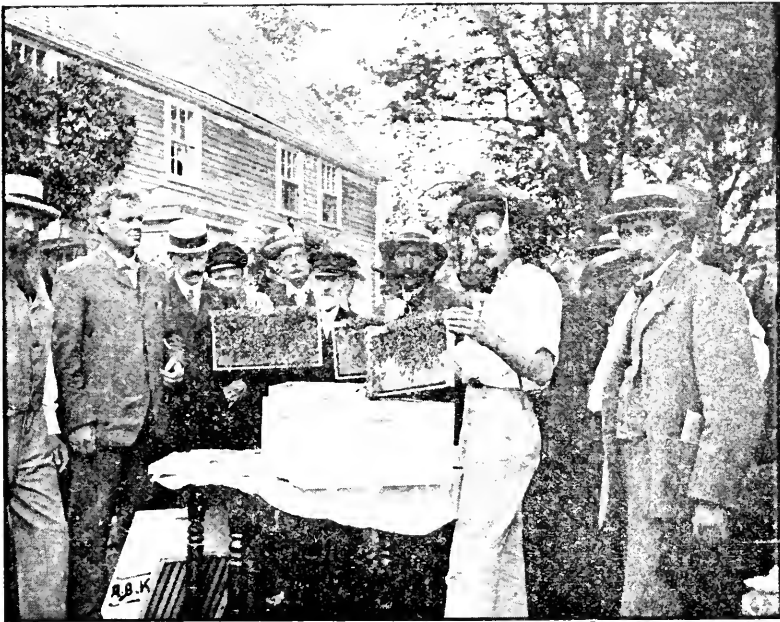
Too much cannot be said in favor of putting out only honey that tastes good. We may think up all sorts of schemes for getting people to use more honey and for enlarging the market for honey, but after all there is only one which is at the head. Sell honey that you enjoy eating yourself.

Norwich, Conn.

## Massachusetts Field Meeting.

Hold at South Byfield by Bee-Keepers' Society, August 11th, Largely Attended.

THE FIELD meeting of the Massachusetts society of bee-keepers at South Byfield, Mass., was held on August 11th, 1906. The meeting was largely attended and was held in the forenoon. The speaker was Mr. Richardson, a well-known expert, who arrived early in the forenoon to assist in the preparation for practical demonstration. Soon after noon the people were



MASSACHUSETTS FIELD MEETING.

Beginning at the left, first is Mr. Adams, then President Farmer and Treasurer Jepson. Farther back, with straw hat and veil, is Mr. Read, next to whom stands Mr. Knight—the gentleman with cap and holding the comb. Mr. Richardson is seen operating the hive, while Mr. Barret is at the extreme right.

Byfield, Aug. 11th, was a decided success.

Over forty members left Boston on the 10:10 train, taking the trolley at Ipswich for the Highfields, while every car during the earlier part of the day brought people interested in aparian matters.

A delegation headed by Mr. Richardson, the well-known expert, arrived early in the forenoon to assist in the

called together by music on the cornet and after listening to several pleasing selections, a basket lunch was partaken of.

Mr. and Mrs. Adams furnished rolls, salad, cake, and pie to all who wished, and also coffee, milk and fruit punch.

Ice cream was served to all through the courtesy of President Farmer.

After lunch a brief address was made by the president who introduced Capt.

Charles Knight, of Haverhill, who spoke most interestingly on technical subjects.

A very interesting period of the meeting then followed where groups would form around the several noted experts present so that demonstration and discussion on various subjects were held at the same time.

The strains of "the assembly" on the cornet recalled all to the shade of the trees on the lawn where an operating table had been improvised and the "clinic" was opened by Mr. Richardson of West Medford who demonstrated the Alexander method of increase upon a colony—much to the astonishment of the bees.

The venerable John T. Gould, who has handled bees more than 70 years, and who sent into Boston the first pound section of honey ever sold there, told how he made \$1000 in a year from less than 50 colonies. Mr. Gould is close to the century mark and when he stepped up to the operating table upon which a large swarm of excited bees had just been placed, some of the attendants stepped quickly to assist, but motioning them aside, the venerable bee master removed the cover and showed that his hand had not lost its cunning.

Other demonstrations were made by experts from various parts of New England, and then followed a most amusing "Queen hunt." A colony would be placed upon the table (and if the attendant shook them up a little it made the greater excitement), and at the word "Go" the contestants opened the hive and sought to find the queen, while timekeeper and referee watched, and the crowd offered jocose advise and counsel. There were five entries, but no record time was made, the swarms being very large and the queens young and active. It was decided, however, that the man who shook all the bees out on to the table was given the most room by the spectators.

Mr. Adams furnished seven colonies for experiment. The demonstration closed with operative work upon a working colony in the apiary.

In connection with the meeting the members of the association had the opportunity to inspect Mr. Adams' apiary, which is one of the largest and best in the state. Mr. Adams carries on his work for the scientific study of the bee as well as incidentally the raising of some of the choicest honey in the comb that is raised anywhere, and he is an enthusiast in his work.

The officers of the Massachusetts association are as follows:

President—F. H. Farmer, Boston and Littleton.

Secretary—Mrs. Florence Richardson of West Medford.

Treasurer—H. H. Jepson, Boston.

The meetings are held monthly in Boston.

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## QUEEN INTRODUCTION.

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### A Convenient Method for the Queen Rearer.

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W. E. Crayton.

EDITOR AMERICAN BEE-KEEPER:  
Among the numerous hobbies of my life has been the bee hobby; an infatuation of some twenty-two years standing and still losing none of its ardor. During that time I have tried to keep at least within speaking distance of modern methods, but have not had time to try all the newfangled ways of doing things.

I keep about fifty colonies, as a side line, which are manipulated mostly for extracted honey, bees and queens; the honey for the local market and the bees and queens to supply the requirements of my bee-keeping friends who have not the time or patience to keep their stock pure.

My method of introducing queens in my own apiary may be as old as the hills (some of them) but I have never

seen it described. It has been so successful with me that I wish to give it publicity for the benefit of amateurs who are often perplexed about a safe and easy way to introduce queens when improving stocks of hybrids or replacing old queens.

My queens are procured by saving cells from the best honey gatherers among the brightest golden Italians during the swarming season. They are hatched and mated from two and three-frame nuclei in eight-frame hives placed in pairs so that if one nucleus is removed the returning bees will find a home in the other. If one queen is sold and I do not wish that nucleus to rear another queen, I unite the two in just twenty-four hours from the time the queen was removed, by simply placing the nucleus with the queen on top the one without a queen, the bottom-board of one and the quilt of the other being removed so that the bees come directly together.

In like manner, if I have a queen whose progeny does not come up to my requirements, either in thrift, color or amiability, I remove her during the warm part of the day and in just twenty-four hours, from that time, the cover and cloth is taken off the queenless hive and the nucleus, containing the queen I wish to introduce, is lifted from its bottom board and gently placed on top. In about four days (no hurry) the upper combs can be taken off, one at a time, and the bees shaken down in front of the hive and the combs given to other nuclei; or, if the honey season is not over, this upper hive may be filled with extracting combs or sheets of foundation and the work goes merrily on, with only a loss of twenty-four hours egg-laying by the one queen and none by the other. There is no worry; only half as much queen hunting; no caging and not the least intimation of a fight. At least that is my experience. I have never lost a queen or seen a "scrap" by this method.

Hoping this will be of use to some one, I am yours for the most honey, the prettiest bees with the least labor and expense.

Lima, Ohio.

### MEAD.

L. E. Gateley

I WONDER how many bee-keepers in this country would have a good stock of mead on hand should some thirsty-looking individual chance to drop in one of these dusty, hot days and order a drink.

And yet, there is no other product of the apiary that will yield one-tenth the profit that will mead. Here are the figures, see for yourself:

One quart honey	.20
Five gallons water	.00
Total	.20
Retail 5 cents a pint, 40 pints	\$2.00
Less	.20

Profit on five gallons \$1.80

To make: Put into a clean boiler five gallons soft water. When hot, add one quart pure honey. Boil gently for one and a half hours, skimming often. Empty into earthen vessel and when blood warm pour into a clean cask. The bung should be put in loosely. If the cellar is warm, fermentation will begin in from five to fifteen days. After fourteen days fermentation, draw off into another cask, leaving the dregs. In the second cask fermentation should be allowed to go on from ten to fourteen days. When the mead is calm, so that nothing more is heard in the cask, close the bung. Allow thirty days for the mead to clear, then draw off into bottles, cork well and pack in sand. It will effervesce in a few days rather strongly.

This is the honey mead of the ancient Germans, who attributed health and great age to its use. It is a delightfully cool and refreshing beverage, and can be used in case of fevers, etc., when wine and beer would be injurious.

Fort Smith, Ark.

### BAD EFFECTS FROM STINGS.

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Addison F. Luther, father of Sterry K. Luther, town clerk of Johnston, is at home in a weakened condition as the result of a horrible experience. He was attacked by bees and was almost stung to death. For almost an hour he was unconscious and only after heroic treatment on the part of Dr. Robbins did he recover consciousness. Yesterday his condition was somewhat easier and he is now considered out of danger.

Mr. Luther's son owns a large apiary. There are in all about 33 colonies of bees each colony having in the neighborhood of 50,000 of the busy little bodies. It was while one of the hives was being removed that Mr. Luther was attacked. He was prepared to withstand the bees' displeasure somewhat, having placed a veil over his head and put stockings over his hands. There were several of the bee-hives to be moved and the town clerk was assisting in the work.

The task required that the hives be carried some distance, and while this was being done several bees alighted on the wrist of the elderly man. He howled, but hung on to the hive, knowing that to allow it to fall would mean an army of angry bees in the air in an instant.

It appeared that there was an organized attack on the man. His son was not molested, although he wore no covering on his hands. When the hive was seated Mr. Luther, Jr. advised his father to run into the barn. This, evidently was the intention of the man, as he understood the nature of bees and knew that they would not enter the place. The bees stayed with him and his great pain caused him to waver from his intended course. He encircled the barn and ran half way to the house and then retraced his steps.

All of this time he was being stung and for a minute he faltered and was about to fall, and then he ran to the

house. He threw open the door and fell unconscious on the floor of the kitchen.

Mr. Luther, Jr., followed his father and, with the assistance of Mrs. Luther, local remedies were applied, but with no result. The pulse was very weak and there was danger of the man quickly succumbing. No time was lost in calling for physicians.

Dr. Robbins was in the village close by and he made haste to respond. It was a half hour after the physician arrived before there was any signs of returning consciousness. When the man did recover he seemed to have an entire lapse of memory. He neither knew the day of the week nor where he was. It was several hours before he regained possession of all his senses, but then his heart action was weak and he has not fully recovered from the experience.

His recent experience is not the first severe one he has had with bees, as each time he is stung he is badly poisoned. He would not have undertaken the task of removing the hives did he not think that he was fully protected, but the stockings on his hands appeared to have been no hamper to the bees. As far as learned his wrists were the only part of the body where he was stung.—Providence (R. I.) Tribune, July 14.

### HONEY CANDYING IN THE COMBS.

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Emporium, Pa. August 7th, 1906.  
EDITOR AMERICAN BEE-KEEPER:

I notice on page 174 some discussion in regard to new honey candying in the comb early in the summer. On May 22nd I visited an out apiary and prepared the colonies for the white clover flow, giving each colony one, two, or three extra hives of full-frame foundation according to the strength of the colony.

On July 9th I went again to extract the honey. I found one third-story hive with combs built in every imagin-



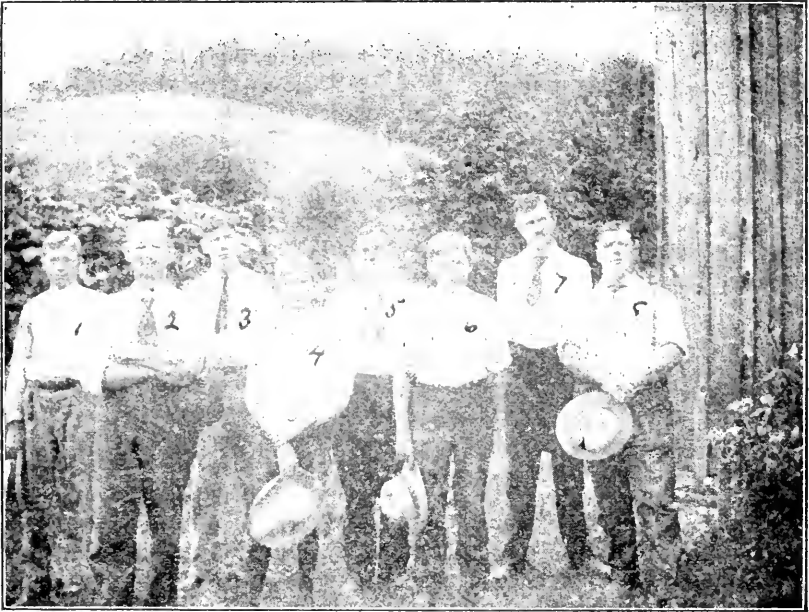
able direction, and all nicely sealed. Inadvertently I had placed a hive there without foundation. Over half of the honey was badly candied. I think this is the explanation: That colony had forty or fifty pounds of honey left over from last season. As the brood nest enlarged, the bees carried that old honey into the upper stories and the worked-over honey candied again.

DELE COLLINS, Ph. D.,  
Queen Breeder.

The AMERICAN BEE-KEEPER, four years, one dollar.

### Muncy Valley Bee-Keepers.

In THE BEE-KEEPER for August was published a report of the convention of the Muncy Valley (Pennsylvania) Bee-Keepers' Association; and, as stated on page 161 of that issue, we received too late for publication a photograph of a number of members, including Messrs. Merrill and Fuller, who participated in a queen-hunting contest in which Mr. Merrill won—finding his queen in just one minute. The picture is reproduced herewith, together with a key, as follows:



MUNCY VALLEY BEE-KEEPERS.

No. 1, Willis Fuller; 2, F. C. Rickolt; 3, Elmer Woods; 4, Chas. Rickolt; 5, W. P. Merrill; 6, Russell Fuller; 7, Rev. L. D. Woods; 8, R. E. Merrill, the winner.

## Government Pure Food Efforts.

THE COMMISSION appointed by the Secretary of the Treasury, Secretary of Commerce and Labor and the Secretary of Agriculture to formulate the rules and regulations for the Foods and Drugs Act respectfully invites interested parties to appear before the commission, either in person or by proxy

or by written briefs, for the purpose of offering suggestions relating to the character and extent of the proposed regulations. In order that these suggestions may be presented in a systematic and compact manner and that economy of time may be secured, the following syllabus is offered:

**GROUP 1—ORIGINAL PACKAGE. PREPARED FOR EXPORT, ETC.**

1. Definition of "original package" (section 2 of the act and subsequent sections where the phrase may occur).

2. Preparation of food products for export (section 2, proviso).

3. Preparation of food for interstate commerce where preservatives are applied externally (section 7, paragraph 5, under "In case of food" proviso).

4. Method of securing freedom from any putrid vegetable substance, or any putrid animal substance not covered by the meat regulations, Order No. 137, Bureau of Animal Industry, and other suggestions relating to the proper inspection of raw materials used in manufacture.

**GROUP 2—COLLECTION OF SAMPLES.**

1. Collection of samples, certification of samples, division of samples into different parts.

2. Branding, marking or tagging of samples, sending of samples by express or otherwise.

3. Size and number of samples.

4. Method of procedure to secure identity of samples in examination. Methods of identifying and certifying the results of the examination (section 3 and first part of section 4).

**GROUP 3—HEARINGS AND APPLICATIONS.**

1. Hearing before the Secretary of Agriculture, character of hearings, appointing of times and places of hearings.

2. Publication of the results after judgment of the court (section 4, last half).

**GROUP 4.—USE OF COLORS, FLAVORS AND PRESERVATIVES.**

1. Kinds of colors to be permitted.

2. How freedom from poisonous or deleterious properties may be determined.

3. Purposes for which coloring may be used.

4. How freedom from imitation may be secured

5. Difference, if any, between "coloring" and "staining."

6. Mixing, powdering and coating to conceal inferiority.

7. Preservatives in food—kinds and quantities (sections 6 and 7 under Confectionery; section 7, paragraph 4, under "In the case of food").

**GROUP 5—MISBRANDING OF FOODS AND DRUGS.**

1. What is the label?

2. Separation of the label from descriptive and advertising matter printed on the package.

3. Size and character of the letters in the principal label.

4. Definition of "false" and "misleading."

5. Definition of "imitation."

6. Deception of the purchaser.

7. Variations to be permitted in statement relating to weight or measure.

8. Character of designs or devices of pictorial character of any kind which may deceive or mislead (section 8, first half).

**GROUP 6—MIXTURES, COMPOUNDS, IMITATIONS AND BLENDS.**

1. Definitions of mixtures, compounds, imitations and blends.

2. What are "like substances?"

3. Definition of "harmless" as applied to coloring and flavoring.

4. Definition of coloring and flavoring (section 8 under first part of second paragraph under "In the case of food")

**GROUP 7—PROPRIETARY FOODS.**

1. Definition of phrase. Proper method of preventing use of added unwholesome ingredients.

2. Definition of trade formulas.

3. How far is the disclosure of trade formulas necessary to secure freedom

from adulteration or misbranding?

**GROUP 8—DRUG ADULTERATIONS AND MISBRANDING.**

1. Definition of "imitation."
2. Application of the standards of the Pharmacopoeia and National Formulary.
3. Method of stating proportion or quantity of alcohol and other ingredients required to be named in drugs, including size of letters, etc.
4. Method of stating standard of strength, quality or purity when not the same as in the Pharmacopoeia.
5. Method of stating the professed standard or quality under which a drug is sold.

(Section 6, first half; section 7, under "In case of drugs," first and second paragraphs; section 8, as applied to drugs)

**GROUP 9—CONFECTIONERY.**

1. Definition of confectionery and list of substances to be construed as confections.
2. Definitions of the terms "terra alba," "barytes," "talc," "chrome yellow," "narcotic drug."
3. Kinds of colors or flavors permitted and methods of control or preventing the addition of any deleterious or poisonous ingredients at the time of manufacture (section 7, paragraph under "In case of confectionery."

**GROUP 10—ESTABLISHMENT OF GUARANTEE.**

- 1 Suggestions respecting the form of a guarantee.
2. How to be signed, by printed or written signature, and by whom.
2. Method of identifying the articles covered by the guarantee, either by stamps, tags or otherwise.
4. Methods which the purchaser should follow in order to establish the identity of the articles and secure the application of the guarantee (section 9).

**GROUP 11—INSPECTION OF IMPORTED FOODS.**

- 1 Securing samples for inspection.
2. Notice to the importer.

3. Character of the hearings of the importer before the Secretary of Agriculture or his agents.

4. Reshipment of condemned articles beyond the jurisdiction of the United States.

5. Form of bond to secure the United States against the sale of goods before the notice of condemnation by the importer is received.

**GROUP 12.**

Miscellaneous suggestions.

The following provisional assignment of groups for discussion is made:

Groups 1 and 2, September 17; groups 3 and 4, September 18; groups 5 and 6, September 19; group 7 and 8, September 20; groups 9 and 10, September 21; groups 11 and 12, September 22.

By courtesy of the New York Board of Trade and Transportation, the hearings will be held in the board rooms of that organization, Mail and Express building, 203 Broadway, New York City. The sessions will begin at 10 o'clock a. m. and adjourn at 12; open again at 2 p. m. and adjourn at half past 4. Extra hours may be assigned in case of necessity.

All persons who appear before the commission are requested to have briefs prepared covering the points which they wish to discuss, so that the written briefs may be filed for the further consideration of the commission.

It is requested that each person who desires to appear before the commission file with the chairman of the commission, Dr. H. W. Wiley, Washington, D. C., on or before the 10th of September a request for hearing, stating the group or groups of subjects on which he wishes to be heard and the time he expects to consume. These data are necessary in order that a program may be arranged which will be just to all parties desiring to be heard. The commission wishes to state further that it does not desire to hear any arguments relating to the constitutionality of the law or any portion thereof, nor to

points of a legal nature save such as may pertain to the scope and character of the rules and regulations authorized by the law.

The officials charged with the enforcement of the State dairy, food, and drug laws are specially requested to submit suggestions.

JAMES L. GERRY,  
Treasury Department.

S. N. D. NORTH,  
Department of Commerce and Labor.

H. W. WILEY, Chairman,  
Department of Agriculture,  
Committee on Rules and regulations,  
Foods and Drugs Act.

Washington, D. C., August 12, 1906.

#### A PECULIAR CASE.

#### EDITOR BEE-KEEPER:

On the 30th of May I shook the bees from my pet colony whose queen had, at that time, 20 frames of brood and a super well under way. This colony had produced three 32-section supers and had two on the hive practically filled. In addition to the brood removed at the time of shaking, three frames had been removed to supply larvae for queen cells.

Now there is a condition about this colony that I do not understand. The queen was one year old early this spring. On the fifth of this present month a swarm issued. The queen was clipped. When I returned home from business at noon the colony from which the swarm issued was pointed out to me. The supers were removed and the frames examined. There was a dozen or more queen cells. I placed the old body to one side and proceeded to shake the bees onto sheets of foundation.

Three virgins were found in the operation, but the old queen could not be found either in the hive or in the grass outside. There was not an egg in the hive and only a few cells of brood ready to seal, but the ten frames were filled with sealed brood

It occurred to me that the queen had been superseded and the swarm emerged at the same time. But the question arises, why did not one or more of the virgins go with the swarm which returned to the old hive after it had clustered for a few minutes. Is it a common occurrence for a colony to supersede and swarm at the same time?

There was two supers on the hive that were about half drawn out. These bees are the golden Italians that I believe you do not think favorably of. Last season I removed 150 perfectly filled sections and 20 partly filled which we used on the table. Last season no swarm issued from this colony and the queen kept 20 frames filled with brood most of the season. I have removed from that colony this season 33 frames of brood and they now begin on 10 more frames of foundation. It seemed to me there was a bushel of bees in the hive when last shaken.

I am pleased to receive THE BEE-KEEPER after missing it for two or three months.

I enclose the address of a few parties who have recently started bee-keeping.

Yours truly,

E. H. DEWEY.

Great Barrington, Mass., Aug. 7, 1906.

The conditions named are indeed extraordinary, though we think it is, doubtless, a case of supersedure; yet it is difficult to conjecture as to why such a queen should be superseded. Several days of bad weather immediately preceding the issuing of the swarm might explain the presence of the virgins, even though the swarm were otherwise a normal one. Possibly, one of the virgins, having issued with the swarm, may have met with an accident, thus necessitating the return of the bees, though usually more than one of them issue with the swarm under such conditions. Suggestions from our readers are invited.—EDITOR.

## Scent, Queen Rearing, Etc.

C. W. DAYTON.

REFERRING TO the quotation from the British Bee Journal on page 175 of the AMERICAN BEE-KEEPER, I would say that I do not see any confiction, whatever, between Mr. A. C. Miller's scent, or, to be more exact, lack of scent, theory and my own, as described on page 109, and which betrays the presence of scent as an important factor.

Mr. Miller's theory related to the characteristic scent of the individual colonies as having a bearing on queen introduction while the other argued the question of scent as possessed by queens which renders them distinguishable from the worker bees. Two kinds of scent—queen scent and colony scent. It seems almost wonderful how soon a queen will be missed from a full colony of perhaps 50,000 bees. Sometimes in 30 minutes. Not all the bees are attendants unto the queen. Very few. Yet there seems to be some kind of language by which the loss and the particular kind of loss, is made known to the whole colony, communicated from comb to comb and to far off supers. If it is not language there must be a sort of abiding scent that constantly diffuses itself through the hive and disappears immediately when the queen is removed.

In ordinary conditions probably 9 out of 10 bees would accept the queen immediately. The trouble is nearly always started by one or two bees attacking the queen and then other bees join in until the queen becomes "balled" and maimed or killed. These contrary bees seem to correspond to the number of fertile workers there would be developed in the colony if the colony remained queenless too long. Some colonies get fertile workers (or laying workers), in four or five days, while in

others it takes two months, while in others the bees live the length of their lives and no signs of fertile workers. Queenless bees live longer than "six weeks."

Those colonies which were the slowest to develop fertile workers were the easiest to introduce a queen into. Sometimes the fertile workers will stop laying as soon as they are given a chance to get a queen, even in a cage. Here is a wide range of bee nature.

If my memory serves me, Mr. Miller's plan was to, at once, shape the dispositions of the bees to accept the queen, and it is called direct introduction.

The other usual plan is to cage the queen in the colony until the queen is of the same scent. One way seems to deceive the bees and the other reduces them to submission. There is a gain of two days in the direct introduction plan, and in the early part of the season two days are of considerable moment. At that time of the year I seldom introduce queens, however.

The method of swarm control which I follow requeens the colonies by the use of their own cells. When the harvest is over I go over the apiary and sort out the poor queens, and any which have a shadow of fault, and replace with better ones so that the poorest colonies become really the best. I use queen and drone mothers which have been tested through the honey harvest. Nearly all bee-keepers wait until spring to do this. Their enthusiasm is like some queens' egg-laying—lacking in contiguity. The rush of the season being past there is plenty of time to sit in the shade, read up on the subject, contemplate and experiment.

At the close of the harvest, in most localities it is advantageous to retard brood rearing, so I introduce by cells,

the slowest but best of all plans. If a colony comes out in the spring with a poor queen I set them down as a total failure. There is no time to make amends then. It is like sending aged and infirm men into the army. If they are not sorted out somewhere they would become an encumbrance, just as a poor colony is an encumbrance to the apiary. It takes twice as long to manage a poor colony as a good one. And about as long, yes, even longer, to manipulate the poor colony once than it takes to rear a fine queen.

Most of the bee-keepers consider the harvesting of the crop as the hard "tug of war," but in reality it is not; merely the accepting of the surrendered sword.

In the previous August or September it is easy to add a dollar or two per colony to a crop of honey, by this correction of a few colonies. It may constitute the only clear profit. When a business falls only a little behind expenses it is conducive to "the blues." It is not easy to build hopes on failures.

But even by the caging plan of introduction, who can say that success is not more dependent upon the disposition of the bees than scent? When we bring a strange horse or cow into the barnyard the others look askance and fretful, but after awhile they accept the strangers and become very friendly. Could it not

be the same with bees? Would the bees not get accustomed to the presence of the queen and finally their animosity wear off or exhaust itself? It needs a pumpkin-eating horse to teach another to eat pumpkins. Would not the friendly bees which are constantly trying to feed the queen through the wires of the cage exert some influence upon the angry ones?

I have known queens to be caged in colonies ten to fifteen days and not be accepted. Other queens were put in and were accepted in thirty-six hours. The rejected queens were accepted by other colonies. I have seen the same conditions in the case of domestic animals.

Another plan may be called the observation plan: Keep the queen caged until the bees on the outside become friendly and the queen rushes about in the cage in a more or less frantic manner. Then pull the plug. When out, if she stops for no earressing or "slicking up" by friendly bees, as some mistakenly call it, but starts downward, plowing the bees out of the way, to the lowest part of the comb to hide, as a queen in a normal colony would do, the queen considers herself mistress of ceremonies, and shows it by her movements.

Chatsworth, Calif.



## The Bee-Keeping World

Staff Contributors:  
F. GREINER, ADRIAN GETAZ

Contributions to this Department are solicited from all quarters of the earth.



### FRANCE.

#### SWARMS AND SWARMING.

Mr. Ignatus has a long article, or rather a series of articles, in *La Revue Eclectique*, on swarms and swarming. Among a lot of interesting items he

gives the following processes to induce the bees to settle at a certain place:

At a distance of fifteen or twenty yards from the hives, preferably in front of them, are planted a few poles. At the top of each one is fixed a settling seat for the bees to alight on. The

"settling seat" is made by a handful of dead bees sewed together so as to look like a settled swarm. It is hung to a string passing over a pulley or through a ring so that the "seat" can be easily lowered simply by paying out the string.

Instead of bees a piece of old comb in a bunch of weeds, or something of the kind may be used advantageously. A queen cage having been used may also be added to advantage. A kind of cover fixed over the "seat" is also considerable help as it gives some shade.

In taking down a swarm from a tree, it is not necessary to shake it down or rake it off in a box or basket. Adjust a bunch of twigs with a piece of comb inside at the end of a pole sufficiently long and bring it close to the swarm. The swarm will soon abandon its place and settle on the comb.

It is said that a limb or pole well rubbed with "melisse" (a plant of the mint family but of which I do not know the English name) will attract the bees and induce them to settle on it. The same claim has often been made in favor of lemon juice or lemon bark. The essence of lemon, according to Mr. Donde, of Algeria, is much more efficacious than the juice itself. If the empty hives of an apiary are rubbed with some, the swarms will often go in them instead of going to the woods.

Another recipe is quoted as follows: In a little alcohol put some dead drones or queens or queen cells having hatched. Leave them in about twelve hours. Put a little of the alcohol in water with some honey and spray the places on which you want your swarms to settle.

In some parts of Europe, dishonest bee-keepers put in the woods or even around their apiaries empty hives rubbed inside with melisse and honey and containing a piece or two of old comb, in order to attract their neighbors' swarms. It must be understood

that in Europe there is not so much woodland as here and what there is is carefully taken care of, so a hollow dead tree is a very rare thing. Here in Tennessee the dead trees are plentiful and the bees will go to them in preference to anything else.

#### VENTILATION.

A correspondent, Mr. A. Dillenseger is bold enough to say that there is no such thing as ventilating bees. That those supposed to be "ventilating" are merely young bees exercising their wings before taking flight.—*La Revue Eclectique*.

#### A NEW BOTTOM BOARD.

Mr. Melchior describes a new arrangement of bottom board. The walls of the hives are extended below the bottom board or floor of the hive and rest on a convenient support. The floor can be taken out and pushed back without opening the hive at the top or removing the comb.—*L'Apiculteur*.

#### WARM WATER FOR BEES.

It has been very often noticed in Europe that bees have a particular preference for the water or rather the juices that may be found around piles of manure. The question has often raised why they take it in preference to clear water. It has been supposed that it is on account of its salty quality, or perhaps because it contains some nutritive substances that may help brood rearing. Mr. G. Gendot has made some experiments on the subject.

He began by fixing some troughs containing water and some containing the aforesaid juice, placed them in convenient places, baited the bees, etc., but all without success. They went for the manure pile. Investigation made, it was found that small pools of juice around the pile being exposed to the sun, were quite warm; a thermometer gave a temperature of 70° against the temperature of 57°. That explained it all. A warm drink is what they want.

Another trough was fixed at a handy place; and warmed up with a small alcohol lamp, so as to maintain the water at a temperature of about 80° or more. The bees were baited. In course of time, that is, in a few days, they were taking the warm water altogether, in place of the manure juice. A trough of water at ordinary temperature placed by the side of the warm water was practically ignored by the bees.—L'Abeille Bourguignone.

#### WAX AND COMBS.

Mr. Martin has given a series of contributions on the production of wax and the construction and uses of combs. He comes to the conclusion that the bees build combs for three reasons:

1. To raise brood.
2. To furnish themselves with a habitation.
3. To store their provisions in.

That's clear enough, but what Mr. Martin maintains is that wax will not be secreted by the bees unless they intend to build combs for one of the above purposes.

In 1904 he had three late swarms. He gave each of them enough comb to fill one-third of their hives. (The European hives are much larger than ours.) He had to feed them. One took 15 lbs. of syrup and stopped. The second took 21 lbs and the third took 25. But when more empty combs were added they resumed work at once. Now, why did they not build combs and keep on storing? Mr. Martin says it is because they had enough provisions and the brood rearing season being over the queen did not need room for much brood. The temperature was quite high and the weather quite dry.

Another well-known fact is also quoted: After the main flow is over, there is often a very light flow with frequent interruptions. If the bees are supplied with combs they may give some surplus during that time. If not, they will not give any because they will not build comb at that time. And

Mr. Martin insists that if they don't it is because the queen has ceased to lay or nearly so.—L'Apiculteur.

#### BELGIUM.

##### MOVING EGGS.

During a lecture on bee-keeping a queen was caged, in order to show some of the processes used in introducing, etc. The cage was placed in the hive between two combs, with the intention of releasing her when the series of lectures would be ended. Somehow or other, the releasing part was forgotten. Three weeks later, the hive was opened for some reason not stated and the queen found alive and in good health. The most curious part is that eggs and very young larvae were found in the cells of the two combs adjoining the cage. The bees must have gathered the eggs as they fell through the meshes of the wire cloth cage and deposited them in the cells.—Le Bucher Belge.

#### Farm Papers and Bees.

Occasionally one finds an item regarding bees in the general agricultural papers that is both reliable and sensible, but such instances are the exception and not the rule. The following from the California Fruit Grower, for July 7, 1906, one of the brightest and oldest on the Pacific coast, is typical of the rule:

"Three Carnolian queen bees, fertilized in Asia Minor, were recently sent to Ralph Benton, assistant in entomology at the State University. They were the first Carnolian bees to reach America alive."

If a bee-keeper would keep up with apicultural matters he must read an apiarian journal. This is an age of specialized industry and the publication which purports to cover a number of general lines is rarely reliable in any. We once said that publishers of such tommyrot as the foregoing could give their patrons better value by running blank space, and we are of the same opinion still.



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Some time ago John Hewitt, Sheffield, England, advertised Punic bees for sale in these columns. We have received complaints from some who sent him money, and received nothing in return. We are requested by some of his patrons to suggest caution in dealing with him.

Do your bee-keeping neighbors know that during this month they can secure the AMERICAN BEE-KEEPER a whole year for 25 cents, or four full years for one dollar?

Throughout southern New England the promise for a bumper crop of fall honey is excellent. Golden rod and aster plants are big, thrifty and abundant, the ground is full of moisture and colonies are strong in bees.

The Review reports a couple of instances of favorable experiments with Caucasians in Michigan during the past summer. We hereby appoint The Review a committee of one to keep tab on these experiments for a year or two, and report again.

The Southern Bee-Keepers' Association will meet at Atlanta, on the fair grounds, during the Georgia State fair, October 11 and 12, 1906. Everybody interested in bees is invited to attend, and a very interesting meeting is anticipated. Mr. J. J. Wilder, Cordele, Ga., is president of the Association.

The American Bee Journal says the "new bee-keepers can afford to wait and see which of the bee-papers are their real friends. The older bee-keepers don't have to wait, for they know already." And the American Bee Journal spoke a gospel truth. If the AMERICAN BEE-KEEPER is ever found wanting in friendship, unbiased interest and determined effort for the welfare of the cause of apiculture, we respectfully request that our readers shall promptly "call us down," and we will as promptly publish the "call."

**"Consistency."**

Bee-papers are supported by bee-keepers. The support is bestowed in return for the good to bee-keeping interests which the said bee-papers are supposed to render.

One bee-paper admits declining to publish resolutions of one of the largest

State bee-keepers' associations because, it claims, the said resolutions contained advertising matter. That is, the said resolutions might help bee-keepers to secure the necessary appliances for running their business more economically, without paying anything in addition to the subscription price, to the said bee-paper. These resolutions, says the bee-paper, "had mostly a local bearing." Of course, one could not reasonably expect such a mighty and influential organ to take much interest in a movement that had been declared by a locality the scope of which hardly exceeds the limits of New York, Pennsylvania, Massachusetts, New Jersey and a few others.

THE AMERICAN BEE-KEEPER has never advocated any particular line of supplies, nor any particular manufacturers. It simply suggests that bee-keepers pull together in that which promises best to serve their interests, and let the supply manufacturers and bee-papers take care of their own interests. The manufacturers and bee-papers that give the most value for the investment will probably not be found wanting support. The intelligence of the bee-keepers of America will attend to this minor point. Neither of the editors of this journal have the slightest interest in any supply concern, nor care "a cent" where bee-keepers purchase their goods; but it deems it a bounden duty to afford the actual producers who support it a medium through which their interests may be served, regardless of the result to any supply house. Resolutions of State associations, tending to benefit producers, may find a place in our columns without payment at advertising rates.

Our correspondence and subscription list indicate that bee-keepers are capable of distinguishing between a broad-minded, fraternal purpose and very narrow selfishness.

Again let us request that the reader acquaint all his bee-keeping friends

with the fact that during this month the AMERICAN BEE-KEEPER may be ordered for one or more years at the exceedingly low price of 25 cents a year. Tell everybody.

#### There's "Something Rotten in Denmark"

The action of the committee of the Pennsylvania State Bee-Keepers' Association entrusted with securing reduced prices of supplies for the members is the cause of much dissatisfaction and is sure to result disastrously to some of the members of the committee.

At the time the committee was appointed by the president, Mr. H. A. Surface, he had in his possession a copy of a contract showing that the New York societies had secured wholesale prices for small as well as for large quantities and the name of the manufacturers with whom the agreement was made was given, and assurance of the same terms for the members of the Pennsylvania society were also given. Certain persons and manufacturers were charged with working against the interests of bee-keepers by unwarranted increase in prices, and in sundry other ways working harm.

In the face of these statements the committee ignored the possibility of securing for the society these wholesale prices, and deliberately entered into negotiations with some of the very persons whom bee-keepers have denounced as their enemies, and made a tentative arrangement for a 10 per cent discount after September 1st, which discount after such date has been the practice of these persons; therefore the committee did not secure any special discount as they claimed. Now the members of the Pennsylvania Association are asking for an explanation.

It looks very much as if a severe shake-up was coming in that society and some prominent members will receive a grievous shock to their self-complacency and possibly be asked to resign from membership in the society.

### Profitable Market for the Small Producer

There are a multitude of persons who produce a few hundred pounds of honey to one who measures his product by the thousands of pounds, yet most of the marketing advice printed is written for the large producer who as a rule is quite independent of such help. It is the small producer who really needs the help and to whom a small increase in price means the most. To the latter we would offer a few items gleaned from many years of experience by ourselves and others.

As a rule it will be found best to deal direct with the consumer and such trade when properly catered to will yield the highest returns. To be sure it costs something in time and thought to get customers, but it is also true that the person seeking such trade has more or less time which can not be more profitably used.

The first essential is to classify your honey keeping the fine flavored, bright honey, separate from the darker or stronger flavored. All thin, unripe, or ill-flavored honey should be fed back to the bees. A little such inadvertently given out or sold may alienate valuable customers. Avoid the danger.

The next step is the judicious distribution of samples. This is not the indiscriminate giving of a small sample with a circular or leaflet attached, but the making of a "gift" or "present" so that the recipient "will know the delicacies we enjoy from our bees, it is the most wholesome sweet in the world you know." With some persons a little chat about bees will be advantageous and will result in their repeating what you say and in indirectly advertising your goods.

As orders are secured you can gradually find the special likes of each buyer, one preferring mild and another strong flavors. By careful praising of your best honeys, fruit bloom, clover, raspberry or some other kind or blend, you can secure a fancy price for it.

Regarding prices. These vary with the section of the country but as a rule it is not difficult to secure several cents above the market price. For example the writer has no difficulty in getting 30c. each for sections of honey from fruit bloom and for some fancy blends. The same price is secured for extracted honey of the same kinds. For clover honey and similar grades 25c is the uniform price. Dark and strong honey is not so easy to dispose of, that is to say fewer persons like it, but such as do like it are quite as willing to pay 25c a pound for it, as others are for the light grades. The average retail price for honey at the stores ranges from 16 to 22c, and extracted honey brings the same as comb.

Produce a good article, find persons who appreciate it and ask what it is worth, and gradually the demand will increase beyond your ability to supply it.

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### Bee Veils.

There are bee veils and bee veils. Mr. Miller has developed one particularly adapted for service in a home apiary and where bushes, trees and vines have to be encountered. Mr. Atwater prefers a veil more readily transported from place to place and does not have to contend with shrubbery. Thus do climatic conditions modify methods and implements.

In reply to Mr. Atwater's wish for a better wire cloth, we would refer him and all interested to that made from a "bronze" wire, which will not rust or crumble. At first it is shiny and hard to see through, but as soon as it oxidizes it is as nearly perfect as any screen can be. The oxidizing may be hastened by washing the wire with most any dilute acid.

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We expect in the near future to present to readers of THE AMERICAN BEE-KEEPER something new about foul brood and bee paralysis and their treatment.

### Keep the Dominators in Check.

Writing of the leasing of "bee range" by the Australian government, Mr. J. A. Green, in *Gleanings*, says: "While the provisions of the act may not be in all respects satisfactory to the bee-keepers, it may prove to be the thin end of the entering wedge that will expand men's ideas on the subject until the government takes possession of all bee territory as something separate from the land and leases, or sells it by itself. Speed the day."

If the provisions of the act are not satisfactory to the bee-keepers, whom, pray, is it intended to satisfy? If there is one thing which will enable the supply men and their satellites to get the plain bee-keepers by the throat it is a statute which will permit the highest bidder or the man with the longest purse to get control by lease or purchase of the best yielding and most accessible bee ranges.

Rapidly the honey producers, great and small, are uniting, the individuals are recognizing their interdependence and in due time they will effectively govern the distribution of apiaries and do without the supply men. They have the remedy in their own hands and if the supply men try to interfere, they will find their trade vanished and they and their aids will be forced to pawn their puffing autos and buy wheelbarrows and get down to some more respectable work than doing their fellowmen.

### Uniting the Bee-Keepers.

There is one all important and vital reason for bee-keepers' societies urging and sustaining the restriction to the societies' members of the large discounts on prices of supplies which the societies have secured. It is self preservation. The honey producers, little and big, must unite and nothing will cement such union more firmly than mutual benefits derived from such union. Cast the benefits broadcast and we are again

at the mercy of the schemers. Our societies will become weak, flaccid things without force or character. The mere assembling of persons with a common hobby or pursuit for social talks will not suffice to create a united body capable of securing the rights of its members. Some greater object than social assembly must exist, and in this decreased cost of supplies we have a real and a powerful one, and this will soon be supplemented with others.

Increase in membership means increased strength; increased opportunity for economies, for mental, social and material advancement.

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### Sweet Clover.

Sweet clover is a honey plant of doubtful value. Where its bloom fills a gap in the honey sources and helps the bees to keep strong for a latter and more desirable flow, it is welcome, but where it more or less overlaps the flow from plants yielding a finer honey, it is a detriment.

The honey from sweet clover has a peculiar taste suggestive of catnip tea and is particularly repellant to some persons. Pains should be taken to keep honey having much sweet clover in it separate from other honey, particularly from fancy white kinds, because it is not a first class article.

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Forestry is a subject that is not only fascinating to all nature lovers, but is one also of vital importance to all Americans, while bee-keepers are especially interested in the devastation of our great forests that has been long going on, to the detriment of their pursuit. One of the most comprehensive works that have come to our notice is "Practical Forestry," by Prof. John C. Gifford, of the New York State College of Forestry, Cornell University, and published by D. Appleton & Co., New York. It contains nearly 300 pages and is beautifully illustrated. The price is \$1.20.

**Our Climate.**

Mr. Getaz in a recent article on the value of double walled hives, says: "Perhaps some explanation on the 'locality' should be made here. With you Northern people the spring does not come until the snow is all melted—that is, quite late in the season. At that time the days are long, the sun quite high, and the weather gets good and warm at once, and stays warm. In this latitude the case is different. The spring begins early, but drags along through a succession of warm and comparatively cold spells of weather. The maples begin to blossom irregularly in March, and sometimes as early as the middle of February, and the apple-trees about the 1st of April; but quite cold spells and frosts, and occasionally a regular freezing day, may come as late as the 20th of May. Under such circumstances the necessity of ample protection is seen at once.

Even during the summer nights are often quite cool—in fact, cold enough to compel the bees to abandon the supers during at least the latter part of the night."

If he will start his spring with late March or early April, the rest of it will hit the "Northern locality," to a dot.

There is not so much difference between the climate of the Northern and Southern states as some people think. A little longer cold spell and a little shorter hot term. Florida has its freezes, Michigan its torrid wave, the Gulf states shiver in a cold fog, and New England wilts with a tropical humidity. We all take a sample. Only the arid regions have a climate peculiarly their own.

From thirty colonies only four swarms have issued this season and yet at times many of the hives have been so packed with honey that the bees ceased work for want of a place to put their loads. Why the absence of swarming?

**Prepare Now for Winter.**

We believe that the older readers of THE BEE-KEEPER know the value of early preparation of their bees for winter and especially of the great value both for wintering and for the production of next season's harvest gatherers, of full stores in the brood nest ere cold weather sets in. For the benefit of the large number of our new readers we wish to repeat and urge that they see to it at once that their colonies have vigorous queens, that all weak colonies or nuclei are combined into strong ones, and that any colonies short of stores be fed until their combs are well filled. Localities where a fall honey flow does not occur are rare and generally by Sept. 15 most colonies will have a full larder but where any are found short, feed them as quickly as possible and if the weather is cool, aid the bees in ripening and storing their food by wrapping the hive in black building-paper.

As soon as the feeding is finished, close down the hive to its winter size and do not open it again until next season. The bees will thus have a chance to place the stores just where their instincts dictate as best and will effectively seal up all cracks. Give the bees a fair chance and they will do more for their own good than man possibly can by any amount of late and unseasonable tinkering.

Let preparedness be the watchword.

If you have supply men or editors of our trade papers among the members of your bee-keepers' society, so amend your by-laws that such members shall have no voice in the management of the society's affairs. If they do not like the restriction, return their entrance fee to them and let them go their way. A man cannot serve two masters.

The AMERICAN BEE-KEEPER, four years, one dollar.

### Sugar Feeding Must Stop.

Recently an article appeared in a contemporary explaining the condition of sugar syrup after it had been treated and stored by the bees, the claim being made that such can always be detected. Presumably the effort was inspired by a desire to defend the practice of sugar feeding as advocated by the paper publishing the article. Unfortunately for the point attempted, no consideration was taken of stored syrups that contain a percentage of nectar from the flowers.

Bee-keepers have got to stop feeding sugar syrup to their bees—except to prevent starvation—unless they are to see their business ruined.

“Most men would feel insulted if it were proposed to employ them throwing stones over a wall and them throwing them back again, merely that they might earn their wages. But many are no more worthily employed.” Thus wrote Thoreau. And today not a little of apicultural advice is of the stone-shifting order.

### HONEY AND BEESWAX MARKET.

Cincinnati, Aug. 4.—We are receiving numerous shipments of comb honey at the present time, and find ready sale here for fancy and No. 1 at 14c to 15c per pound in a jobbing way. This is a poor market for grades lower than No. 1. The receipts of extracted honey are normal, although the demand is not so good as it was sixty days ago, nevertheless, there is no material change in prices. Are selling amber in barrels and cans at 5c to 6½c. Fancy white at 6½c to 8½c. For choice beeswax, free from dirt, we are paying 30c per pound delivered here.

51 Walnut St.

The Fred W. Muth Co.

Chicago, Ill., Aug. 6.—There is now offered some good lots of comb honey and while the trade in it is not active it is taken at 15c and 16c for fancy, 14c and 15c for No. 1, 12c and 13c for fancy amber, and 8c and 10c for fancy dark. Extracted is slow of sale with prices according to quantity and quality. White extracted 6½c and 7½c, amber 5½c and 6½c, dark 5c and 5½c. Beeswax wanted at 30c per pound.

159 So. Water St.

R. A. Burnett & Co.

Boston and Worcester, July 18.—Our market is entirely cleaned up on honey. We sold last lot at 15c. Prices through season for good stock have been from 14 to 17c. There has not been any over-supply on the market, therefore conditions have been favorable for good prices. We under-

stand there is to be quite a good crop next season but still we hope to have a good, fair market, although possibly not quite as high as this season.

W. H. Blodget & Co.

Kansas City, Mo., July 17.—The supply of honey is somewhat limited with demand fair and increasing. We quote our market today as follows: Fancy white per case [24 sections] \$3.00. Extracted 5½c. Beeswax none. No new extracted honey as yet

C. C. Clemons & Co.

Buffalo, July 16.—The supply of honey is coming slowly, while demand is increasing. We quote our market today: Fancy comb, 14 to 15c. Extracted, 5 to 8c. Beeswax, 28 to 30c. Strictly fancy is wanted but Nos. 2 and 3 sell slowly at 10-12c. Old unsaleable stock slow at 3 to 5c.

Batterson & Co.

New York, May 12.—The supply of honey is sufficient to meet demand. The demand is fair for extracted. We quote our market today as follows: Comb, 9 to 15c; as to quality, Extracted, 4½ to 6½. Beeswax 30 to 31c. Hildreth & Segelken.

### WANTED.

**The American Bee - Keeper wants an agent in every city, town and village of every English-speaking country in the world. To our representatives everywhere we pay cash for available matter for publication, and liberal cash commissions on all subscribers secured.**

American Bee-Keeper, Falconer, N. Y.

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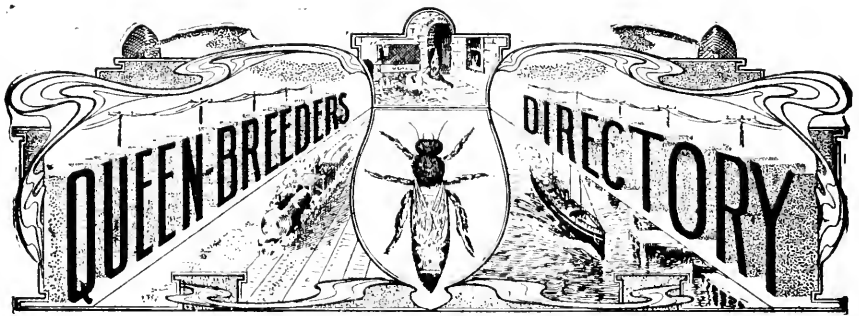
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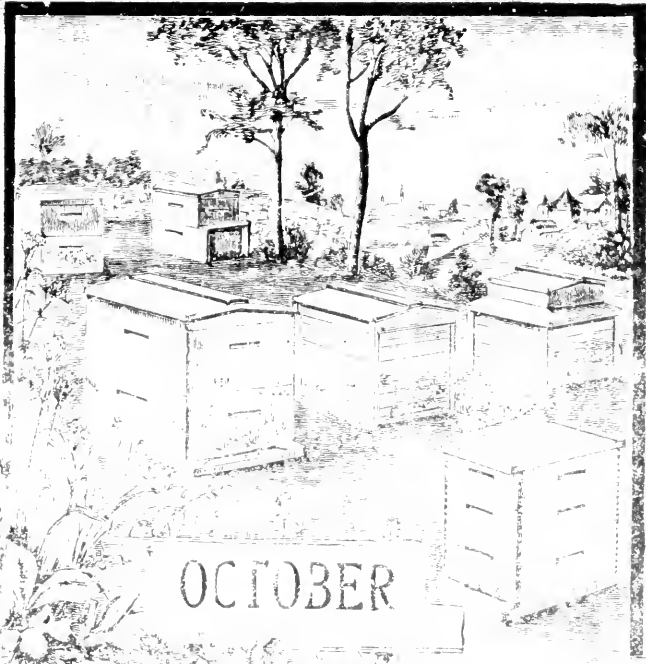
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OCTOBER

1906

VOL. XVI

NO. 10

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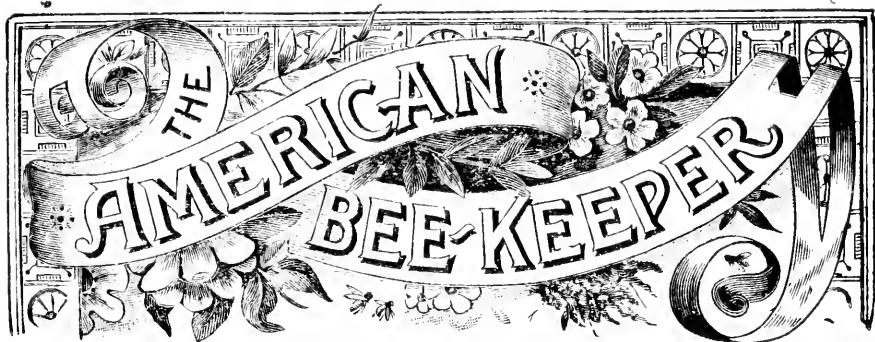
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**The American Bee-Keeper, Falconer, N. Y.**





Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVI

OCTOBER, 1906.

No. 10

## A Unique System.

### How an Ingenious School Teacher Harvests Crops of Honey from a Desert.

A. C. MILLER.

OF ALL UNPROMISING places for profitable apiculture Cape Cod would appear to be the worst. A strip of shifting sand with twenty miles of bay on one side and three thousand miles of ocean on the other describes the most apparent conditions, and yet, Allen Latham finds bee-keeping there to yield satisfactory returns. It was the writer's good fortune to be able to accept an invitation to visit Mr. Latham at his summer home, and the uniqueness of the locality as a bee pasture and his methods of apiculture made a strong impression. Mr. Latham's home is right on the shore of Cape Cod bay and at high tide the water is within a few feet of the door. North and south stretch the upper beach covered with coarse salt grass, while to the east is the highway bordered by a fresh water lake edged with rushes, and beyond this are the shifting sand dunes and the broad Atlantic. My first statement was that he must have developed an

aquatic bee and trained it to dive for the seaweed bloom, for naught else seemed to offer a chance for forage.

Like many other apicultural enthusiasts he found it impossible to be without his bees, so when early established in his summer home, some years ago, he bought a small colony and put it in a hive built into one corner of an upper room. Much to his surprise they did well; despite the unchecked sweep of winds the colony waxed strong. He now has three colonies in his house, the entrances being just above the piazza roof.

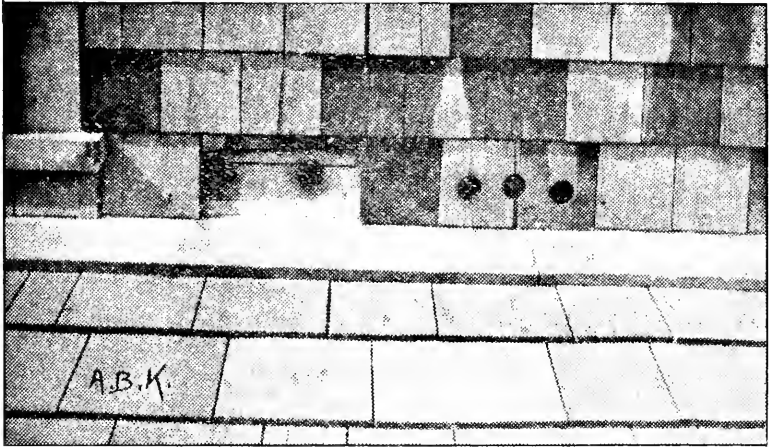
At various parts of the cape he has other colonies. At Provincetown, on the very end of the cape, he has eight colonies, several of which this year gave him over 150 pounds each. When he told me the yield I could scarce believe my ears, but when he opened some of the hives and showed me great slabs of new comb packed with his-cious golden honey I could but stand

and wonder. The Provincetown yard is his largest on the cape, the others ranging from one to four hives each.

The sources of honey are beach plum, huckleberry, sundry small summer flowers, in some places some white clover, and golden-rod without limit. The coarse marsh grass is literally full of a dwarf variety of golden-rod which yields bountifully.

As Mr. Latham is with his bees only from July 10th, to September 1st, of each year he had to devise a "let alone" plan of culture, and he has developed his system particularly to meet

tion is as follows: A hive holding twenty frames 16 inches long by 11 inches deep, inside measure. They are arranged on the "long idea" plan. The "brood nest" consists of eight frames and is located next the entrance the combs running parallel to the front wall. Back of these eight frames is a sheet of queen-excluding zinc, behind which are the twelve frames for honey. When first put into commission the brood frames are filled with foundation and the honey frames have one-inch starters. Thereafter the brood nest is seldom disturbed, the only frames re-



ENTRANCE TO HIVE IN MR. LATHAM'S HOUSE AT PROVINCETOWN, TWO MILES FROM VILLAGE.

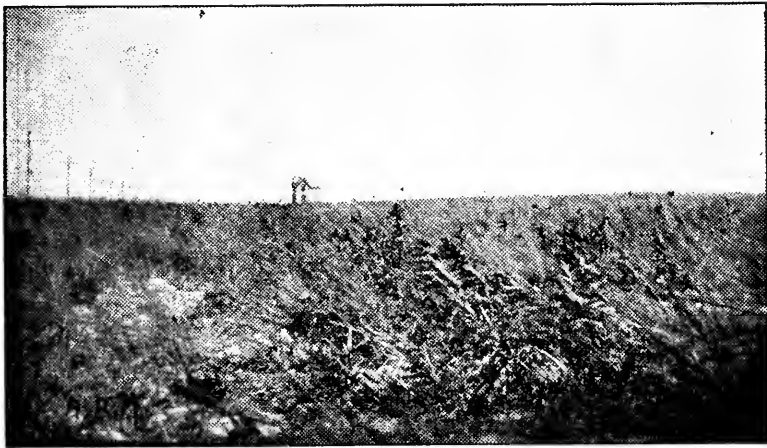
the peculiarities of the location. A hive to withstand the bleak winter gales and the blistering summer sun was his first problem, and was met by an adaptation of the air-spaced hive used in Norwich, Ct. The next consideration was its size and shape, for it must have room enough for the fall and spring flow and with a brood nest large enough for summer and small enough for winter. How such a problem would stagger some of the shallow eight-frame hive advocates, His solu-

tion moved being the store frames when filled. The full combs are cut out, a half-inch of comb being left along the top bar, and the frame at once returned. These combs seldom contain pollen and are crushed and the honey strained out. This method saves the trouble of carting combs to extractor, or extractor to apiaries, and incidentally yields a fine crop of superior wax. The twelve frames will hold about one hundred pounds of honey. The hives are made from boxes

bought at the grocery. The entrance extends across one end, is an inch high and is guarded by a grating of wire nails driven up through the bottom; this is to keep out the mice. Inside the box is put a layer of several thicknesses of newspaper against which at the bottom and near the top are nailed strips of wood about three quarters of an inch thick. To these is tacked another layer of newspapers, over which is placed a wall of wood. The frames hang on the top edge of this wall. The floor is also double. The frames have wire tops and ends so that when in

To hold the covers on, small holes are bored and long wire nails are pushed firmly in. Bees thus housed and sheltered care for themselves, make rousing colonies, do grand work, rarely swarm, and stand all the extremes of one of the bleakest and most exposed spots in New England. Where possible Mr. Latham locates his hives in clumps of the scrub oak or other trees scattered here and there in hollows of the land, but the protection thus afforded is slight indeed.

A more successful "let alone" plan it will be hard to find in all this broad



BEACH GRASS AND GOLDENROD AS SEEN FROM MR. LATHAM'S PIAZZA, LOOKING SOUTH ALONG SHORE OF CAPE COD BAY.

place they form an inner wall. They do not fill the hive from front to rear by half an inch and the space thus left is closed by a long wedge of wood, and when thus fixed the frame tops and wedge make a complete top to the hive and holds all bees below. Over these are laid a pad of newspapers and above by half an inch an inside cover of half inch boards. The outside of the hive and the outer cover is covered with a heavy black building paper, Paroid Roofing I believe it is called.

land.

Since the foregoing was written the following notes were received from Mr. Latham:

"I captured my first swarm from the branch of an elm tree in 1884, June. The next summer I bought and otherwise increased my colonies to five. In 1886 I had nine, the next year 16, and from then on till 1894 I kept about 30 colonies in Lancaster, Mass. I disposed of my honey to the neighbors, and in the New England fair, held at

Worcester, Mass. When I left college, in 1892, I began teaching, but continued to go home to care for my bees, whenever occasion demanded, and I could get away from my school duties. Two or three visits from April till the summer vacation in late June usually sufficed. In 1894 pickled brood (?) made such ravages in my apiary at the old home that I broke it up and gave way all but five colonies. These I joined with two other colonies which I had carried with me on my teaching pilgrimages, and from 1895 I kept from four to 15 colonies in Walpole, Mass.

Those elsewhere are run for chunk honey, and strained honey.

"It is some five years ago that I first thought it would pay to set large hives out on farms in different localities, from which to cut honey in the fall of the year. I now have sixty or more such hives, and I find that the income from honey and wax is very good, the work being rather light, the bees needing only a minimum of attention.

"My largest yield from any colony was 146 salable sections in 1893. These sections were 4 1-4 by 4 1-4 by 1 7-8, two bee-way, no separators. Would



THREE HIVES IN A LITTLE HOLLOW IN THE SAND HILLS AMID BUSHES AND SCRUB OAK.

I kept from two to five colonies while teaching in the towns of Deerfield and Andover previous to this. I kept the bees in Walpole till I moved to Norwich, Conn., in 1902.

"It was in 1901 that I first took bees to Provincetown, Mass. I now have 10 colonies in Provincetown, 13 in Truro, Mass., 14 in Lancaster, Mass., 26 on the hills about Norwich, Conn., and 60 colonies in my home yard, besides a dozen or more nuclei. The colonies in the home yard are run for section

average more than a pound each.

"I have always made my own hives. I first used a frame about 13 deep by 11 long, nine to the hive. Then I shifted the frame so that it was 11 deep by 13 long. That frame I used for 15 years, and still have eight of those hives. Loose-hanging, made from pine strips 7-8 wide or a full inch sometimes. I now use a cross-wise frame, closed-end, 10 deep by 12 long, 11 to the hive.

"My hives are with few exceptions made from grocery boxes, and covered

with Paroid Roofing paper.”

Thus it will be seen that a person with a little ingenuity and but a small amount of leisure may accomplish much even under adverse conditions.

Also it is apparent that much fussing and manipulating is not at all essential to profitable bee culture.

Providence, R. I., Sept. 11, 1906.

### BEE DISEASE FIGHTERS TO MEET.

The following circular was sent to apairy inspectors and bee disease experts throughout the country, last sum-

tors for the purpose of remedying this condition of affairs in so far as is possible, by consultation and co-operation of persons familiar with this work.

If the Inspectors now at work on these problems can meet together, there are several subjects which could be discussed to advantage. Among these might be mentioned:

Comparisons of methods of treatment.

Locality differences in disease and treatment.

Foul Brood Laws now in force, with suggestions for improvement.

As a time and place of meeting San



ROAD IN FRONT OF MR. LATHAM'S HOUSE, SAND DUNES IN BACKGROUND, BEYOND WHICH LIES THE OCEAN.

mer:

Milwaukee, Wis., August 3, 1906.

To the Bee Disease Inspectors:

As you are well aware, the brood diseases of bees are serious things to American bee-keepers. While the Inspectors are fighting the progress of disease to the best of their ability, yet lack of laws, inadequate laws, and an absence of uniformity of method and of co-operation make the work difficult.

For these reasons, it has appeared advisable to call a meeting of Inspec-

Antonio, Texas, November 7th, 1906, has been suggested, since the National Bee-Keepers' Association meets there the day after, and the Inspectors would thereby get to attend both meetings. At the same time it would also add to the interest in the N. B. K. A. convention. The low railroad rates would make the expense less heavy. Another suggestion is Washington, D. C., where it would be possible to have the bacteriological side of bee disease work explained and demonstrated. No decision

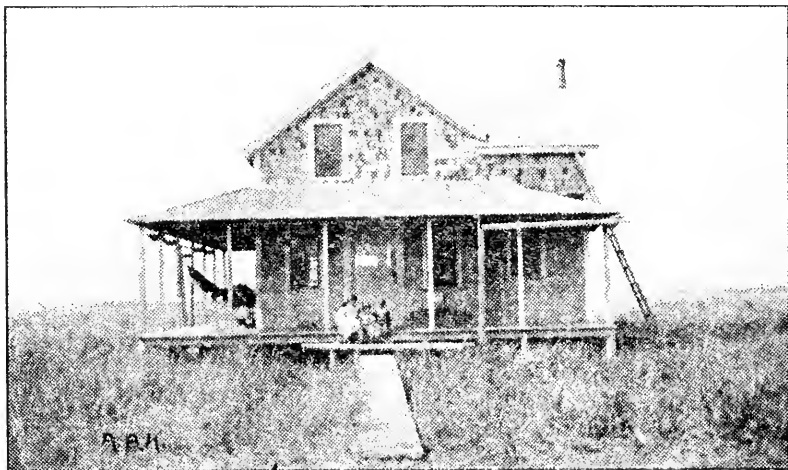
of time and place will be made except by choice of the majority of Inspectors who agree to come.

One of the important results of such a meeting would be that persons interested in the passage of new Foul Brood Laws would have an opportunity to consult with those already familiar with the fighting of bee disease, and get suggestions as to the best form of law. If such a meeting is held, it will be open to all persons interested, but it is understood that it is to be strictly an Inspectors' meeting, and other persons will not be allowed to take up

easily be made for the publication of the proceedings of the meeting without cost to the Inspectors.

We feel that attendance at such a meeting by the Inspector would be of sufficient value to the community that the state or county employing him should be willing to pay the necessary expenses of such a trip.

The hearty co-operation of every person interested in this work is earnestly requested. Such a meeting will be for the purpose of furthering work in fighting bee disease and not to advance the interests of any person except the bee-



MR. LATHAM'S SUMMER HOME, EAST FRONT. AT BACK IS CAPE COD BAY AND BUT A MILE AWAY IN FRONT THUNDERS THE ATLANTIC.

valuable time of the meeting in discussions.

The questions which we wish to have answered by the various Inspectors are:

- (1) Are you in favor of such a meeting?
- (2) Will you come?
- (3) Will your state or county pay your expenses?
- (4) What is your choice of time and place?

In case of a good attendance and a successful meeting, arrangements can

be made for the publication of the proceedings of the meeting without cost to the Inspectors.

We feel that attendance at such a meeting by the Inspector would be of sufficient value to the community that the state or county employing him should be willing to pay the necessary expenses of such a trip.

The hearty co-operation of every person interested in this work is earnestly requested. Such a meeting will be for the purpose of furthering work in fighting bee disease and not to advance the interests of any person except the bee-

keepers of America. Kindly write at an early date and let us know what you think of such a movement. A candid, full reply is solicited.

Truly yours,

W. Z. HUTCHINSON,

Inspector of Apiaries for Michigan.

N. E. FRANCE,

Inspector of Apiaries for Wisconsin.

E. F. PHILLIPS,

U. S. Department of Agriculture.

After hearing from a number of Inspectors who agree to be present, it has been decided that this meeting will

be held in San Antonio, Texas, on November 7, 1906, the day preceeding the first session of the National Bee-Keepers' Association meeting. A number of persons prominent in bee disease work will be present, and a good meeting will result.

To this meeting all persons interested in work on bee disease are invited. The attention of persons interested in having bee disease laws passed is particularly called to this gathering, and such persons are urged to attend. It is of course, to be understood that discussion of subjects foreign to bee

### MR. DEWEY'S "PECULIAR CASE."

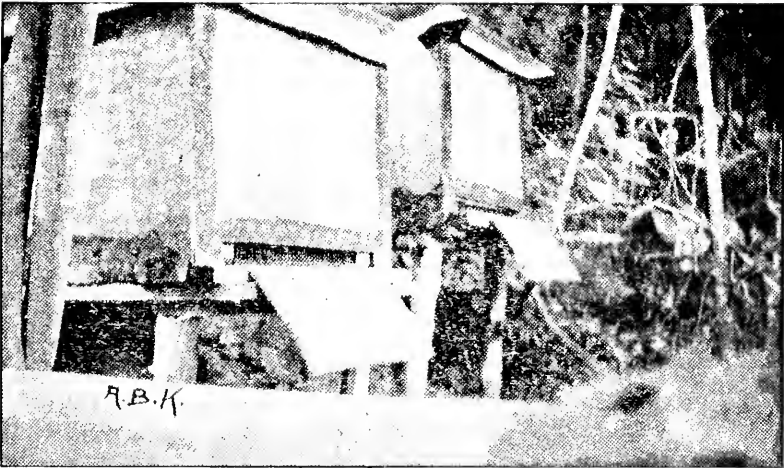
SOLUTION BY ALLEN LATHAM

Norwich, Conn., Sept. 8, 1906.

Editor BEE-KEEPER:

On page 195 of the AMERICAN BEE-KEEPER you invite suggestions from your readers, and having had two cases somewhat similar to what Mr Dewey describes I will venture an explanation.

I feel sure that it was not a case of supersedure. In the first place bees rarely develop more than one queen at a time while superseding. They may have two or three cells going, but



FRONT VIEW OF TWO OF MR. LATHAM'S GIANT HIVES, LOCATED ON STEEP SIDE OF LITTLE HOLLOW IN THE SAND HILLS. HIVES ARE PAINTED BLACK BUT APPEAR WHITE ON ACCOUNT OF REFLECTED LIGHT. MOUSE-GUARD SHOWN AT ENTRANCE.

disease will not be allowed, nor will any one be permitted to occupy the time of the meeting in riding a hobby. This meeting is not part of the National Bee-Keepers' Association meeting, nor is it in any way connected with it. The proceedings will probably be published, so that the discussions will be available for those not present.

one is usually far in advance of the others.

The queen was clipped. A week or so earlier, say about July 28th, a prime swarm issued from that hive unobserved by Mr. Dewey or his folks. The clipped queen was lost in some way, and the bees returned to the hive. On August 5th the colony swarmed again, as was observed, but did not stay swarmed.

Why did no virgins go with swarm?

Largely because each virgin was too intent upon the business of hunting up her challenging sisters. When for any reason the prime swarm loses its queen and returns to the hive, the swarm then becomes no longer normal, and the virgin queens will not act in the usual (?) way. I have waited four days for a swarm thus conditioned to issue, the virgins piping vigorously all the while. The governmental condition of the colony is very chaotic, and requires a long time to adjust itself. Ultimately the colony will either swarm or all virgins will yield to one which is to carry on the old colony with all its forces.

Remember that when the old queen is thus lost each cell becomes the centre of interest of a rather numerous company of supporters. The hive ceases to have a central government, and becomes rather a loose aggregation of principalities.

When Mr. Dewey states that there were a few cells with larva about ready to seal, he tells us that the old queen was present about July 27th at greatest. Is not the case plain?

Yours very truly,  
ALLEN LATHAM.

DR. MILLER'S EXPLANATION.

Marengo, Ill., Sept. 8, 1906.

Mr. Editor:

Referring to that "Peculiar Case" page 195, your guess seems to be orthodox, but as you ask for suggestions I venture the additional guess that about eight days prior to the time the swarm issued a prime swarm, unnoticed may have issued, the clipped queen being lost. The effect would be practically the same as your hypothesis that bad weather had delayed matters.

You say "it is difficult to conjecture as to why such a queen should be superseded." Are not queens generally superseded on account of old age, and was she not practically a pretty old queen? For is not her age to be meas-

ured by the service she had done rather than by the number of months she has lived? "The queen was one year old early this spring." That means she did about a full years work last year. This year she worked up to the last of July, and that means nearly another year's work, for queens don't lay such a very large amount after the first of August. So her term of service was not far from two years. She had 20 frames of brood this season, and last year she "kept 20 frames filled with brood most of the season." When size of frames is not mentioned it is fair to assume that they were Langstroth frames, and keeping 20 frames filled was more than twice as much as should be expected from an average queen; so no matter how long she had lived she had done something like four years work. Why shouldn't she be superseded?

Hope you're having comfortable weather in Florida. Last night was one of the hottest nights of the season.

Best wishes,  
C. C. MILLER.

JOHN M. DAVIS TELLS HOW IT HAPPENED  
Editor BEE-KEEPER:

I just noticed your diagnosis of Mr. Dewey's peculiar case, page 195. Off the track, Harry. This is evidently a case of natural swarming, and the old clipped queen being lost in the grass about a week before the swarm mentioned by Mr. Dewey. Bees do not build so many cells when superseding a queen, and they never wait until the queen is so nearly exhausted before they prepare cells. In this case owing to the excessive number of bees I think the old queen led the first swarm out rather soon; or at least before the queen cells were as far advanced as is usually their custom.

Their young queen may have been lost as you suggest, but I am of the opinion that the bees being so anxious to swarm, did so a little too quick and



the young queen could not take wing. This was owing to their crowded condition.

I have frequently had this experience. In cases of ordinary after-swarms the young queens are often held in the cells until they are old enough to fly direct from the cells; but in the case mentioned the first queen came out as soon as she could cut out, and possibly was helped out, as the bees were anxious for her advent.

All queen breeders know that queens just emerged from a cell in a nucleus cannot fly. These are allowed to come out just as in a case where an old queen has been lost. Yours truly,

JOHN M. DAVIS.

#### HANDLING CROSSWISE FRAMES.

Allen Latham

NOT LONG AGO an editor of a bee-paper said that frames should hang lengthwise of the hive so that the hive could be tilted that the water might run out. If that is the only reason for having the frames hang lengthwise, and is a sufficient reason, then bee-keepers in general may be put down as dolts. There are of course, other reasons, some not possibly so imbecile as the one above. On the other hand there are reasons why the frames should hang crosswise; and it is my purpose in this article to give some of these.

Most apiarists are in accord in saying that the crosswise arrangement is the warmer, but prefer to sacrifice this advantage for reasons of their own. That this advantage alone is sufficient reason for hanging the frames crosswise is one of my beliefs. There are, however, numerous other advantages which are not recognized till one has handled such frames a year or two.

With the frames crosswise work can be carried on from the back of the hive. There is double gain here, —first, the bees are less easily stirred up, second, the hives do not require side-spacing

for purposes of manipulation. If one has plenty of space the second gain does not count for much, but every one will find the first gain worth while. It is remarkable how little smoke is required while working from the back with crosswise frames. Later I shall have more to say concerning this, and will dismiss the matter at present with the simple hint that working thus one can keep out of sight and disturbance of the entrance guards.

Speed is gained by the crosswise arrangement. With this arrangement a bee-keeper can find out the condition of half as many again colonies in a given time as with the lengthwise frames. You will scarcely believe this statement, and so I must offer reasons for making so bold a statement. I have often seen it stated that the crosswise frames meant more work and time, since there would have to be more frames. Allowing that there would have to be more frames, and I am blessed if I know why I should allow such a questionable inference, I still think that time would be saved with the more numerous frames.

If I read the signs aright, apiarists are coming more and more to follow the instincts of the bees instead of their own whims. It is safe to say that all really successful bee-keepers are those who are ever ready to yield to the instinct of their pets, knowing full well that by so doing they will gain more in the end. One of the powerful instincts of the bee is to give its brood nest a station near to the entrance, and to store its honey up and back. That this instinct is invariably followed, I do not assert. I have seen many exceptions. Like all bee-instincts, however, it generally holds true. With the crosswise frames one can make good use of this instinct.

Who has not observed that in the lengthwise frame there is almost always more honey in the upper back corner than in the upper front corner. Some-

times, indeed the entire back end is solid honey, while the front end is seldom thus. The brood-nest tends to the front of the hive. But does it tend to the right or the left? A guess is the best you can say. Some observing bee-keepers will note by the bees about the entrance whether the nest centres to the right or to the left, and will thereby gain a minute in their examination of the colony. With the cross-wise frame one neither has to guess nor to observe the entrance.

Suppose we wish to note the condition of a colony. We note that the brood-nest is to the left. We remove frame after frame from the right till we find brood. We note character of brood and eggs. We count remaining frames, and to make sure remove the left-most frame. Far easier with the cross-wise frame.

All the time that we are taking out frames thus we are disturbing the entrance guards, irritating them and enticing them away from their post of duty. If no honey is coming in there is great danger of starting some robbing. Please note that with the length-wise frame we break the cluster length-wise cutting it from the quiet back portion to the lively front portion. We thereby upset the whole tenor of the colony. Not thus with the crosswise frames.

Now suppose we have crosswise frames, and we wish to know the condition of a colony in early spring or summer. We will not smoke the entrance at all. We simply remove the cover, fold back the cloth frame by frame till we see the clustered bees. We then remove a frame. Its condition will tell us nine times out of ten, what the condition of the colony is. Why? Well, the brood-nest nine times out of ten is begun near the front and is carried back frame by frame. We are reasonably sure therefore that all the remaining frames except possibly the frontmost one have brood in them. To

make sure we have merely to roll the cloth back from the front. If the bees are clustered there, then we know the number of frames of brood. As we have just seen the last laying of the queen we can judge very well of her character.

It is mere play to find out the condition of colonies with crosswise frames in the springtime. In summer we are equally well off, for we have merely to take the rearmost frame out in order to know what the brood-nest is. For we can rest assured that if that rearmost frame contains brood then all is well. If it is solid with honey, we must of course, proceed towards the front till we find what we are after.

I handled lengthwise frames for 18 years, and still have a few. I have handled crosswise frames for four years, and I have hundreds. I shall never return to the use of lengthwise frames. In none of the operations about the hive is time lost by the use of cross-wise frames, while with many of them time is actually saved. After one has become familiar with the handling of these frames he can even find the queen more easily. Why? Because the frames are frequently individual brood periods; this frame is all sealed; that all young brood; that all eggs. Do not understand me to say that this is always so. Cross-wise combs like lengthwise combs lose that character as summer progresses. But with the crosswise frame one can be surer of getting the queen for the simple reason that he is disturbing the cluster parallel with the entrance and not perpendicular to it. He is disturbing bees of like ages and instincts at one time, and not disturbing bees of various ages and instincts. There is less likelihood of frightening the queen into hiding.

With the crosswise frames many manipulations can be carried on without causing the bees to stop work. Many a time I have seen the bees continuing their work, (field work) as though

nothing was happening, though I was working with the rear frames. Thus this frame is a gainer for the bees as well as for the apiarist.

I have before hinted of robbing being started with lengthwise frames. With the crosswise the entrance guards are seldom enticed away from their duty, and even though robbers may be hovering about the rear of the hive while one is manipulating the frames, he can close up the hive and rest assured that any robbers will meet with a hot reception if they carry their thieving to the entrance.

I have already made this article rather lengthy, and must close, though I could easily offer other valuable advantages which the crosswise frames afford. The one which I have dwelt upon most is a weighty one and should

carry conviction. Dr. Miller teaches that one should in early spring remove the unoccupied combs from one side of the brood-cluster and shove the combs containing brood to the hive wall farthest from the manipulator. Thereby one will thereafter know where the brood-nest is and can save much time in manipulation. Well, Doctor, with the crosswise frames that mighty valuable thing is already done for you. Norwich, Conn.

Make notes of the condition of each colony that you put into winter quarters considering its stores, its bees, whether they are normally proportioned or mostly old or mostly young, the queen's age and quality and then consider the results next spring. Those factors have quite as much importance as the kind of hive and protection given.

## Honey Vinegar.

Timely Hints for Farmers. Issued by the University of Arizona Agricultural Experiment Station.

A. E. VINSON.

THE DESIRABILITY of utilizing honey washings and waste for vinegar making has been pointed out in Timely Hints 48 on Bee Products in Arizona. Hitherto only a small amount of honey vinegar has been produced locally, although cider and distilled vinegar demand an unusually high price in the home market, and are supplied by eastern makers. The vinegar usually retailed is made by diluting "Triple extract" with two or three volumes of water. It retails at 15 cents per quart, including the bottle, and varies greatly in strength. On the other hand, the local producer is usually discouraged by the length of time required to put "the sparks" into his product. This delay requires the long investment of his valuable capital. In the meantime the

hoops rust off his casts, and they begin to leak. Moreover, the intense heat of summer, where proper protection is not given, occasions the evaporation of alcohol and acetic acid. It retards the activity of the ferments and finally degenerative fermentations take place, which decrease the strength of his product.

### ARIZONA CIDER VINEGAR

The method of making honey vinegar now in use among farmers, often results in the loss of enormous quantities of saccharine material, which would have been fermented, had they been treated differently. This fact is brought out most strikingly by the analysis of a small number of samples collected within the Territory.

## COMPOSITION OF ARIZONA HONEY VINEGAR.

	Unfermented		Ash
	Acetic Acid	Matter	
(1) Fort Lowell	2.11	0.87	0.29
(2) Phoenix	4.24	22.81	0.39
(3) Buckeye	3.81	6.58	0.44

No. 1 is a vinegar, six months old, in which the honey is nearly all fermented to alcohol, but is still undergoing acetic fermentation.

No. 2 is a very striking example of saccharine matter. Alcoholic fermentation is very seriously retarded by even small percentages of free acid and in this case it is doubtful if any of the remaining sugar ever becomes vinegar. Furthermore, the unfermented honey sweetens the sourness to such an extent that it tastes but slightly more acid than a vinegar of half its actual strength.

No. 3 also shows considerable material which escaped fermentation. This is often due to adding fresh washings to partially made vinegar. The alcoholic fermentation must, in all cases, precede the acetic, for even small amounts of acetic acid greatly retard or entirely prevent the activities of the yeast cells. In other words, acetic acid is a direct poison to yeast, and no further addition of washings or honey should be made.

## THE ALCOHOLIC FERMENTATION.

As already indicated, we notice that the process of changing sugar to acetic acid, or vinegar, takes place in two principal stages. First, sugar to alcohol; second, alcohol to acid. The first stage is the work of yeast cells; the second, that of the acetic acid forming bacteria. In attempting to shorten the time required for these changes, we must, therefore, provide those conditions which are most favorable for their development in the order named. The most essential conditions for the

rapid development of any micro-organism are a complete nutrient medium and a suitable temperature.

Honey diluted with ordinary well water falls short of meeting the first requirement, i.e. providing sufficient and proper food for the yeast. From the honey analysis given in "Timely Hint" No. 48, we at once notice the very small amount of mineral matter, ranging from 0.06 to 0.46 percent and of nitrogenous matter, which was about 0.25 percent (0.04 percent nitrogen.) For their best development, yeast cells make the same demand for potash, phosphoric acid and nitrogen on the medium in which they grow as the field crops do. The time in which yeast will convert a given amount of sugar into alcohol, depends not only on the temperature, but upon the quantity of each of these fertilizing substances present.

These facts were put to test by means of a series of cultures similar to those often made with grain in pot experiments. Six flasks of about 400 C. C. capacity were fitted with sulphuric acid valves, by which the free escape of carbonic acid gas was provided for, but the evaporation of moisture prevented. Exactly 250 C. C. of dilute honey, containing 400 grams of honey in 2000 C. C. of well water, were placed in each flask. The well water used supplied sufficient lime and magnesia. Flasks 1 and 2 received no further fertilizer. Flasks 3 and 4 received 1 part per 1000 (0.25) of ammonium chloride each. Flasks 5 and 6 received the same

amount of ammonium chloride and, in addition, 1 part per 1000 of potassium phosphate. Each flask was then inoculated with 10 C. C. of yeast culture made from a boiled potato with a little sugar and commercial hard yeast. The cultures, with flask and sulphuric acid valve, were weighed at the start and once a week afterwards. The loss in weight, due to the evolution of carbonic acid gas, is a measure of the activity of the yeast cells. The following abridged table shows these losses:

mercial yeast. This may have been due to a mixed fermentation. As is well known, different species of yeast produce different fermentations, some yielding more alcohol from sugar than others. The fermentation is never purely alcoholic, for some glycerine and succinic acid are always formed, and sometimes lactic fermentation takes place. A commercial yeast has probably been grown from a species which has proved to give a pure alcoholic fermentation. The brewer and distiller

TOTAL LOSS IN GRAMS, AT THE END OF EACH PERIOD, DUE TO EVOLUTION OF CARBONIC ACID GAS.

No.	Nutrient	1st week	2nd week	3rd week	4th week	5th week	6th week	10th week	13th week	Percent alcohol by wt. in wine produced
1	None	4.36	7.40	9.87	11.55	12.52	13.52	16.31	17.18	7.04
2	None	4.74	7.79	10.47	11.37	13.53	14.71	17.76	18.28	7.42
Ave.		4.55	7.65	10.7	11.95	13.03	14.12	17.04	17.73	7.23
3	Am. chlor.	7.99	11.96	13.81	14.82	15.28	15.78	17.13	17.43	6.69
4	Am. chlor.	7.96	11.65	13.34	14.53	15.26	16.24	17.61	17.89	7.09
Ave.		7.98	11.8	13.58	14.73	15.27	16.01	17.37	17.66	6.89
5	Am. chlor. and Pot.	10.39	16.79	17.62	17.94	18.03	18.11			7.12
6	Am. chlor. and Pot.	11.27	17.08	18.01	18.26	18.36	18.40			6.98
Ave.		10.53	16.94	17.82	18.10	18.20	18.26			7.05

This experiment shows that the addition of ammonium chloride alone accelerated the fermentation in the early stages, but that complete fermentation was secured very little sooner than with unfertilized, diluted honey. When both ammonium chloride and potassium phosphate were added, the fermentation was practically complete at the end of the third week.

A number of small casks of dilute honey, containing about 10 percent of sugar, were then prepared and one part each of ammonium chloride and potassium phosphate per 1000 were added. One of the casks was left to catch wild yeast from the air, and the others inoculated with good cake yeast. The fermentation was a day slower in starting from the wild yeast, but after two weeks, was as nearly complete as those that had been inoculated. The percentage of alcohol produced, however, was somewhat lower than with com-

are very careful about the yeast they use, because the quality of their product depends so greatly upon it. Thus it would always be advisable to add a little pure yeast as a starter. The added expense is insignificant. Some of the experiment stations, moreover, have found such a practice to shorten appreciably the time required to make cider vinegar.

The cider produced from fermented honey makes a very palatable beverage especially if used at just the right time. This cider, though of lighter color, resembles apple cider very much. The wine obtained by adding a small amount of vinegar to the completely fermented honey, after it has cleared up can scarcely be distinguished from a grape wine, and has a clean, pleasing flavor. In all cases the cask must be perfectly clean. It should be steamed, or, at least, thoroughly scalded, before the diluted honey is put in. One of the

casks used in these experiments was slightly tainted, and, although thoroughly soaked and cleaned with cold water, the fermented honey took on a most disgusting flavor. Ordinarily, if the honey undergoes a rapid fermentation, the honey flavor is practically obliterated.

Having once obtained good wines and insured practically the complete fermentation of the sugar, we are ready to arrange the best conditions for the rapid oxidation of the alcohol to acetic acid. This is accomplished by the vinegar bacteria known to science as *Mycoderma aceti* or more accurately as *Bacterium aceti*, and other allied species. There remains then only to know the conditions most favorable to the activity of these organisms, and we will know the way in which to produce honey vinegar in a minimum amount of time. This way, fortunately, has been clearly marked out for us, since the success of the carefully worked rapid processes of vinegar making depend upon it.

The vinegar bacteria require, above all else, abundant supplies of oxygen, best furnished as fresh air. They tolerate rather strong alcohol, but do not flourish in solutions of over 10 per cent. They develop only slowly in very weak acid solutions, but increase in activity, as the acid becomes stronger. At about 2 percent acid, and 75 degrees to 85 degrees Fahrenheit they find their optimum conditions.

**Rapid progress.** By the rapid process, these conditions are so well fulfilled that complete acetification takes place in a very few days, or even hours. One part by volume of ordinary alcohol is diluted with 10 parts of water and sufficient strong vinegar added to give the total about one percent of acetic acid. This mixture is allowed to percolate slowly through deep vats, filled with beech-wood shavings, which have been boiled and afterwards inoculated with vinegar bacteria. The vat

is provided with a perforated false bottom, between which and the real bottom rows of holes, slanting downward, as bored through the sides of the vat. When the generator is working properly, a match flame will be drawn into these holes. The rapid oxidation of the alcohol generates much heat, which if not controlled, will result in the volatilization of alcohol, aldehyde and acid. When there is danger of loss by heating, some of the holes are plugged. No metal can be used in such a factory as the acid vapors corrode it very rapidly. The piping is all glass with rubber connections, and the necessary pumps are of hard rubber. The dilute alcohol is distributed evenly over the surface of the shavings with a glass Barker's mill.

A very good vinegar was produced in this laboratory with a simple apparatus consisting of a keg filled with beech-wood shavings over which dilute alcohol was allowed to trickle from a vessel arranged above. Due to the small size of the apparatus, the dilute alcohol has to be passed through it several times, to accomplish complete oxidation. The temperature frequently reaches 95 degrees Fahrenheit and there was, consequently, considerable loss. A small rapid process apparatus, while quite effective, would hardly prove satisfactory in the hands of a farmer, as it requires too much supervision. A large plant, however, located in a good bee district, should prove remunerative, as the washings and low grade honeys for that region could then be worked at a central factory. This should prove especially successful if worked in connection with a local pickling works, since an adequate supply of good vinegar, at a reasonable cost, is essential to that industry.

**Cask process.** On the farm, however, the most practical method is the open cask. In this case the formation of vinegar is most rapid when the bacteria from a film on the surface of the

liquid. Under such conditions, the writer has observed the formation of acetic acid at the rate of one-tenth percent a day. The film, however, rapidly becomes heavy, and is submerged, after which the acetification takes place much more slowly. The film therefore, should be preserved. Shaking, or adding fresh wine, is sure to destroy this film if present and for that reason the vinegar barrel should never be disturbed. To obtain a good supply of air, the cask should not be more than two-thirds to three-fourths full.

A moderation of a French generator, devised at this Station, will prove especially serviceable where only small amounts of honey wine are to be made into vinegar from time to time. A good wine or alcohol barrel is carefully painted on the outside to prevent corrosion of the hoops. A hole is now bored in each end of the cask near the chime on the side next the bung and covered with a fine screen to keep out insects. At the bottom of one end, a spigot is fitted and a perpendicular row of gimlet holes bored and fitted with wooden plugs to act as a gauga. Fresh wine, which must first be fully fermented, can be added from time to time through a tube passing in at the bung-hole and ending near the bottom of the cask. In this way the active film will not be disturbed by drawing off a little vinegar, or adding a little fresh wine. The tube must not be of metal, but can be of glass where available. In this region, a large stalk of native cane, the joints of which have been perforated with a hot iron, makes a very serviceable tube. A tin funnel may be used in pouring the wine into the tube. A similar apparatus has been found very serviceable in France for converting table wine waste into vinegar. Such wastes, under suitable temperature conditions, yields good vinegar in ninety days. The generator is started with a mixture of about

three-fourths wine and one-fourth good vinegar. When once started, no new vinegar need be added.

**Degenerative Fermentations.** After vinegar has become strong enough for ordinary use, about 4 percent, it should be poured off from the mother, filled into casks, and tightly bunged. Just as the vinegar bacteria oxidize alcohol into acetic acid, so other organisms, in turn, destroy this acid and the vinegar loses its strength. Air is necessary for this degenerative process, as well as for the formation of acetic acid, and consequently, its exclusion preserves the strength of the vinegar. In this laboratory, honey wines which were progressing nicely and contained as much as one percent acid, have suddenly become infected and lost all acidity in a few weeks.

#### THE MAKING OF HONEY VINEGAR

Apple juice of good quality contains, usually from 10 to 12 percent of sugar and yields a vinegar containing 6 or 7 percent of acetic acid. In making vinegar from honey it is desirable to start with a solution containing as much or more sugar than apple juice. When low grade honeys are used, as the raw material, it is very easy to obtain the proper dilution. Most honey produced in the arid region contains about 80 percent of fermentable matter and may be weighed off and diluted with the requisite amount of water. Where washings are used, however, they may need strengthening or diluting. This can be easily governed by the use of a specific gravity spindle, which may be obtained at small cost. The Brix saccharometer is such an instrument, arranged to read percentages of sugar directly at 17.5 degrees C. (about 65 degrees Faht.) but for the present purposes no attention need be paid to temperature. In case an ordinary hydrometer is used, it should read from 6.8 degrees to 8.5 degrees Baume. or from 1.048 to 1.061 specific gravity. This will give a sugar solution of from

12 to 15 percent, which is a very advantageous strength for fermentation. If the finished product is stronger than necessary, it can be watered just as honestly, in this case, after as before the fermentation is complete. The yield will depend largely upon the purity of the fermentation, and upon the extent to which degenerative processes are absent.

Having prepared the diluted honey of proper strength, we next add the fertilizing materials and a little yeast. As previously shown, the best material is ammonium chloride and potassium phosphate, about one part of each per 1000 parts of solution. Unfortunately, potassium phosphate is seldom to be had in the drug store and we must rely on other chemicals to take its place. This is best done by using sodium phosphate; of each about one part per 1000. This combination is much cheaper than the rather expensive potassium phosphate and is to be recommended where large amounts of honey vinegar are made. These chemicals can all be obtained in large quantities for about 15 cents per pound. The small producer, who cannot afford to buy large amounts at wholesale, will experience much difficulty in getting potassium sulphate, but experiments in this laboratory have shown that potassium bicarbonate, a chemical to be had in every drug shop, can be substituted with nearly as good results. The chemicals are absolutely harmless and are in no sense of the word to be considered adulterants. Care should be taken to secure well water of good quality, preferably hard but not too salty.

Formula. When a barrel of honey vinegar is to be made for family use or by the small producer, we offer the following formula:

Strained honey	40 to 45 lbs.
Water	30 gals.
Ammonia chloride	4 oz.
Potassium bicarbonate	2 oz
Sodium phosphate	2 oz

One quarter cake of dry yeast softened in luke warm water.

The chemicals for making thirty gallons will cost about 25 cents in a small way, but on a large scale not more than 10 cents. Somewhat larger amounts of potassium bicarbonate and sodium phosphate, would give even better results, but the amounts are here cut to the minimum to bring the cost low enough to make it profitable.

In from three to four weeks all visible fermentation will have ceased and the yeast settled out. Now rack off the wine, add ten gallons of good vinegar, containing a little mother, and let stand undisturbed in a place having as near as possible an even temperature of from 75 to 80 degrees Fahrenheit. The acetic fermentation may be started by floating mother or the scum from an older cask on the surface of the mixture by means of thin cork shavings. Carried out in this way and a suitable temperature (temperature over 85 degrees Fahrenheit will retard the process and cause loss of both alcohol and acid) a good honey vinegar can be produced in from four to six months.

#### LAYING WORKERS—QUEEN SCENT.

Jno. H. Heagy, M. D., F. H. S.

EDITOR AMERICAN BEE-KEEPER:

Perhaps at some time in the near future some one of the many readers of THE BEE-KEEPER may have a laying worker in some one of the colonies of his apiary to contend with. Should such be the case it is well to be prepared to meet the emergency when it arises, such being the case is my only excuse for this space.

Many ideas have been advanced in trying to explain this peculiar phenomena and of these different ideas, as to cause, we leave you to your own choice of an explanation of it, for, we are not trying to explain the peculiar phenom-



ena only to give a method of riddance of a worthless worker and a still more worthless layer. As an explanation of the method, I call attention to the fact that a laying worker never has, or never will leave the hive on any pretext whatever. There was she reared and there she lives, never once leaving the hive. This being the case she has no sense of locality whatever, and to get rid of her we take advantage of this lack of the sense of locality.

Prepare a hive with starters or drawn comb and after removing the hive that contains the laying worker, place on the old stand, take the hive, bees and all having been shut in the night before, away quite a distance, say 100 yards, open it and shake out all the bees on the ground, they will find their new home on the old stand except the laying worker, who, never having been out before, is lost and never reaches the hive. Of course this is troublesome to do, but as she cannot be distinguished from another worker is less trouble than many other means advanced to rid the apiary of a nuisance.

Sometimes on introducing a new queen to a colony, according to the rules printed on the cages, the bees at once kill the queen; or if not at once they may accept her until she commences to lay; and then fell on her and kill her, start a few queen cells and rear a queen to suit themselves, while the apiarist thinks his queen is all right. Then when the young bees commence to fly he curses the queen breeder for sending a queen not

purely mated, when the real truth of the matter is, the queen was killed some time after she was seemingly successfully introduced. To obviate these difficulties observe the following rule:

On receipt of a fine queen by mail, have a new cage ready to receive her—one that has never contained or been near bees of any grade. Take the queen by the wings and with a camel's hair brush wet in warm water gently brush her all over, wings, thorax, under side as well as upper side, go all over her and when done put her in the new cage. Go to the hive you propose to introduce her to and catch a dozen or so youngest bees you can find (those young little hairy fellows), put them in with her, and then proceed as the directions on cage tell you. Place the cage between the middle frames half way down the combs. Push the frames together to hold it there. Shut the hive and don't bother for five or six days, when she will be eaten out and laying well contented, and the bees well satisfied to recognize her as the head of the colony. The object of the above is to remove all traces of extraneous scent from cage and queen. To observe the effect of scent, just take a cage that has been in several hives long enough to acquire the scent of each colony, put in a full hive, and see how angry it makes them. Why, it acts just like a red rag before a mad bull. Try a clean, new cage and observe how little attention they give it.  
Black Lick Sta., Pa.

## Comments of a Curmudgeon.

Fond of Fiction, He Weaves a Delightful (?) Romance  
Apianian.

JOHN R. RAGLE.

My greatest regret has been the extinction of a strain of bees discovered by me on Jackass Hill, a well-known and truly classical spot, famous as hav-

ing been a resident place of Bret Harte Mark Twain, Prentice Mulford and other celebrities.

The bees were found in an old tunnel where I went prospecting for gold, and I called them the "golden California" bees, not so much because of the color, but because their stingers were composed of minute slivers of genuine metal gold.

This was so astonishing that I went to Uncle James Gillis, owner of the hill, for an explanation. He informed me that I had found the last of a variety propagated in the early '50's by an aged alchemist, when gold was so plentiful that even insects could not crawl about the hill without becoming incrustated with it. Just how the old dreamer did it Uncle Jim never knew, as he and everybody else was too interested in gold digging at the time.

A distinguishing peculiarity was that the bees would not feed upon anything but the golden California poppy for honey and that they always demanded and used gold-dust for pollen. On this account they became rather expensive to keep in the latter days. Uncle James gave me the bees, only reserving twenty-five per cent., his usual royalty for anything found on the hill. I took mine down to Tuttle town, but the boys and even men got to catching them for the value of their stings and my stock was destroyed before I realized it. Uncle Jim's bees starved for the lack of pollen, as he had no more gold-dust to feed them.

I am satisfied some enterprising capitalist could have made a fortune if he had only organized a stock company to propagate and sell the bees to beginners.

When I begin printing my a, b, c, book I shall keep a standing list of bee-sting remedies. That is one thing the beginner misses in all the books and papers. There are antidotes and the beginner needs them.

**A wad of wet tobacco slapped over**

the wound will keep down the swelling every time.

Moistened soda is a natural antidote.

It is well to know what remedy to apply in case a visitor or a neighbor's child gets stung. Bee literature treats the subject too lightly. The junior editor of the Medina supply house says that you cannot introduce the finest cambric needle into bee-stings. Now, as a matter of fact, you can introduce a small crowbar into them and the stings often leave scars. A sure cure is to suck the poison out instantly. Dr. Miller, a well known bee-keeper and a graduate physician, always recommends mud applied to the wound. The principle of this and many other remedies is to keep the afflicted part warm and air-tight, which allays the inflammation.

I own five Heddon hives, which are the thinnest, flimsiest, most worthlessly constructed warpy, ill-fitting, closed-end "blasted-hopes" that any get-rich-quick Eastern supply maker could induce a foolishly trusting beginner to buy. They cost me \$13.95 with freight, and my bees during two seasons, to date have stored eleven sections of honey in them. If "Brother" Heddon doesn't quit fishing and look to what people are sending out and lauding as his "invention" then I sincerely hope that he never will get rid of the mysterious disease that he seemed to think his bees contracted in Prof. Frank Benton's Bureau. Surely no sane and honest man would invent and put on the market such things as I have been using for bees to store honey in. I feel guilty of cruelty to animals in having kept my bees in them. The hammer gets them, for kindling wood, and thick, tight grocery-store boxes, if nothing better, will take their places.

It has long been my dissenting opinion that every up-to-date bee journal should have its fiction department properly labeled. I submit the following, which I have named "Old Beazer and Zed Doublebee; or, How a Romance Ended

Happily—a short story in several chapters:”

#### CHAPTER I.

Old Beazer of Beeville, Bee County, in the State of Beekansaw, was, as you already may have inferred, gentle reader, a bee-keeper. He was deaf and had wheels and whenever he appeared the little rascals of the neighborhood would put their hands to their ears and say “Buz-z-z!” The reason why he had wheels was because he kept giving away his snap by continually writing to the bee papers about what a fine place his locality was for bee-keepers until young Doublebee, who was also a bee-keeper, finally appeared upon the scene.

#### CHAPTER II.

Now, old Beazer was well fixed. He had 160 acres of land in the arid west and 90 colonies of bees in boxes. He also had a daughter. The plot thickens.

#### CHAPTER III.

Young Doublebee had nothing but four (4) out apairies on rented ground. He had no home apairy and did not own even a home. He was compelled to board, poor fellow, at two dollars, (\$2) per day at the “Commercial” or “Drummers’ Retreat.” But then he had fresh meat, and soup and pie every day, while old Beazers’ family was limited largely to salt pork and cabbage and pure milk from cows.

#### CHAPTER IV.

Young Doublebee went to his out-apairies once a week in his automobile, run by denatured alcohol. All the rest of the time he played pedro (a game of cards) at the “Drummers’ Retreat,” especially in winter, when the bees did not require attention. At other seasons he had hired help at forty cents per day and “board themselves.” This was a ruinous policy. Old Beazer said so.

#### CHAPTER V.

Now it must be understood that old Beazer had been keeping bees in the same boxes for twenty (20) years and

sometimes cleared twenty dollars (\$20) per year, besides having all the honey and bee bread he could eat himself, as well as some beeswax to sell to the shoemaker; while young Doublebee had only appeared that season, flooding the country with four hundred (400) colonies of bees in modern hives with dove tails. Old Beazer’s hives, alas, had no tails of any kind.

#### CHAPTER VI.

The story is soon told, gentle reader. Old Beazer’s bees nearly starved that season and young Doublebee, by his modern methods and feeding sugar syrup cleared \$5000, mainly because his Italians robbed old Beazer’s blacks; and which sum, alas, he lost at poker, (another game of cards) in three nights, at the “Dummers’ Retreat” by playing with a prepared pure extracted honey man from Chicago, whose firm always put a small piece of comb in every bottle to prove that it was honest.

#### CHAPTER VII.

Then, in the great proverbial generosity of successful bee-keepers, young Doublebee went and showed old Beazer how to feed his bees and thus carried them through the winter, ready for another season. In doing this he made the acquaintance of old Beazer’s daughter and they were soon married, old Beazer forming but few objections.

#### CHAPTER VIII.

The scene changes. The next season came along and Doublebee’s bees didn’t store enough to feed their young. His crop was a complete failure. So was old Beazer’s in the box hives. This was partly owing to the overstocking of the territory by the large number of bee-keepers who rushed in as soon as they read of young Doublebee’s success. But old Beazer, you will remember, had 160 acres of land and young Doublebee sold his automobile and got in and pitched hay with the rest of them; and he and his beautiful bride, by living with the old folks,

managed to pull through till the next season. By that time all the bees of both parties were dead with imported disease, wintering and starvation, old Beazer's mainly by innovation. But

old Beazer had found a good farm hand and young Doublebee a good wife. And they lived happily ever after.

[THE END.]

Stent, Calif.



## FRANCE.

### ADULTERATION OF WAX

The Societe Comtoise d'Apiculture has decided to investigate the possibility of determining whether a given wax is adulterated or not. A committee was appointed to prepare some mixtures, such as would be likely to be used and have them analyzed. The results were that the ceresin and stearin could easily be identified.

But a mixture of wax 65 grains, Carnoba, wax 35 grains and ozokerite 50 grains, could not be distinguished from genuine wax except that when saponified the proportion of acid soaps was slightly greater. Further investigations will be made.—L'Apiculteur.

### BEE PARALYSIS.

A reproduction of an article from an Australian bee-paper is found in the Bulletin of Alsace-Lorraine. The correspondent claims to have cured his bees by feeding them with a syrup, to which he added one spoonful of sulphur and five or six drops of Dr. Collis' chlorodyne per pint of syrup. He previously removed all the honey in the hive. He thinks that the disease is not very contagious, because the sick colonies were rather scattered throughout the apiary. A very contagious disease would spread from a colony to the next ones first. He thinks that the

quality of the honey is the cause of the disease and gives as proof that some combs of honey taken from a diseased colony to a healthy one gives the disease to the latter.—Gazette Apicole de France.

### WAX FROM SLUMGUM.

After extracting wax from the combs the residue, called here slumgum, is never entirely separated from the wax and still contains a sufficient quantity of it to justify the use of a chemical process in recovering it.

With the carbon bisulphide process, a slumgum containing one per cent. of wax can be successfully treated. The process consists in putting the slumgum in a vessel hermetically closed and strong enough to stand a considerable pressure. The carbon bisulphide is forced into it with a pump and is left there long enough to dissolve all the wax. It is then pumped out and forced into a distilling apparatus. A slight heating evaporates it and sends it through the condenser into the vessel where it is kept. This last vessel is not closed but contains a quantity of water. The carbon bisulphide, being very heavy, remains under the water. The water prevents any evaporation or danger of explosion. Needless to say that when the distillation is completed the wax is left in the distilling apparatus and can be taken out. The use

of pumps and hermetically closed vessels is to prevent any evaporation of the carbon which can thus be used indefinitely. The same apparatus can be used for many other uses. For instance, extracting the last portion of linseed oil from the residues left after the ordinary processes. *Gazette Agricole de France.*

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### ALGERIA.

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The Society of Algerian Apiarists has published an interesting report, on bee-keeping in that country. From the oldest historical times until now, bee-keeping has been in honor in that part of Northern Africa; that is, Tunis, Algeria and Morocco, which are really recent divisions of the same old Punic region.

The climate is very favorable to bee-keeping and the temperature rarely descends to the freezing point and is in summer about 80 degrees. In the high mountainous sections of the interior, the weather is much colder and the country is not so favorable to bee-keeping.

The race of bees is a very black strain often called the Punic bees. They are quite aggressive, yet some strains more than others. The most aggressive are called by the natives goat-bees and the others sheep-bees.

They are very prolific, swarm excessively and are very lavish in the use of propolis. The colonies can be bought from the natives for from 40 cents to a dollar each.

The hives used by the natives are made in the form of a cylinder of pottery, something like a sewer pipe laid on the ground. Sometimes a circular piece of cork tree bark is cut out and allowed to retain its natural form. The ends are closed by pieces of bark on boards or by a mixture of clay and cut straw.

The honey is cut out from the back end until the brood is reached, usually about

the last of June, after the main flow. A hive gives from four to ten pounds of honey, which is sold for about 11 cts. per pound wholesale, and 20 cts. or over at retail. With modern hives and processes, a surplus of 40 pounds extracted can easily be obtained.

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### BELGIUM.

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#### POISONOUS HONEYDEW.

In a portion of Hanover, in 1903, a very heavy honeydew was observed on the oak trees. The bees gathered it as fast as possible, but it proved to be poisonous, producing a kind of paralysis. Not only the bees but the ants which gathered it perished also. At the end of the week a heavy rain put an end to the situation.—*Le Rucher Belge.*

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#### WINTERING IN THE GROUND.

In some portions of northern Europe it is customary to dig a hole in the ground sufficiently deep to put in the hives, cover them with planks, put some straw on and finally put back the dirt and thus bury the bees for the winter, until warm weather comes again. In describing the process, Mr. Dricot insists on the necessity of having the hole sufficiently large to leave an ample space under and around the hives. The surplus air thus provided is sufficient to carry the bees through the winter without having them smothered. Care should be taken that no water can get in. And no rats or other rodents either.—*Le Rucher Belge.*

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Put all your spare combs where rats and mice cannot get them. They are worth too much to be neglected. A superful of combs oft means a superful of fruit blown honey when otherwise it would not be stored. That honey means from \$4. to \$6. to you. Ar'n't those combs worth caring for?

THE  
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**Danger in Some Foul Brood Laws.**

At the time of the vetoing of Missouri's proposed foul brood law, we called attention to what would be possible and probable under the statute as framed, had it been enacted. Some of the champions of the bill took offense at our remarks, saying they were

wrong from every point of view, and maintaining that there was no danger of incompetent persons becoming inspectors or of the arbitrary and wanton destruction of bees or fixtures.

In California, where bee-keeping as a business is recognized as one of the important industries of the state and where it would be presumed the bee-keepers would have a voice in the selection of inspectors under their law, which is much like that proposed for Missouri, incompetent men have secured the jobs and the very evils we forecasted for the latter state, are being experienced.

It is to be hoped that bee-keepers of other states will take warning from the misfortune of their brethren in California and have present laws so amended as to prevent such evils, and, if possible, some provision made for at least partial compensation in cases where destruction of property is unavoidable.

If the papers which so vociferously clamored for arbitrary foul brood laws will now give equal publicity to the Californians' troubles they will perform a good service for bee-keepers, even if it does reflect on their own earlier judgment.

**Conventions.**

The Southern Bee-Keepers' convention will be held at Atlanta, Ga., October 11-12. The Connecticut bee-keepers will meet at Hartford, Oct. 12. The annual meeting of the Missouri people comes off Oct. 2-3, at Marshal. The National convention, as announced, is to be held at San Antonio, Tex., Nov. 8, 9 and 10.

If you find THE AMERICAN BEE-KEEPER interesting or helpful, kindly speak of it to your friends who are interested in bees. The more subscribers we secure, the better we can make the paper. Let us help one another.

### Study the Bees.

Despite the thousands of years that bees have been kept by man only a little is known of their habits. Thanks to a few diligent scientists we have a very fair knowledge of the bee's structure and through the efforts and enthusiasm of some practical bee-keepers we have hives which give us ready access to the bees' home, but notwithstanding the possibilities offered by this combination the progress of discovery of the "why" of the bees' actions is painfully slow. This is partly due to the desire for immediate results in the shape of honey; partly to the misguidance caused by accepting without question statements in text-books, and magazines devoted to bees, and still more to the fact that prejudice and financial interest prevent some editors and publishers from printing anything which casts any reflection on the accuracy of the work and statements of authors on whom they depend for support and advertisements. The result is the constant traveling in the old ruts, the endless discussion of manipulation and appliances.

How many of such wordy wars would be quickly and permanently decided if the participants knew what bees really do and why they do it? Such knowledge would put a damper on the sale of many new contraptions, would end the persistent change from big to little hives and back again, so dear and so profitable to supply dealers and would stop the expensive and wasteful changes in super styles.

We have long urged our readers to try to learn more about the life of the bee, knowing that every bit of additional knowledge regarding it will bring us one step nearer to making apiculture an exact science, thereby making it more certainly profitable, doing away with the present day guessing and aimless manipulating.

During the coming months we will present to our readers a few new facts about bee life, some of which, though

seemingly slight, have great bearing on current practices, and we hope will stimulate further study and observation.

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### Fame Made to Order.

"You pat my back and I'll pat yours" is an old dodge in many fields besides that of apiculture. Some papers have made the reputation of some of their correspondents because these persons helped their business. The man boomed as a close observer and who boasts of the hours he has spent studying the bees is not always all he is painted. This would not be an outsider's concern did not such mutual admiration copartnership result in loss to many innocent and confiding persons. In the past we have shown the error of some of the statements of the made-to-order authorities and we will soon tumble over some more of their card houses.

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### Preparing for Winter.

If you winter your bees out of doors put on the tarred paper wrappings or outer cases before the hives get soaked with the fall rains. See that all covers are water-tight. Better give them a fresh coat of paint. Make all entrances mouse-proof either by means of queen excluding zinc or wire-cloth with meshes large enough to pass a bee. Be sure no mouse is already ensconced in the hive before the guard is put on.

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A Columbus (Ga.) dispatch says that much Florida honey is being shipped to northern points via Columbus, honey shipments being frequent items in the manifests of Chattahoochee river steamers. The steamer Bradley brought nearly sixty barrels of honey on its last up trip.—Zolfo Advertiser.

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"How doth the little busy bee" must join the growing host of fables, for individually Mistress Bee is an exceedingly indolent person spending many sunny hours sweetly sleeping in a cell.

### Decline of Farm Bee-Keeping in New England.

Less than a quarter-century ago many farmers in Vermont and New Hampshire made bee-keeping an important part of their business, but now one may travel for many miles and not see even a solitary hive. Why is this so? Can any among our readers give us light on the subject?

Surely there are hundreds of families who would welcome the addition of honey to their larder if it was to be had for the taking and a few former bee-keepers with whom we have talked, bemoan the fact that they now have no bees.

The keeping of a few bees on the hill farms will not hurt the market or increase competition but will materially help the families having them. Mr. Geo. W. Adams, of Byfield, Mass., a practical farmer has guided many another farmer into the successful care of enough bees to keep his own table supplied, thereby adding to the pleasures of his family and at practically no cost to him or them. Mr. Adams is to furnish us with some articles on bee-keeping for farmers which, as we know Mr. Adams and his practical ways, we can assure our readers will be worth reading.

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### New Things are Interesting.

New things, novelties, always appeal to the public and when such chance to be in the line of our pleasures or our business all too many of us are prone to plunge in more deeply than is wise. New races of bees, particularly when their supposed merits are glowingly set forth, always appeal to the bee-keeper with almost irresistible force. We wish to save our readers disappointment and loss—to help them up, not down, hence we again caution them against making rash test of the new races. Don't hesitate to try one or two queens if you can afford it but do not "plunge" heavily.

### Pure Honey.

In the supplemental proclamation, Circular No. 19, which supersedes circulars No. 13 and 17, issued by the U. S. Department of Agriculture, entitled "Standards of Purity for Food Products," "Honey" is thus defined:

1. Honey is the nectar and saccharine exudations of plants gathered, modified and stored in the comb by honey bees (*Apis mellifica* and *A. dorsata*); is lævo-rotatory, contains not more than twenty-five (25) per cent of water, not more than twenty-five hundredths (0.25) per cent of ash, and not more than eight (8) per cent of sucrose.

2. Comb honey is honey contained in the cells of comb.

3. Extracted honey is honey which has been separated from the uncrushed comb by centrifugal force or gravity.

4. Strained honey is honey removed from the crushed comb by straining or other means.

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### Observation Hives.

The person who designed the single-comb type of observation hives now on the market, surely was not a bee-keeper, or at all familiar with the conditions which make for success in handling these miniature colonies. We will soon give our readers an illustrated article on the making and management of such hives. It will help the enthusiasts to have bees to study and play with all winter.

The pinewoods around DeLand are full of wild bees, and from the quantity of honey taken from the trees cut, it is evident that this has been a good season for the busy workers. One day last week Mr. Paxton and his "boys" cut a small tree on the plantation of the DeLand Naval Stores Company, that yielded about seventy-five pounds of fine honey in the comb. Mr. Paxton has our thanks for a fine and liberal sample of the product.—DeLand (Fla.) Supplement.



### The Best Medicine.

Mother had been ailing for more than a year when Margaret came to work for us. She was the most bashful creature I ever knew, excepting the hired man, who I am sure often went hungry because Margaret sat opposite him at the table. One day, as mother and Margaret were alone, the bees began to swarm. Grabbing two kettle covers, Margaret rushed out beating wildly and shouting, "Hank! Hank!"

Mother managed to crawl to the open door in time to see Hank come dashing up to the scene of action. But the bees meanwhile, mistaking Margaret's hoop-skirts for a hugh hive, had taken shelter within their hospitable embrace.

"Where's the bees!" gasped Hank.

Margaret hung her head and blushed, and Hank, thinking he was being guyed started off.

"Come back," called mother, beginning to laugh, for the first time for a year. "Take a stick and rap on Margaret's dress."

It was now Hank's turn to blush, which he did to perfection; but placing a hive at her feet and fixing his gaze on the sky, he gently switched her skirts, thus persuading the bees to come down and take to their hive. And all the while mother sat and laughed. From that day she began to mend and in two weeks was doing her own housework—a well woman! She always claimed that laughed cured her—Mrs. H. E. Ellsworth.—(From the January issue of *Homemaker*.)

### Convention Notice.

The Fall Meeting of the Connecticut Bee-Keepers' Association will be held Friday, October 12, 1906, in Room 50 of the Capitol building, Hartford, beginning at 10.30 a. m. Members will please note date, which is earlier this year. As a special effort is being made to get into touch with the 2500, or more, bee-keepers that it is believed are scattered over the state, it is earnestly desired

that every member and friend of the Association not only arrange to attend the forthcoming meeting, but send lists of bee-keepers to the secretary, at once to enable him to extend a personal invitation to as many as possible.

J. ARTHUR SMITH, Secretary.  
Box 38, Hartford, Conn.

### HONEY AND BEESWAX MARKET.

Cincinnati, Sept. 18.—The demand for comb honey is good; fancy and No. 1 selling freely at 15c and 16c. Lower grades not wanted at any price. The market on extracted honey is quiet, as quantities remain unsold, from last season. Quote amber at 5½ to 7c according to quality. Fancy extracted white clover at 7½c to 8c. We are paying 29c and 30c for choice, yellow bees wax, free from dirt.

The Fred W. Muth Co.

51 Walnut St.

Worcester, Sept. 11.—We have received no new honey as yet. There would not be much of a market at present as our trade does not commence much before the first of October. Weather must be colder in order to make a demand. We expect quite a quantity of Vermont honey the last of this month and are looking for quite a good market, probably about the same as last season. Perhaps the supply may be so large that it will be necessary to sell a little lower, but think good quality will be in good demand at steady prices. There seems to be quite a crop this season. No doubt supply will be equal to the demand.

W. H. Blodget Co.

Kansas City, Sept. 12.—The supply of honey is light. The demand is good. We quote our market to-day as follows: Comb, fancy white, per case 21 sections, \$3.00, extracted, 5½ to 6½c. Beeswax 25c. We look for a steady demand right along.

C. C. Clemons Co.

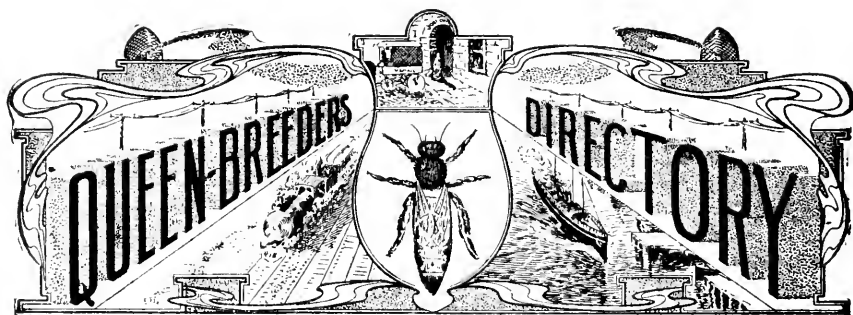
Buffalo, Sept. 10.—The supply of honey is very light and prospects for a poor crop hereabout and we look for excellent prices. Selling now fancy 16 and lower grades 10 to 14c. Think it will be easy to please this season. Write us if interested in Buffalo. Soon as fruit is over we look for a big and sharp trade at satisfactory prices.

Eatonson & Co.

Chicago, Sept. 8.—The receipts of comb honey are quite large, and there is also a good demand for it, so that prices are well maintained at 15c and 16c per lb. for No. 1 to fancy; anything short of these grades is not selling freely and ranges from 1c to 3c per lb. less; buckwheat 12½, dark grades 8c and 10c. Extracted white 6½c and 7½c, amber 6 and 7c, dark 5½ and 6c. Beeswax 30c per pound.

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QUEENS HERE.—We are still asking you to give us your trade. We sell Italians, Golden and Carniolans at 75c for untested and \$1.00 for tested. Prices on quantities and nuclei upon application. JOHN W. PHARR, BERCLAIR, TEXAS. Jan. 6

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HONEY QUEENS AND BEES FOR SALE.—I extracted 300 pounds per colony in 1903. THOS. WORTHINGTON, Leota, Miss. Aug 5

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## Cent-a-Word Column.

A. H. REEVES—Distributor of Root's Bee Supplies for northern New York, Beeswax wanted. Perch River, N. Y. oct 6

FOR SALE.—UNTESTED ITALIAN QUEENS .60c each, two for \$1.00. Tested \$1.00 each. Mrs. J. W. Bacon, Waterloo, Seneca Co., N. Y.

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

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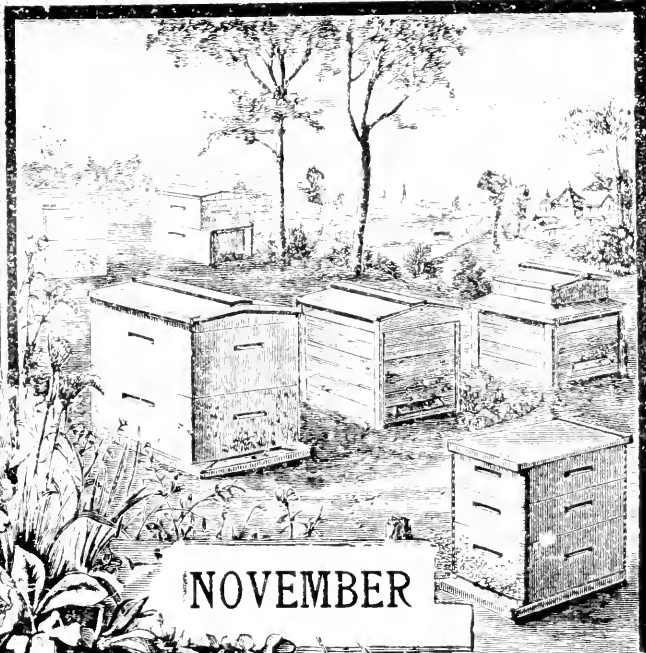
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NOVEMBER

1906

VOL. XVI

NO. 11

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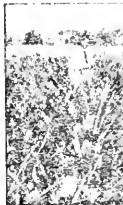
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**The American Bee-Keeper, Falconer, N. Y.**



Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVI

NOVEMBER, 1906.

No. 11

## Worcester County Bee-Keepers' Show

The First of a Series of Educational Exhibits to be  
Made in New England.

BY A. C. MILLER

SEPTEMBER 24, 25 and 26 the hustling bee-keepers, of Worcester county, Massachusetts, held an exhibition of bees, honey, implements, etc., in Horticultural Hall, Worcester. It was the society's first attempt at anything of the kind, and is planned and promises to be, the forerunner of many similar affairs.

The hall is in the heart of Worcester's business district, and its use was given to the bee-keepers' society conditional only on free entry to the public, which has learned to look with interest and favor on exhibitions held therein. The hall has been constantly filled and except during the lectures the crowd was steadily changing.

Among the more prominent of the lecturers were Dr. E. F. Phillips, of the U. S. Department of Agriculture; Mr. R. H. Holmes, of Shoreham, Vt., an enterprising and remarkably successful honey producer; Mr. Allen Latham, of Norwich; Dr. Lyon, of Rye, N. Y.;

and Mr. Cary, Jr., of Lyonsville, Mass.

Some of the lectures were "technical," others "popular," but all were received with close attention. We have before mentioned in these columns the remarkable interest which the public of Worcester evinced in matters apicultural, and this exposition has vividly shown that the interest is growing.

Mr. Burton N. Gates, president of the Bee-Keepers' Society, kept things moving right along, and much of the success of the exposition has been due to his unflagging interest and tireless efforts. He was ably seconded by Mr. A. A. Hixon, the genial secretary of the Horticultural Society. The bee-keepers not only of Worcester county but all of New England as well, should be very grateful to them for what they have done and are doing for the industry, both in its commercial and its scientific features.

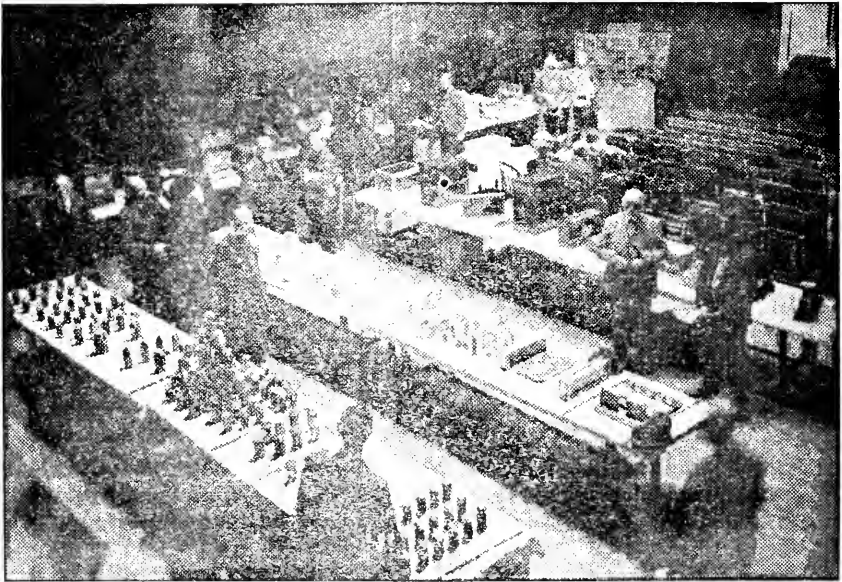
The display of bees, honey, etc.,

while not large was sufficiently comprehensive to be of educational value. Many kinds and colors of honey were shown, ranging all the way from light and delicate apple and clover honey to that as black as Porto Rico molasses.

The first prize for extracted honey went to Mr. J. S. Whittemore, of Leicester, Mass., for honey from apple bloom. It certainly was as near perfection as we need ever ask. The second prize went to Mr. Shepard, of Sturbridge, for white clover, and the

There was a sample section of orange blossom honey from Owanita, Fla., produced by a Mr. Wheeler. It was not quite perfect having been kept for some time and subjected to some rough handling. It was white and smelt faintly of orange bloom, but was not opened for sampling.

Mr. Latham had some honey vinegar, which he came near loosing. Dr. Phillips sampled it and "took to it." He could hardly be blamed, it really was good enough to drink, and the rest



APIARIAN EXHIBIT, WORCESTER.

third to Mr. Cheney, of Worcester, for apple bloom, and had this latter been a little lighter in color it would have been a sharper competitor for second.

One interesting and unique exhibit was that of a Mr. Lobdell, who had several dozen bottles and tumblers in which the bees had built their comb. These attracted much attention. A Mr. Holmes had combs showing his name and initials.

of us helped him to "sample it." There was bread, cake and preserves made with honey and some were very fine.

On the stage at one end of the hall was a large wire cloth cage in which demonstrations with bees were made. These were decidedly a popular feature of the show. The bees for these demonstrations were generously furnished by Mr. Cheney, of Worcester,



who, by the way, is quite an investigator in practical apiculture. He furnished the writer with some interesting notes on Punics and Caucasians which we will print in another place.

The new form of observation hives which are the source of much of the AMERICAN BEE-KEEPER'S exclusive information were the center of much attraction, a crowd being about them at all times. This hive will be des-

cribed in an early number of THE BEE-KEEPER. It is already used in several colleges and by a number of men of scientific training.

The purpose of the show was to enlighten the public on the wholesomeness of honey and its varied uses, and the display of bees, implements, literature, etc., was but a part of the means for drawing the public and getting an opportunity to instruct them.

## Why Drone Comb is Built.

### An Interesting Discussion as to Cause and Effect.

BY ALLEN LATHAM.

ON PAGE 184 Mr. A. C. Miller offers an ingenious explanation for the building of drone comb, and more than one of his statements is very convincing, yet, much as I should like to agree with the entire article, I must confess that I think Mr. Miller is largely, if not altogether, in error.

Mr. Miller leaves the building of drone comb wholly to chance, the bee to build drone comb only when certain conditions mechanically force such work upon the bee. Though I am not one to believe that the honey-bee uses reason, that is, logic, I do fully believe that the bee is a creature of conscious action. Though the bee has not the power of reason, she rarely does a thing without a reason.

The bee may be "a graving tool mounted on jointed levers" and the size of cell may be due to "a greater or less arc," but this tool has an individuality and it controls the arc of its radiating mandibles. This is just my opinion, for I have no proof.

"When drone comb is being built we find that the clustering is less compact," says Mr. Miller. Of course, says everyone else. When men are hoeing adjacent rows of potatoes they are less compact than when weeding adjacent

rows of onions. But the illustration is not good, for the rows are fixed. Let us say planting, for then the men define the space between the rows. Is it not obvious that bees must work less compactly while building drone comb than while building worker? Why then does this argument of Mr. Miller's have any force?

Though it is obvious that bees are less compact while building drone comb, does it follow that it causes the drone-comb-building, or does it merely occur as a result of this work? Right at this point I would take an exception to what Mr. Miller, at least, implies. I will venture to say that a vast amount of drone comb is built under conditions tending to be anything but less compact or crowded. Mr. Miller has noted with fair completeness the times and conditions under which drone comb is built, but he leaves out one very important item. Namely, drone comb is built when there are a host of graduating nurse-bees.

A swarm will often, if not usually, continue to build worker comb till a week or so after the first new bees emerge in the new colony. As these new bees become numerous they crowd down to the edges of the combs and to

the outside of the last comb, and there they build drone comb. This drone comb is always built under more crowded conditions than existed when the last of the worker comb was built. The same phenomenon can be seen earlier in the season, in the old colony. Allow a colony in spring the space of an extra frame and watch results. Along in late May there is an influx of graduating nurse-bees to that space, and in a few hours a great deal of comb, all drone, will appear. This comb will almost invariably be used by the queen immediately. The impulse here is a desire for male bees.

In a time of great honey flow bees will build drone comb. We call it store comb, but there is no need for this extra term, for all comb built by bees is either worker or drone, that is sooner or later all comb is subject to the laying of the queen. Under the pressing need of a place to deposit their rapidly accumulating stores the workers build drone comb. This comb, unlike the comb mentioned in the preceding paragraph, will not be immediately taken possession of by the queen. It is immediately stored with new honey. Here we see that the impulse which caused the drone comb was need of store-room.

Why do bees prefer to build drone comb under the pressing needs mentioned in the last paragraph? Simply a matter of economy,—economy of time and wax. It needs no explanation upon my part to make clear to everyone that drone comb requires less wax in proportion to its honey-holding capacity than does worker, and that drone cells can be built always, if not quite, as rapidly as worker cells. The worker may not think what she is about, but she does obey an impulse which calls for the drone comb.

Now all this is a thing difficult to prove, one way or the other. Mr. Miller has offered a theory. He probably would not even suggest that he meant

to offer any proof for this theory. I can only offer a theory with little or no proof. Offering negative proof for Mr. Miller's theory is far easier than to offer positive for my own.

And yet it is not easy to offer negative proof. If I cite instance after instance of worker comb built when the cluster appeared to be dense, Mr. Miller has but to say, "But you know, Mr. Latham, that the difference in the clustering is merely a matter of one twentieth of an inch; a difference so slight that you would overlook it." Ah, but is this very slightness not a great stumbling block in the way of theory? Can so slight a matter cause the building of one kind or the other kind of comb? If so, it would seem as if we could never succeed in getting one solid comb of worker or of drone comb, but that every comb would be a higglety-pigglety conglomerate.

Put 50 bees into a box and they will build comb, and always worker comb. Will Mr. Miller say that they are crowded compactly to keep warm?

Watch a new swarm. After about eighteen days the edges of the combs are all worker and though but sparsely covered with bees, they are still growing. After 30 days again look; the combs can not be seen for the crowds of bees, but upon running the bees aside there will be seen several nucleating spots of drone comb.

In early summer or late spring the bees crowd the hive to overflowing. At this time they tuck little patches of drone comb into every corner and crevice.

In my long hives with their twenty crosswise frames the honey apartment of 12 frames offers abundant opportunity for the study of comb building. Drone and worker combs frequently alternate. Sometimes three or four all-worker combs will be followed by a single drone, or oftener three or four all-drone combs will be followed by a single worker comb. Again a comb

will be a mixture of the two kinds. Sometimes the very last frame will be a solid drone comb, again a beautiful worker comb.

In this matter of comb building I have again and again run up against a wall. Unless my observations have been too loosely tabulated, I find that bees build more drone comb with young queens than with old queens. Only this very day I was cutting out comb honey from these hives, and I found that there was less worker comb in the hives containing the younger queens. One fine old queen is in her fifth year. She never led out a swarm, and she rarely lays eggs in drone cells. Her bees build a great deal of worker comb back of the excluder zinc. Right here, though it is apart from my subject somewhat, I would venture to say that in these large hives I have found that queens under two years of age are much worse for drone laying than are two and three-year olds. A queen in her second year filling all available drone comb with brood, while many a queen in her third season leaves vacant drone comb right in the midst of the brood-nest. Explain this, if you can.

Norwich, Conn.

REPLY BY ARTHUR C. MILLER

The following reply to Mr. Latham's article has been submitted to him and with his assent is here printed:

Yes, I leave the building of drone comb—and worker also—wholly to chance, the conditions which chance to exist at the time. Years of careful scrutiny of the bee, with steadily increasing mechanical aids in the work, have converted me from a belief in the bees' intelligence or reason to that of considering them but little more than reflex machines. "Though a bee has not the power of reason she rarely does a thing without a reason," says Mr. Latham. Change that last word to "cause" and we will agree perfectly so far.

Yes, bees work less compactly while building drone comb than while building worker, but the compactness is not because of the cell size but the cell size is because of the compactness. The bees are there always before the cells are.

Graduating nurse bees do not of necessity or consequence produce compact clustering. "Crowded conditions" as man considers them do not by any means make crowded conditions as bees feel them. "The impulse for male bees." Yes, an uneasiness, a nervous restlessness, causing drone comb.

Mr. Latham specifies conditions under which a queen does and does not occupy drone comb. Her use of it or non use are the result of her or the colony's condition after the comb is built. Only the effect on the colony of her condition when the comb is building can be pertinently considered in relation to its construction. "The need of store room" as a cause for drone cells, may be put thus: When at loss for a place to put their loads bees are "uneasy" cluster loosely, we will say, hence the size of cells.

In Mr. Latham's long hives, where he gets some sheets of drone comb interspersed with sheets of worker comb it should be noted that this comb is built at intervals during the late summer and fall of one year and the spring and early summer of the next, a period long enough to afford a multitude of comb building "waves" or periods.

Let man produce conditions of unrest among the bees and drone comb results. During such periods clustering appears to be less dense, hence the deduction that the size of the cells depends upon the density of the cluster. Mr. Latham speaks of "economy in time and wax" as a reason for the bees "preferring" to build drone comb under certain conditions. Regarding time, the bee has no regard for it whatever, spending many sunny hours literally sleeping in the cells. In the

aggregate of the bees of a colony accomplish much, but individually the bee is the personification of laziness. As to economy of wax. In a general way it may be stated that there is a surplus of wax produced at such times as drone comb is being built, I mean surplus in relation to the opportunities for its use and the bees using it.

I am perfectly well aware that some of the statements I have made above are radically at variance with tradition and belief, but my statements regarding the indolence of bees and certain habits are matters of absolute knowledge and further have been substantiated by other observers.

Providence, R. I.

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### THE NATIONAL CONVENTION

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Secretary Hutchinson sends the following for publication:

The following letter has been received from Udo Toepperwin, of Texas.

San Antonion, Texas, Sept. 20, 1906.

We have made arrangements for the National Nov. 8, 9 and 10th. Have selected the Market Hall in this city to hold the convention. This is a very good hall. It will seat 1,000 people. We have selected the Grand Central hotel as headquarters for the bee-keepers. These people guarantee to accommodate 50 bee-keepers, and think that they can accommodate 100. Whatever they can't accommodate they will find out nice rooming places for them in the neighborhood of the hotel. In this way, all bee-keepers can have a chance to stay not far from the convention hall. The hotel has 100 rooms, all very fine and furnished nicely. It is a brand new hotel, and we have secured special rates for bee-keepers of 50 cents a berth, and 25 cents a meal. The restaurant is separate from the hotel, but all under the same management. I believe that the bee-keepers will be highly pleased.

We have also planned a trolley ride and a Mexican supper, and the San Antonio people will elect the sweetest lady between 16 and 20 to be queen of the convention, and this lady will be introduced to the bee-keepers, and presented with a handsome gold watch on the stage at the fair grounds.

Thursday, November 8th, is bee-keepers' day at the fair and advertised that way by the fair Association. I believe it would be a good idea to go ahead and advertise the convention, so that we will have a good attendance.

The Grand Central hotel, which is to be headquarters for bee-keepers is only one block from the I. G. & N. passenger station, so it would be well to mention that bee-keepers better buy their tickets so as to arrive over that road, then they will have only one block to walk to be at home. While all cars connect with the other depots, and pass by the hotel, yet it is more convenient to simply step off and walk one block.

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### A PHILOSOPHICAL ADMIRER OF THE BEE-KEEPER.

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The following was recently received from a California apiarist:

EDITOR AMERICAN BEE-KEEPER:

I greatly enjoyed "Curmudgeon's" article, as also your editorials. You put more "juice" in one line than those "would be" censors in a half column: Still it is an enormous undertaking to attempt to install "truth." I heard a man the other day talking about a "revolution" and the laws and wages the people would get; I reminded him that there has never been a revolution but what was caused through the lack of intelligence of the people. If the people were intelligent they would correct the laws and law makers when they first begin to be refractory—"a stitch in time saves nine," is as true today as it ever was.

## TECHNIC OF FARM BEE-KEEPING.

C. W. Dayton.

YOU ASK SOME questions as to the cause of the decline of farm bee-keeping in New England. It is no more the case in New England than anywhere else. I know of three farmers between my place and the city who have bought from \$5 to \$10 worth of hives and supers and sections, which they keep stored in the loft of the barn and do not know how to get their bees into them. If they had obtained these fixtures before they got the bees they would probably have hived the bees in them; but it is not like farmers or anyone else to buy several dollars' worth of truck he never expects to need. So when a swarm of bees is found out in the orchard it is left to hang, or the boys shake it into a box as a matter of amusement. Then the bees store honey and the box becomes heavy and this draws the farmer to realize that if the honey was in a shape so it could be obtained he might enjoy something more than pork fat on his griddle cakes. It is the "heft" of the old box that causes the purchase of the "boughten hives" and sections; but after they get them they do not know how to use them and I just advise them to trade them off. Farmers would never buy incubators if they did not find that there was money in poultry without incubators. They buy incubators to facilitate their present paying business. Farmers and farmers boys have spare time, as we see them sitting about the barn, on the porch or in the shade of a tree. If they could pick up a comparatively worthless box and a few laths or sticks and construct a sort of a movable frame hive out of it they would do it and put them up in the barn or woodshed to await the arrival of a chance to put a swarm into it; but, not so when a mere hive outfit for one colony costs several dollars

They rather take a chance on a watch or a rifle.

Nor they cannot go to a neighbors and get a pattern of a cheap hive to work from unless it is a hive this neighbor has not science enough to use. A farmer could no more make a Hoffman frame than he could make a wooden water pail, and I suppose he thinks the shape of the top and side bars the only shape that bees will work on. Then also the sides of the Langstroth hive are too long to be constructed of one-half inch or three-eighths lumber, the kind used in boxes to be had at stores. It causes them to be flimsy, shaky and knotty and altogether unsatisfactory. That is one of the main advantages of a shorter frame—a 13-inch hive of one-half inch lumber is as substantial as an eighteen-inch hive constructed of seven-eighths material.

Well the bees are in a box and the farmer cannot get even a little of the honey so the bees are allowed to keep it all. The bees crowd the brood-nest so full of store that early and small swarms result, until the old colony becomes queenless. Then the honey is robbed out by other bees and a mess of moth-eaten combs only remain. If his small swarms are hived in the Langstroth hive they seldom utilize the whole length of the frames at once so that after part of the bees of the swarm becomes engaged in brood-rearing and another part have gone out as fielders the ends of the long frames are likely to be finished out by pieces as they want more room to store honey so that the ends of the combs are crooked crosswise of the frames, making the colony in no better condition than if it was in a box. No frames are movable.

When there are 10 to 16 short frames in a hive it is seldom that some of them cannot be gotten out. When one is out it affords access to more. At least some honey can be procured. Even 10 pounds is enough to send a farmer after a swarm of bees. But if no

honey is obtained the bees become a disgust.

In all my marketing of honey to consumers I always found that my first and best customers were persons who had once kept bees themselves, or else their children. It was almost the salvation of retail trade that there were such people. It is said that the desire or taste for honey or any other commonly used food causes a chemical change in the brain as well as throughout the system and that the dearth of sweets and their substitution with meats and vegetables creates a chemical change which opposes sweets. Not only in respects to sweet food in general but the chemical change creates a desire for honey especially. Some prefer to call it taste or memory. Pray tell what is memory and taste? Is it a something which grew into their system without a cause or stimulus? Because a commodity is produced on a broad scale, is that a reason they will wish to consume it? The more the small-fry bee-keeper and farmers have dropped out the more the market has fallen in amount consumed.

Chatsworth, Calif.

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### THE NATIONAL SOCIETIES.

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C. S. Ferry.

Editor Rural Bee-Keeper:

**I**N AN ARTICLE on page 55 of your journal, Rural Bee-Keeper, July 1906, you desire to know what the directors, appointed by the committee, (which was appointed at the National Bee-Keepers' Association of St. Louis) have done regarding the forming of the National Honey Producers Exchange of America. As one of the directors, I will say that we have done as directed by the National Bee-Keepers' Association, we commenced work at once.

While at the table eating our next meal this subject was discussed in an approving manner, and some wanted to subscribe for stock at \$25.00 per share.

Before leaving the table there was about \$200.00 pledged. We at once drew up a subscription list and on this last day of the convention in only a few hours, we had subscribed \$790.00. Even on the street car going to train one subscribed, and just before going through the gate to take train for home one bee-keeper came to me and wanted to know if I was in the Honey Producers committee, and said he wanted some stock, and subscribed at that time. Your directors felt quite pleased. Upon returning to our homes, which were quite a distance apart, the remainder of the work was slow. We had incorporation papers drawn up, as well as by-laws, etc., and some of the money paid in, what was supposed to be our brothers in the great National Bee-Keeper' Association, bolted from the National and started and incorporated the National Honey Producers' League.

With this league staring us in the face, we thought it wise to go slow. It has now "petered out," as it was not a honey producers' league, for the protection of the honey producer and his interests; but was started and composed of fixture, commission men and editors of journals who make their living out of the honey producer.

When this league found they could not work the honest honey producer, what did they do? In order to pull the wool over the eyes of the honest honey producer again, they came to the National Association and offered to turn over what money they had, to the National (with a string on it) to be used for the same cause as it was subscribed—more wool over the eyes of honey producers. Now these supply dealers, commission men and editors have had their inning and have showed their hand. Are we honey producers going to take much stock in them? The honey producers say No? The honey producers say by their co-operation, and independent movements in the different states that they are ready to co-operate

and find where they can buy bee-keepers' supplies as good and much cheaper. Members of five states of bee-keepers' associations have a contract with manufacturers, not in any combine, to supply bee-keepers' supplies in small quantities at wholesale price.

I think this will answer your question: "What has the directors appointed at St. Louis by the National Bee-Keepers Association been doing regarding forming 'The Honey Producers Exchange of America?'"

Mount Vernon, N. Y.

### THE TEXAS MEETING OF BEE DISEASE EXPERTS

UNITED STATES DEPARTMENT OF AGRICULTURE, BUREAU OF ENTOMOLOGY, APICULTURE, WASHINGTON, D. C.

October 5, 1906.

Dear Mr. Hill:

You will find enclosed a provisional program for the inspectors' meeting to be held in San Antonio, Texas, November 12th. Excursion rates are not available so that this meeting can be held on the 7th as was expected and the change of date was therefore necessary.

Yours very truly,

E. F. PHILLIPS.

Acting in Charge of Apiculture.

### PROVISIONAL PROGRAM OF INSPECTOR'S MEETING.

San Antonio, Texas, November 12, 1906

Demonstration of bacteria of bee diseases—Dr. G. F. White, United States Dept. of Agriculture, Washington, D. C.

History of Bee Disease Inspection in Wisconsin—N. E. France, Inspector of apiaries for Wisconsin, Platteville, Wisconsin.

General discussion of existing bee disease laws—An examination of laws now in force and suggestions for most effective legislation.

The Introduction of European foul brood into Michigan—W. Z. Hutchinson, Inspector of apiaries for Michigan, Flint, Michigan.

The Inspection of European foul brood in New York—Charles Stewart, Inspector, 3rd District of New York, Sammonsville, New York.

Foul Brood on the Pacific Coast—F. A. Parker, former Inspector, Santa Barbara County, Lompoc, California.

The present status of the investigation of bee diseases—Dr. E. F. Phillips, United States Department of Agriculture, Washington, D. C.

Reports of Inspectors from the various states and counties on the progress of inspection.

This program is subject to such changes as may be necessary but it will indicate the character of the meeting. All persons interested in bee disease inspection are urged to attend. A number of persons prominent in this work have agreed to be present.

Respectfully yours,

E. F. PHILLIPS.

Acting in Charge of Apiculture.

### BEE-KEEPERS BY THE CARLOAD.

EDITOR AMERICAN BEE-KEEPER:

Arrangements have been completed for a car-load of bee-keepers from Chicago, joined at St. Louis with another car-load, to go to the National convention Nov. 8, 9, 10, at San Antonio, Texas. Meetings in Market Hall. Board and lodging at special reduced rates at Grand Central Hotel. Nov. 12 in same hall there will be a meeting of all the United States and Canada bee inspectors; other bee-keepers invited. The latter meeting conducted by the U. S. Dept. of Apiculture. Land-seekers excursion rates, at dates to attend above.

N. E. FRANCE,

Gen. Mgr. N. B. K. A.

Subscribe for the BEE-KEEPER,

## THE MINNESOTA STATE FAIR.

Walter R. Ansell.

THE MINNESOTA State Fair was held this year Sept. 3rd to 8th in extremely pleasant weather for sight-seers.

The honey exhibits were quite up to the average notwithstanding a general complaint of short crops. There were several new exhibitors with very good samples of honey which must be encouraging to the management, who have communicated by circular with over 1000 bee-keepers in the state, the names having been furnished by the Committee on Co-operation, of the Minnesota Bee-keepers' Association.

Too little encouragement has in late years been given to new exhibitors and it is well that it should be known that such will be welcome and may expect a fine share of the very handsome premium list (\$500) given by the Minnesota State Agriculturist Society.

It is expected that the Minnesota Bee-keepers' Association will make arrangements in the future to care for small exhibits from the country which it would not pay the exhibitors to accompany personally.

Another need of the future, according to many exhibitors, is the selection of a competent judge by the exhibitors themselves, who, with the exception of one or two of the large ones who absorb most of the premiums, have never been consulted on the subject.

The exhibits of bees showed a marked improvement over former years. Not only were there more entries than usual for premiums but the general standard was higher; no doubt owing, partly to the increased amount of premiums offered and partly to the official encouragement of the State Department by the installation for the third time of a large observation hive of a full colony of bees working under almost normal conditions.

One striking feature was the consid-

erable quantity of preserves "put up with honey." Experience has taught us that honey is misplaced for such use as sugar has equal preservative qualities while being cheaper and less liable to discolor the fruit or taint it with a flavor not its own.

The comb honey was possibly a little below the standard and was certainly in smaller quantity than usual. To make up for this the show of extracted honey was both finer and larger than in past years.

The first premium wax was decidedly inferior being of a dark color, indicating a presence of dirt. This article should be paid more attention to by bee-keepers, as the production of clear bright wax is important and not difficult.

The supply dealers were fully represented though no premiums are offered them.

A pretty part of the exhibit which should be very instructive was the granulated honey.

## CALIFORNIA NOTES.

Bees have been getting a little honey all along and will probably continue for two months. Good colonies add a little to their present stores and poorer colonies get a living: not from the mountains, but from the stubble fields. A small weed about 12 inches high, with a blue blossom, or a raceme of blossoms, about the style of an alfalfa blossom. It is called, here, vinegar weed. The honey is light in color and insipid in taste. From my gate I can look across 50,000 acres of such stubble fields, and beyond is seen San Jacinto mountain, a hundred miles away.

Then on the grass lands is another late honey yielder resembling a milk weed when a stem is broken. Its growth resembles asparagus after the asparagus has run to up seed. It has many slim, long branches bearing flowers about the size of a dime and about



three inches apart closely set on the branches. It looks like sticks with purplish-white stars distributed here and there. It looks very odd. The bees hum to it every morning for two or three months and they leave the apiary with a busy roar. I can't find anyone who can name it. It is not described in any of the botanical books I have examined.

Lately I received several queens from eastern breeders and I have introduced them by the hatching-brood plan. The first ten days in September was so cold that I had to keep them in the house in a tank with quilts over the tank and a lamp under it. The last four days have been just the opposite—a hot wind from the desert, direct. I had severed my water pipe about a quarter of a mile away to change its course so I have to tie the horses nearly half a mile away to keep them from being pestered by bees alighting on their noses and eyes in search of water. Bees will rob on water nearly as bad as on honey in these dry climates. A five-gallon can of honey having the top cut out is kept sitting by the table on a box to save trips to the honey house. I notice this dry spell has formed a crust on it, as if it had been boiled—like candy near the “stringing” point.

C. W. DAYTON.

Chatsworth, Calif., Sept. 20, 1906.

### A SERMON TO BEGINNERS.

Adrian Getaz.

WELL, THE WINTER will soon be here. The important thing now will be to see that the colonies have enough provision to go over the winter.

“How much?” will ask the beginner. Somebody answered once in a convention: “Entirely too much is just enough,” and that was right.

The actual quantity varies according to the size of the colonies, the length of the winter, the weather, more or less cold, etc. Quite a difference ex-

ists between the colonies wintered out of doors and those wintered in a cellar. The figures given in Langstroth are at least twenty-five pounds of honey for colonies wintered out of doors. This will do to take a colony safely through the winter and through an ordinary spring anywhere in the United States. Still it is better to have ten pounds more if possible. At least it is so in my locality.

Some explanations are in order. The advocates of indoor wintering insist that it saves considerable amount of honey. Well, it does, but the saving is more than lost later on. The difference is more than offset at the very start by the fact that the bees wintered out of doors (if they are sufficiently protected) come out in the spring in better health. They have the advantage of good cleansing flights during the early part of the winter and again towards spring whenever a warm spell of weather comes.

But that is not all. The colonies wintered out of doors begin brood rearing several weeks before those that are in the cellar. And early brood rearing means lots of bees at the time the harvest comes, and lots of bees means lots of honey if there is any at all to be gathered.

It is astonishing how much honey a colony raising a large amount of brood will or can consume, and that is where the great difference between the two modes of wintering originates. So far as mere living through the winter is concerned, there is but little difference, but the colonies out of doors begin brood rearing much sooner and keep on increasing it and keeping away ahead of the others through the whole season. It takes lots of honey to do that. Early in the spring most of the bees must remain at home to keep the brood warm. Only a limited number can go to the field. Even if there is plenty of nectar to be had too many bad days of cold or rain intervene. Even during

fruit blossom time the bees cannot gather enough to feed all the brood they can raise and unless there are ample provision in the hive they will be compelled to curtail brood rearing, which means a curtailed amount of surplus obtained later on. In fact I have had colonies starved during fruit blossom and even poplar blossoming time a whole week or more of bad weather happened.

Of course, when warm weather comes it is possible to feed, in the spring if the colonies are short of food. The trouble is the apiarist never finds it out until it is too late. If a week or more of cold, raw, rainy weather comes it is almost impossible to open the hives to see whether there is enough food or not without damaging the colony considerably. Then the weather may be too cold to permit the bees to take the food. So take my advice and feed "more than enough" now before the winter comes. It will pay you and pay big to do so.

#### HOW AND WHEN TO FEED.

The sooner the feeding is done the better. If the locality is such that there is no fall flow, or the weather is so dry that there will be none, even in localities where there would be one in more favorable seasons, the feeding can be done early. In such cases, the process I have already described will do. But there is nearly everywhere more or less nectar to be gathered from the fall flowers, and the apiarist will not be willing to feed more than necessary and will wait until the flow is over, and then complete what may be needed.

As to what to feed: I will say unhesitatingly, feed granulated sugar syrup. Good honey is too valuable and bad honey is liable to cause dysentery in the colony. Honey dew, especially, must be avoided. Better extract it if the brood nest is full of it and replace it with something better.

I have sometimes had trouble by the

honey gathered in the late fall granulating and becoming unfit for bee food. It would be better to extract it and replace it with sugar syrup.

While inferior honey will not do for wintering it can be fed in the spring or at any time that the bees are flying freely.

I would use the Eastman or Alexander feeder or any that enables the apiarist to feed without opening the hive and without permitting robbers to get at the food. The Boardman and other entrance feeders are objectionable.

In feeding for winter (unless it is done very early), the raw syrup, as described in a previous contribution, cannot be used because it is liable to granulate. Use twenty pounds of sugar to one gallon of water and one ounce of tartaric acid. Put on a slow fire until the sugar is dissolved, stirring constantly and boil for ten minutes, thus making a syrup which is very near like honey, is perfectly healthy and will not crystalize.

If the weather is already too cold for the bees to come down to the feeder, put the food in as hot as possible. The heat will warm them up and enable them to get it. The supers should have been taken off as soon as the last flow was over, so that the bees could seal the cover down with propolis, while the weather was warm enough yet to do it. The feeding should then be done as soon as possible, so as to give the bees a chance to fix their provisions for the winter to the best advantage.

Before feeding, the apiarist wants to know or estimate how much honey is in the hive. There is no way to do it but to open the hives and look at the frames. A space of comb of the size of a section, well filled on both sides will weigh a pound. With this in mind the apiarist can guess near enough how much there is.

#### EMERGENCIES.

For some cause or other the feeding

may have been delayed until the weather is quite cold—too cold for the bees to leave the cluster. In that case put the feed as hot as possible in any kind of can or jar that may be at hand. Tie two or three thicknesses of cloth over it and invert it over the frames above the cluster after having taken off the cover of the hive. Put on a super (or two if the jar is too high for one) and pack all around and above the jar with rags. The warmth of the food and what little will leak, will wake up the bees and enable them to take up the food. Needless to say that the cover should be replaced. Give at once all that is needed.

Knoxville, Tenn., Sept. 1, 1906.

### IOWA HONEY CROP FAILS.

Clinton, Ia., Oct. 14.—The first carload of honey ever brought into Clinton reached here this morning, consigned from California to L. Iten & Sons, who operate one of the largest cracker factories in the United States. The firm has heretofore obtained the supply of honey necessary for the manufacture of certain kind of cakes from the home apiaries. This year, however, the honey crop in eastern Iowa and western Illinois failed and the company found it necessary to send to California for the honey. The car contained about 30,000 pounds.

### The New Races.

Two bee-keepers of Worcester, Mass., a Mr. Cheney and a Mr. Harris, have been testing the Punic bees, and Mr. Cheney the Caucasians, with the following results:

#### PUNICS.

These bees look very much like our Blacks except that their chitin is more of a blue-black.

They handle like Italians and are of fairly good disposition.

They begin work earlier and stop later in the day than other races and work on cooler and more inclement days. They cap their honey wretchedly. For their disposition to work early and late and on cool and cloudy days they may be worth something for some climates, and may be worth some efforts at development through breeding. In many other respects they are surpassed by many other races.

#### CAUCASIANS

Look like Blacks.

Handle like the best Carniolans.

Mr. Cheney's colony gave him about 120 pounds of extracted honey, 37½ pounds of which was the apple bloom honey which took third prize at the Worcester show. The rest of the honey contained much honey dew, of which he extracted 59 pounds and the rest granulated in the combs.

The Punic queens were imported from England.

The Caucasians were raised by a reputable breeder in this country and were sent out as purely mated. (M.)



## The Bee-Keeping World

Staff Contributors:  
F. GREINER, ADRIAN GETAZ

Contributions to this Department are solicited from all quarters of the earth.



### FRANCE.

#### DIVERSE NOTES.

Dr. Brunnick states that he has never lost a queen when introducing by the

Simmins process. This consists in having the queen to be introduced caged alone without food for half or three-quarters of an hour and then smoke the colony with tobacco and run the queen

in at the entrance.

Once he found a dead queen before a hive. He thinks she must have been dead for several hours before he saw her at about 10 o'clock a. m., because the bees, though without queen, did not seem to pay any attention to her. That same day at 10 o'clock p. m. he dissected the queen and found the spermatozoa in her fertilizing pouch living and moving briskly.

Once he had given a virgin queen to a baby nucleus or something similar (the nucleus box had only one comb and had glasses on both sides), when he saw one of the bees coming toward the queen with evidently hostile intentions. The queen went toward her and stung her several times. She died at once.

On another occasion when giving a virgin queen, the queen was stung on the left side of the thorax. The bee succeeded in extracting her sting. The queen did not die and eventually was fecundated and is doing good service. The only effect of the sting, as far as can be seen, was to paralyze the middle leg on that side.

M. Brunnick claims that by the Simmins process, he has successfully introduced queens to colonies having laying workers.—L'Apiculture Nouvelle.

### BELGIUM.

#### PREVENTION OF SWARMING.

Mr. Lacoppe-Arnold gives the following plan and says it has always been successful with him. Take from the hive all the frames with the adhering bees and put them in an empty hive. Then brush off all the bees at the entrance of the old hive putting back the combs in the old hive as fast as they are brushed. Destroy all the queen cells, replace two of the combs by frames of foundation and add a super. The bees thus treated are completely disconcerted and abandon all notion of swarming.—LeRucher Belge.

#### DRIVING BEES.

Temporary asphyxiation is recommended when for any reason drumming cannot be used to dislodge bees; for instance, when the weather is too cool, or when the bees are decidedly vicious. Take a wet cloth the size of the hand, sprinkle over it a quarter of an ounce of powdered saltpetre, then roll it in the shape of a cigar. It must be prepared in advance so as to be thoroughly dry when used. Dig in the ground a hole about six inches deep and a little smaller than the hive. Give the bees a little smoke just to keep them in and take the hive off from its bottom and put it over the hole. Stop the entrance and all the cracks except a hole to blow the smoke in. Light the "cigar," put it in the smoker and smoke the bees. In a few seconds the cigar will be burnt. Plug up the hole. Then comes an intense roaring, a cry of agony that becomes feebler and feebler and finally ceases completely. Wait four minutes, then lift the hive off, giving plenty of air to the bees. When they begin to stir they can be directed to any hive you choose. In half an hour they are in as good health as ever. While waiting during the four minutes, a few sharp raps given to the hive will dislodge the few bees that may not have fallen. Thus treated any colony will accept a new queen. Several can be united without trouble. Any queen not found otherwise can be secured.—Le Rucher Belge.

#### OLD CURE FOR FOUL BROOD.

About 1790 a very simple cure for the bee pest (foul brood) was given to the bee-keepers of that time. The advice was to put the diseased colony in the condition of a swarm. As there were no frame hives in those days, we presume the bees were driven out and put in a new hive. Very likely the old hive was to be burned completely, hives, combs and all; though nothing is said on that point.—Le Rucher Belge.

THE  
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**HOW TO ADDRESS.**

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Matters relating to the editorial department—manuscripts, photographs, or correspondence in any way referring to articles that have been or are to be published, should be addressed to The American Bee-Keeper, Fort Pierce, Florida.

**DISCONTINUANCES.**

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

**SUBSCRIPTION RECEIPTS.**

We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered. The date printed upon the wrapper label of your paper indicates the time to which you have paid. Our subscribers will confer a favor by observing the date, as noted, and promptly renewing or requesting the paper discontinued at expiration of time paid for, as may be desired.

Evidently the captains of the National Association have not heard that there are three cases of genuine yellow fever in the city of Havana. They are still talking of going to San Antonio. It can hardly be that knowing, they would take such chances. (H.)

**They Are Coming Slowly.**

Slowly and surely the other bee papers are yielding to our hammering and are beginning to give their readers fragments, often warped and twisted, of what has been going on in the bee world during the past year or more. Why not tell them the whole truth, gentlemen, and nothing but the truth? They are sure to learn it sooner or later and then what will they think of you? We refer not only to matters regarding the politics of the bee world but to practices in the art of apiculture. The Journal has just dared to hint at the possibility of evil existing in the practice of sugar feeding, taking for the text of its editorial an article which appeared in the Canadian Bee Journal. Never mind, Bro. York, the plain bee-keepers know who first took up the fight against the sugar habit. We hereby challenge the defenders of that habit to offer one grain of proof that honey or sugar syrup in the brood nest does not usually, aye, most always, get carried to a considerable extent into the supers. The shifting of stores up and down in the hive is almost like the beating of a heart. (M.)

It is reported that the Rev. Emerson Taylor Abbott, America's noted traveler, contemplates a journey to Texas this month. We suggest Mr. Abbott carry with him a cake of ice and a couple of hot brick, in order that his favorite temperature may be maintained. Mr. Abbott nearly perished with the cold in Florida at one time. (H.)

The editors invite correspondence upon bee-keeping subjects, with all subscribers of the Rural Bee-keeper. The policy of the AMERICAN BEE-KEEPER has always been to maintain as close an acquaintance as possible with its patrons, and thereby be better able to recognize and serve their interests.

### The Rural Bee-Keeper Suspends Publication.

To the list of young bee journals recently suspended has been added the name of the Rural Bee-Keeper, River Falls, Wis., edited and published by Mr. W. H. Putnam.

In the matter of typographical neatness The Rural was, perhaps, at the head of the list of American bee papers. It was one of the very promising ventures and did much credit to Mr. Putnam's ability. The American Bee-Keeper has taken over the subscription list of The Rural, and all unexpired subscriptions will be filled by this journal. THE AMERICAN BEE-KEEPER shares the regret which Rural readers must feel in losing the latter journal, but we trust they may find this paper a satisfactory substitute, and that they will each and all join our circle with assurances of welcome, and lend all possible assistance to the work of adding spice and interest to our columns and that of extending the subscription list. There is probably but one other bee journal in America enjoying so wide a circulation as THE AMERICAN BEE-KEEPER, though it is one of the youngest. This popularity is a result of its independent stand for the rights of the producer; and our efforts in their behalf shall continue until THE AMERICAN BEE-KEEPER shall become a household word wherever the English language is spoken.

Every Rural subscriber, as well as our thousands of old patrons, is cordially invited to take an active interest in our work, by sending in items and soliciting subscriptions. We do not ask our friends to exercise their efforts in behalf of THE BEE-KEEPER without remuneration. We gladly pay for service rendered. (H.)

The following from Mr. Putnam explains itself:

FAREWELL.

River Falls, Wis., Oct. 1, 1906.  
To the Subscribers of The Rural Bee-Keeper:

Dear Friends:—It has seemed best to me to discontinue the Rural Bee-Keeper. The problem that then confronted me was how to fulfill my obligation to my loyal subscribers. I have accordingly arranged with the AMERICAN BEE-KEEPER to fill out the unexpired term. I wish to ask you to accept this substitution. I have formed very agreeable acquaintances through the medium of the Rural Bee-Keeper. I am sorry to give up the paper, and I hope I may continue to hear from them through the medium of the AMERICAN BEE-KEEPER. I hope the advertisers who have been so kind to me will now place their advertisements with the AMERICAN BEE-KEEPER. I heartily thank one and all who have helped me to make the Rural Bee-Keeper what it was, and hope I may be of some service to all at some time.

Yours very truly,  
W. H. PUTNAM.

### Of Interest to the Boys.

The American Boy is the greatest boys' magazine in the world. It is profusely illustrated and always contains an abundance of wholesome and interesting matter presented with a view to the development of the boys' manly traits, and to appeal strongly to his nobler impulses, thus aiding him greatly in the building of character necessary to a life of success and usefulness. It is all presented in such a way as to interest any boy. It is a boys' paper, of boys' affairs, and should be read by every boy.

The subscription price of the American Boy is \$1.00 a year, but we have arranged to club it with the AMERICAN BEE-KEEPER, sending both papers for only one dollar—just the price of one.

Nothing could make a more appropriate Christmas gift for any boy than this magazine for a year. If you subscribe now he will get the Christmas number.

### Importance of a Water Supply.

The fact that water is hardly less important to bees than is honey itself, and that they are quite as persistent in their efforts to procure a supply for "family use," is interestingly demonstrated by the experiences of Mr. Dayton, noted in this number of THE BEE-KEEPER.

It is doubtful if bee-keepers generally throughout the North Atlantic states and the Middle West (Mr. Abbott excepted, of course) appreciate the importance of an adequate water supply near the apiary, nor of the quantity of water required by an apiary during the season of brood-rearing. The writer has seen a half-barrel of water, which constituted the sole supply for a mountain apiary of 200 colonies, disappear in two days. During this time the bees constantly swarmed, with apparent delight, about the water and kept up a veritable stream of water carriers to the hives. No doubt some of the work of emptying the half-barrel may be attributed to evaporation, though during the sunny hours its surface was practically shaded by the myriads of bees, which would greatly reduce the percentage of evaporation.

On the islands of the Florida coast, where bees are sometimes kept temporarily, and which are surrounded by tide-water, the fresh water supply is often very meagre, and sometimes wholly absent. Under such circumstances bees will as readily detect any fresh water that may be carried to the islands by their keeper, as they would an open vessel of honey during a dearth of nectar, and their determination to appropriate it to their own use is no less obvious.

The dews of early morning usually afford, to some extent, a small supply of water for the bees; and, fortunately, water in abundance is generally available from other constant sources, so that the matter is rarely given any attention by bee-keepers; yet, in many

instances, no doubt, the brood-rearing of spring is quite as seriously hindered through neglect on this point as by a shortage of honey or pollen in other localities. (H.)

### Keep a Weather on 'Em.

It has been brought to our attention that under the guise of being earnest workers for the Independent movement some are using their utmost effort to obtain positions of influence and power in the new and reorganizing societies. The interests that have so long manipulated affairs for their own profit are not going to sit meekly by and see their avenues of income blocked. Where they cannot openly direct affairs they are using persons who, while considered friends of the honey producers, yet will do the bidding of their employers. Some good men are so working, having been made to believe that they are best serving the interests of all concerned.

Bee-keepers must carefully consider all candidates, judging them by their works and their associates rather than by their words, for the Devil can quote scripture and wolves are as ready as ever to masquerade in sheep's clothing. Eternal vigilance will be the price of liberty here as elsewhere. (M.)

In a recent issue of the Farmer and Busy Bee, Editor Abbott goes out of his way to apply to a certain gentleman a description which appeared in our columns shortly before. We do not know what Mr. Abbott's object was in so doing. It certainly could not have been kind regard for the feelings of the person he so fulsomely eulogizes. If to him it seemed to fit a friend of his the least he could have done would have been to refrain from saying so. As neither of the editors was present at the meeting referred to we were dependent entirely on our correspondents as to conditions and persons, hence the indefiniteness of our specification. (M.)

### The Cuban Situation.

There has been some anxious speculation in bee-keeping circles as to the ultimate outcome of the present Cuban turmoil and its effect upon the honey industry of the United States. Dr. Miller, in *Gleanings*, however, assures us that Cuba will not be annexed. This appears to be one of the things the Doctor does know. It would be comforting to know that he knows, but we fear he knows not. However, the admitting of Cuba to the sisterhood of States, in open competition with our producers, would not necessarily entail the loss of our pursuit in the United States.

The various sections of the United States produce varieties and flavors of honey peculiarly their own, and each will continue to maintain a monopoly upon its own variety, as heretofore, even though Cuba should become one of us.

It is not within the province of human knowledge at this date for any man to foretell the form of government which the future holds for Cuba. It is improbable, however, that the United States shall continue indefinitely to invest millions in the quelling of her periodical insurrections. It would be vastly cheaper to assume permanent control of the island's political affairs, and derive the revenue accruing therefrom.

In the event of Cuba's final annexation, the island then becomes available for settlement and pursuit of bee-keeping or other industrial enterprises, to those who regard its honey-producing advantages as superior to our own. But it may never be annexed.

"Sufficient unto the day is the evil thereof." (H.)

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### Notice.

In order to facilitate prompt and direct attention to all matters pertaining to the management of THE BEE-KEEPER, and to avoid, as far as possi-

ble, the degree of confusion bound to result from the wide separation of its offices and its editors, we again invite the attention of our readers to the fact that the business office is located at Falconer, New York. All letters referring to business matters of whatever nature should invariably be so addressed.

The publication office is at Fort Pierce Florida, where all contributions for publication or letters pertaining to articles, either for future publication or that have been published, receive prompt and careful attention.

The address of Mr. Arthur C. Miller, associate editor, is Box 1113, Providence R. I., and matter for publication submitted to him, as above, will be promptly reviewed and reported.

Probably no two men in any given pursuit hold views exactly alike upon the various phases involved, and in order that our readers may readily identify the authorship of future editorials in these columns, and thus save us the time and expense of transmitting a heavy volume of correspondence from Providence to Fort Pierce, and Fort Pierce to Providence, beginning with this number and continuing hereafter each item will carry an initial for identification.

A careful observance of these points by our readers will be appreciated.— (H.)

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Secretary Hutchinson, of the National association, announces in *The Review* that he will positively decline to accept the office another term, and expresses a desire to see Mr. Jas. A. Green, of Grand Junction, Colo., elected as his successor. W. Z. has been actively associated with the National for many years, and much of its success is attributed to his indefatigable efforts. While his numerous friends of the Association will regret to learn of his decision, he will doubtless enjoy the tranquility which is the portion of a lay member. (H.)



**The Inspectors' Meeting at San Antonio.**

At San Antonio, Nov. 12th, instead of Nov. 7th) the Inspectors of Apiaries of various states will hold a meeting for the purpose of discussing their work, its conditions and its needs. The report of this meeting will appear in the bee-papers later.

We wish, however, to call attention now to a few facts, knowledge of which by the mass of bee-keepers may tend to guide them in their attitude toward and relations with the inspectors and the laws under which they work. Owing in a few instances to incompetent persons getting these responsible positions, and to the discreditable attempts by some men to secure similar positions, considerable distrust and ill feelings exists. But most of the inspectors are conscientious, hard working, self sacrificing men who, at ridiculously small pay, are doing a splendid work for the craft. This is particularly true in the case of some of the California inspectors. These men are hampered by lack of sufficient means, by inadequate laws by having the disease return from adjacent states having no inspector, and thus year after year having to do their work along the state lines over and over again.

At the coming meeting the inspectors hope to agree upon a general form of a statute which will appeal to all reasonable men, and so be easy of passage in states now having no law on the subject. They hope to so frame it as to make difficult the appointment of incompetent men, to provide sufficient means to properly conduct the work, to safeguard the interests of the individual bee-keepers, and at the same time give the inspectors the necessary powers to make their labors effective.

Naturally the basis of such a law must be a full knowledge of the various diseases of bees. Studying these has for some time been the work of trained men, and their labors are now sufficiently complete to enable them to speak

intelligently on the subject and to furnish the information needed by the inspectors in their approaching conference. (M.)

In the October 15th Gleanings Mr. N. E. France has an illustrated article in which he sets forth that in an apiary of over one hundred colonies, where black building paper is used for winter and spring protection, the loss from both wintering and from spring dwindling is not over two percent! The editor says never a word. It may be recalled that he once said that he tried "virtually the same thing—a hive wrapped in paper and a wooden case slipped over it." Something like putting your undershirt over your rubber coat. The tarred paper wrapping which the A. B. K. was the first to exploit and which it has so persistently championed has come to stay even if it does interfere with the sale of outer cases and chaff hives. By the bye, how comes it that Gen. Mgr. France furnishes a trade paper with illustrations and copy intended for the National Report before he sends it to the members? The honey producers had an idea that he had learned wisdom from his previous entangling alliances and would hereafter fight shy of them. (M.)

Gleanings announces to its readers that it will soon publish serially a translation of a German scientist's work entitled "Are Bees Reflex Machines." The work is of much interest but other scientists have questioned the accuracy of the author's conclusions and have shown wherein they think he erred. We expect to present to our readers the other, and we believe the more rational side of the case and we feel sure it will interest them and we trust prove of value to them by bringing them a little nearer to a perfect understanding of the habits of the bee on which they must base their practices to have them successful. (M.)

**The Questionable Virtue of Minding  
Everybody's Business.**

The Rev. Emerson Taylor Abbott, in his mongrel magazine, which divides its attention between apiculture, building hen-coops, scientific methods of weaning bull pups and vituperative onslaughts upon those who fail to see things in general through his own spectacles, displays his dominant trait of character to unusual advantage, in an effort to belittle the editor of the AMERICAN BEE-KEEPER. He likens us to a snarling cur, and thinks our diet must consist of vinegar and Indian turnips.

This exercise of Mr. Abbott's crowning virtue (?) constitutes one of a series of similar insults directed at various members of the apiarian fraternity, and is a result of the publication in these columns of an item referring to some "old man" at the Jenkintown meeting of the New Jersey bee-keepers last summer. Mr. Abbott thinks the item was a reflection upon Mr. A. I. Root, which he seeks to vindicate by a glowing tribute to the venerable gentleman, and a tirade of insults aimed at "Brother Hill." In Mr. Abbott's continuous performance of publicly striving to right some fancied grievance, he is usually found to be completely off the track, and this instance is no exception to the rule, for "Brother Hill" had absolutely nothing to do with the authorship of the item, nor had the slightest idea as to its intended application. Whether Mr. Abbott's guess is or is not correct, the writer does not know. Of one thing, however, he feels very certain, and that is, if Mr. Abbott would exert himself as much in matters of legitimate concern to himself as he does in minding other people's business he would be more popular with the craft, and, possibly, might some time attain to positions of prominence heretofore denied him by fraternal suffrage notwithstanding his determined efforts to get there.

Here is another of Mr. Abbott's brilliant sorties: "By the way, has anyone ever seen the editor of the AMERICAN BEE-KEEPER at a convention? We never have. He writes sometimes as though he had never been twenty miles from home."

With all Mr. Abbott's various accomplishments it is not remarkable that he should presume ordinary mortals to possess exhaustive funds of profound wisdom in regard to every phase of apiculture, journalism, parliamentary work and extending into the depths of the most minute details of agricultural problems—even unto the eradication of chicken lice and the most propitious time to spread manure. He ought not to, though.

We presume Mr. Abbott has traveled extensively. The common people, however, to which class the editor of THE BEE-KEEPER belongs, cannot well afford the luxury of extensive travel.

As to the conventions, perhaps it is just as well that the editor of THE BEE-KEEPER has not found it convenient to attend, for who knows but his presence also might be depressing to the peace-loving attendants, and become the cause of thrusting such disgraceful scenes before the meetings as those presented at Los Angeles? Perhaps the conventions would lose but little if our critic were less in evidence himself upon such occasions.

The writer is not a convention worker and he is content to leave this branch to other more capable and experienced men; but this is the first intimation we have had that it is a crime for one to forego the ambition to run the earth and the fullness thereof as some seem bent upon doing at all hazards, even though they become a laughing-stock of the craft and leave consternation ever in their wake. (H.)

"The man who cannot jest is a poor wight at best,  
None poorer, save the man who naught  
can do but jest," —Ruckert

**The Wisdom of the "Old Reliable."**

In the American Bee Journal for September 27th, last, appears an editorial headed "Feeding Glucose to Bees" from which we quote the following:

"Mr. Ernest W. Reid, on page 701, wants to know if any one has succeeded in getting bees to eat glucose. I fed some to my bees in July, and they ate it all right. I bought the stuff for 1 cent per pound, with which to experiment. It was during a very dry spell that I fed about 50 pounds. I made a syrup and fed in the open air about 200 yards from the hives. It was at a time when there was nothing to get from the flowers. The syrup was made by adding water and heating it until it was all dissolved, I did not feed enough for the bees to store any in the supers. I do not think they would store any of it, for I tried to get them to eat glucose at a time when there was nectar in the flowers, but they would not touch it.' 'Missouri.'

"As bees do not take enough glucose to store in the supers for surplus, there is really no excuse for talking about the matter. If they will eat only enough to keep them alive, the feeding of glucose has no bearing at all on the question of honey for market."

How about the assertions that bees will not touch glucose unless it is mixed with more than an equal amount of honey? It should be noted that "Missouri" says he "did not feed enough for the bees to store any in the supers." The editor twists this into "As bees do not take enough glucose to store it in the supers, etc." Logical, isn't he?

Further on he quotes the Chief Food Inspector of Chicago as follows:—"Honey in comb-80 percent glucose. Glucose is fed to the bees and they put it in the comb and seal it up." To which the editor replied: "We at once wrote to Mr. Murray, the inspector, asking him for the authority for the statement concerning comb honey. Up to this

time we have received no reply from him. If his statements regarding other supposed adulterated food articles have no more foundation than the one about comb honey being 80 percent, glucose, he is not to be depended upon at all. If bees can not be induced to use more than enough glucose to keep them alive how foolish it is to talk about 80 percent glucose in comb honey."

From this he switches to the following lucid (?) remarks: There are a lot of foolish folks in this world that talk nonsense, just because they know nothing about the subject on which they attempt to speak. More harm is done by such utterances than can ever be undone. It is much like saying that comb honey was once manufactured, because a little deep-cell comb foundation was made. Deep-cell comb foundation is not honey at all, although it may appear to be something like empty honey-comb. There is a world of difference between honey-comb and comb honey. And yet, recently, when the matter of deep-cell comb foundation was referred to, it was mentioned as if it were perfect comb honey, made by machinery. And while the thing was exceedingly misleading, the worst of it all was that it was written by a small bee-keeper who imagined he was doing a great thing in the interest of truth! Fortunately the statement appeared in a somewhat obscure publication. But it may be dug up some time and quoted with great gusto as being indisputable evidence that comb honey was really manufactured by machinery, when it never has been, and very likely never will be so produced. Comb honey is the product of bees only." That is really funny. So the AMERICAN BEE-KEEPER in that editor's estimation is "a somewhat obscure publication." Which same nevertheless was sufficiently in evidence to be instrumental in smashing the "League," of which the above quoted editor was a moving spirit.

He lets his ill temper run away with

his logic, as note: "Deep-cell comb foundation is not honey at all, although it may appear to be something like honey-comb." Brilliant that and so convincing.

"There is a world of difference between honey-comb and comb honey." Wonderful discovery! "And yet, recently, when the matter of deep-cell comb foundation was referred to, it was mentioned as if it were perfect comb honey, made by machinery." A gentlemanly prevarication. It was perfect artificial honey-comb with full depth cell. "And while the thing was exceedingly misleading, the worst of it all was that it was written by a small bee-keeper who imagined he was doing a great thing in the interest of truth." Why was it "the worst of it" to have a "small bee-keeper" write of it? Be it noted that the editor of the American Bee Journal is not a bee-keeper at all. Little boys in glass houses should not throw stones.

Foundation is the base of a building not the whole structure, and sheets of foundation built out by the bees to full depth we call "comb" even though the cells are unoccupied and uncapped, and even though they have an artificial base, consequently artificial comb of full depth cells is "comb" not deep foundation.

We would call the Journal editor's attention to this paragraph of his, and suggest that he ponder thereon: "There are a lot of foolish folks in this world that talk nonsense, just because they know nothing about the subject on which they attempt to speak." (M.)

#### Our National Organizations.

The annual meeting of the National Bee-Keepers' Association, to be held at San Antonio, Tex., Nov. 8th to 10th, promises to mark a crisis in the society's affairs. The growing unrest culminated at St. Louis in the attempt to form within the society a co-operative body for specific purposes. Certain officers

of the National openly championed such action, and then later, together with other persons, hurriedly and secretly organized the Honey Producers League, giving an excuse for their action which was more blackening than silence would have been. This duplicity of some of the officers was the last straw, and resulted in the associated societies of the State of New York withdrawing in a body. Other states' societies rapidly followed, and societies not affiliated with the National voted to stay out. As dues became payable members failed to renew, and this defection has spread all over the country until the life of the National Association is in jeopardy.

Some of the officials of the National and their friends state that such action by the bee-keepers was an attempt to wreck the Association. On the contrary it was only after trying all other ways possible to purge it that they decided that the only thing for the real honey producers to do was withdraw and later form a body of their own. This predicament of the National has been brought about by its officers, and for them now to try to cast the burden on the long suffering producers is but to add insult to injury and make the beemen more bitter than ever against the Association's officers.

The dissatisfaction with the present conditions is so intense that either a radical change must be made both in the constitution and the officials or the Association will come to a speedy end.

It would be a great misfortune to have the "National" collapse for it would take years for a new body to reach its size and prestige, dimmed though the latter now is. Every member who cares for the good of the honey producing industry should use his utmost endeavor to save the National if the present officials will permit it to be saved. If regeneration is impossible, then let all good men help to establish a new society exclusively for honey producers.

Some of the officials against whom much of the feeling of distrust and resentment has been directed and whose terms are now expiring, have expressed an intent of declining to serve again as officers. This will materially help matters, but there still remain allies and associates of these persons who have neither declined renomination or expressed an inclination of retiring from office. Also some of the retiring officials have very unwisely attempted to nominate their successors. Rightly or wrongly there is a widespread distrust of many of the men now in office, and only extensive changes will satisfy the members. One official of the National who was associated with the founders of the "League" has since its death done all in his power to rectify his mistake and save the National. He has felt deeply the loss in its membership construing it as personal censure of his act in joining the "League" movement while still an officer of the National. That man is Gen'l Manager France. If our information is correct, there is a widespread feeling that if the National is thoroughly reorganized he should again be made General Manager.

To save the National all of the present officials who were mixed up in the League affairs (excepting Mr. France) must step down and out, and the constitution should be so amended that no supply manufacturer, dealer, editor, publisher, or their agents or employes even down to the staff correspondents and "department editors" shall be eligible to office, and further if any officer is found guilty of conniving with any such persons that office shall at once become vacant.

Much care will be needed in selecting new officials, for there are among the active movers for reorganization some men who are looking out solely for their own financial benefit, and at least one of these men is not even a bee-keeper. Wise heads and plain speaking are needed in the present crisis. (M.)

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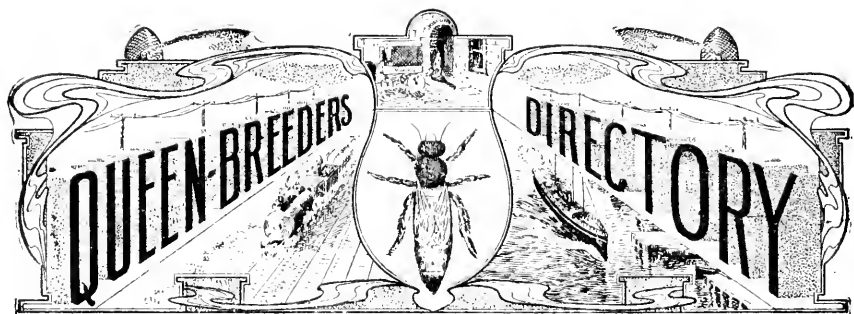
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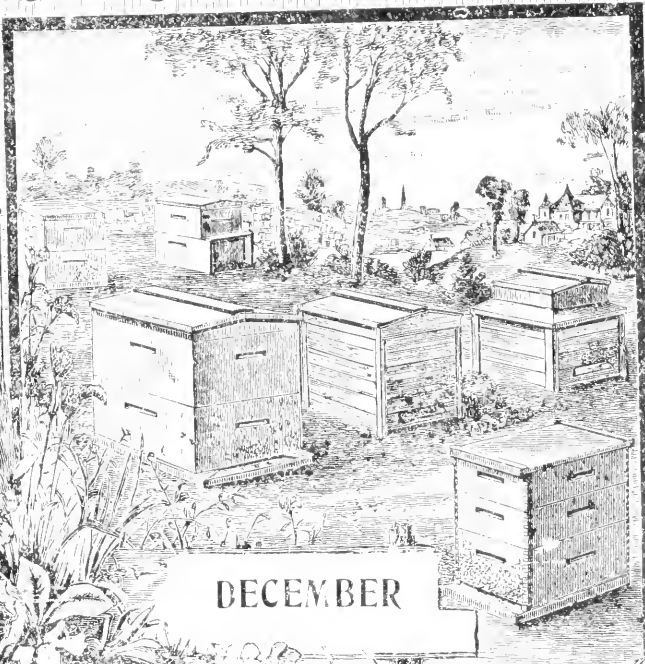
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DECEMBER

1906

NO. 12

VOL. XVI

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## CALCIUM CHLORIDE IN THE BEE CELLAR.

### Details of an Interesting Experiment, Worthy of Thorough Investigation.

ALLEN LATHAM.

**T**HOUGH plenty of cases are on record of bees wintering well in cellars which were apparently damp, there can be no doubt that bees as a rule winter successfully only in dry cellars. Personally I question whether bees have ever wintered well in a really damp cellar; that is, a cellar in which the air was humid. Many a cellar, has a wet floor but still is comparatively a dry cellar, the circulation being sufficient to keep the air dry, but not sufficient to dry out the springy soil of the cellar bottom. A dry atmosphere in the beecellar is almost a certain guarantee that the bees will winter successfully.

A dry atmosphere being the great desideratum it is worth our while to go to some pains to get that condition in our bee-cellars. The usual devices are a dry location with good drainage, or a cellar with excellent ventilation. Now it is not at all possible for many a bee-keeper to get a dry location, for his house is where it is and he is not in position to

move, nor has he opportunity to build a bee-repository at a greater or less distance from his house. He must then choose the ventilation method.

To keep a cellar dry by ventilation is extravagant of heat in any case. If the cellar is without furnace or steam heater, to ventilate the cellar means a chilling of the bees, which is more than likely to result disastrously. To warm up the air in a room separated from the cellar and then introduce the warmed fresh air is alike attended with disaster, as it tends to excite the bees. For these and other reasons I hold that it is difficult to ventilate a damp cellar sufficiently by ordinary means.

I would make one exception to the statement in the preceding paragraph. A cellar which has a furnace or steam-heater in it is most excellently ventilated, even though all windows are closed and no efforts made to ventilate at all. Allow me to explain. Assume that this heater or furnace consumes six tons of coal during the winter. To do this means the consumption of fifteen or more tons of

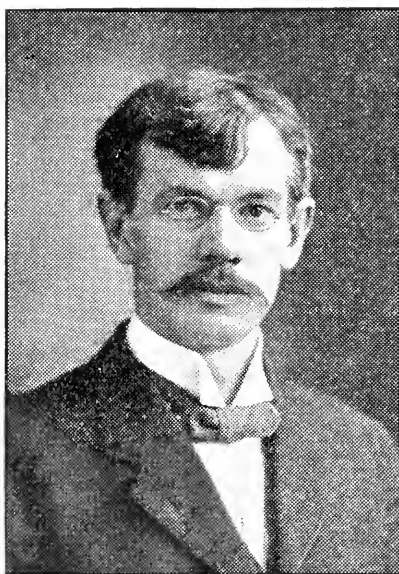
oxygen, and as oxygen is only a fifth part of the air, this means a consumption of seventy-five or eighty tons of air at least. All of this air enters the fire-box and goes up the chimney. It must before entering the fire-box enter the cellar. Thus we see that a cellar in which a furnace stands will have eighty tons of fresh air drawn into it anyway. Being dry winter air, and sifting gradually into the cellar, it is quickly tempered by the warmth of the cellar, and the bees are

spring I tried an experiment which convinced me that cellar-wintering of bees can be done with perfect assurance of success.

I took two baby nuclei which had already got into rather poor condition and fitted up for each an apartment in my cellar which I could keep in a very damp condition. I even used the garden sprinkling pot about these hives to keep them in an atmosphere reeking with moisture. One of the little colonies was left to its fate; not so the other. Above this latter one and below it, separated by wire cloth, were placed pans containing fused calcium chloride. This chemical was placed in lumps on wire netting above the pans so that the air could freely reach it. Being an extremely deliquescent salt the chloride tended to dry the atmosphere about the second colony.

The two colonies were kept thus for a month and then notes were taken. The colony without the chloride had badly spotted its hive and many bees lying about dead, with greatly distended bodies. But few dead bees were about the other hive, and many of these were wizened and small like normally dead bees. I have unfortunately mislaid my notes, and cannot give the exact number of dead bees found inside and outside of each hive. I counted carefully in each case, and remember that the ratio was 4 to 1. Four times as many bees had died in the hive without the chloride than in that with it, and all these in the short space of one month. Another thing noted was that the hive without the chloride had brood in all stages, while the other was without brood. A dry cellar discourages breeding.

This little experiment, though founded upon good sound reasoning, and though pointing clearly to greatly desired results, must not be given



MR. ALLEN LATHAM.

not at all disturbed by this sort of ventilation. I hold, therefore, that a cellar with a furnace or steam-heater in it, if said heater is so made that it does not lose much heat and gas into the cellar, is an ideal cellar for the wintering of bees.

But suppose that a man has neither a dry cellar, nor one in which there is furnace or heater. Is there any hope for his bees except out-door wintering? There assuredly is. Last

too much weight. Yet it warrants my suggesting an experiment upon a larger scale which might be tried this coming winter.

Let some one who has a rather damp cellar, and whose bees generally come out in spring weak and then grow weaker by spring dwindling, act as follows: Let him purchase about a hundred pounds of crude calcium chloride, not chloride of lime so-called, but the real calcium chloride, fused. Let him purchase a dozen or so of galvanized pans, and enough galvanized netting, six mesh or so to the inch, to furnish a piece to rest over the pan. Let him put a pound or so of the salt on each piece of netting and then place the pans with the netting and salt here and there in the cellar, some above the hives, but many below the hives.

If the cellar is very damp the salt may get all dissolved in a few weeks. In this case the pans must one by one be set in the stove-oven for an hour or so till the water is driven out, the

salt again placed on the nettings and the pans replaced in the cellar. The salt can be used again and again, requiring only a moderate baking to bring it back to its original state.

There can be no doubt that a cellar can be kept very dry in this way, and need have almost no ventilation. Bees need very little air indeed if that air be dry air. Their need of fresh air is like our need of fresh air, that is plenty of oxygen. They need fresh air mainly that its drying power may help them to get rid of the water which keeps accumulating in their bodies.

I winter my bees out doors with the exceptions of my baby nuclei, or I should most assuredly try the calcium chloride on a large scale. I trust that it may be tried the coming winter, and that full reports may be given of the results.

Norwich, Conn.

Fused calcium chloride costs, in 10-lb. cans, 15c per pound, and in 100-lb. lots, 10c per pound.—A. C. M.

## HANDLING HONEY.

### Instructions and Suggestions for the Inexperienced.

W. R. GILBERT.

**T**HE CONSUMER has at length arrived at a very good idea of what to require in a first-class honey. Comb-honey (in section cases) should be translucent, showing the clear, bright color of the contained honey, evenly and delicately worked out to the sides and bottom of the section, and with a scrupulously clean surface. The finest liquid, extracted honey, should be bright and clear, of a light straw-color, and delicate in flavor and aroma. Granulated extracted honey should be of fine, even grain, creamy-white in color, and of good

flavor. There are many grades of medium and dark colored honey, below this first-class standard, but the latter is what the bee-keeper must strive to attain, in order to command a ready sale for his produce.

#### Preparation for Comb-Honey in Sections.

In regard to comb-honey, the preparation commences with the filling of the wax foundation in the section boxes. To secure a well worked out section, this should be cut so as to just clear the sides of the box, and

hang to within one-sixteenth of an inch of the bottom, thus allowing for a light stretching of the foundation, caused by the heat of the bees clustering on its surface. The fitted boxes must next be placed in the section super, with separators between the rows, reaching to within three-eighths of an inch of the top and bottom, and wedged up perfectly square and tight. This is important, for the bees will place propolis over every crack or small space, causing disfigurement and extra work in cleaning; also sections "out of square" are much more liable to breakage, when packed for traveling, owing to the unavoidable spaces between them. The rack must be placed perfectly level on a hive containing a strong colony of bees; it will then be filled with good, straight, and even combs.

Removing filled supers from the hives should be done with as little disturbance to the bees as possible. The best method is to place a "super-clearer" on a stool or box by the side of the hive, raise up the bottom edge of the super, and insert a small wedge; puff a little smoke between the super and top of the frames; then remove the super steadily with a screwing motion, and put it down gently on the "super-clearer;" then place a cloth, on which a few drops of carbolic acid have been sprinkled over the top of the frames. In about ten seconds remove the cloth, and it will be found that the bees have been driven down, leaving the tops clear. Now immediately take up the super with the "clearer" and place them on the frames. If this operation is carried out in the afternoon, by next morning every bee will have found its way down to the body of the hive, through the bee escape, in the center of the "super-clearer," and the rack can be removed with comfort to the

bee-keeper, and without disturbance to the apiary.

The full supers should be carried in to a bee-proof room, the wedges, and back board removed, and the center section of the exposed row taken out. Do not attempt to lift it straight out, the result would probably be a damaged section, but tilt it backward on its bottom edge, and when loosened it will come away easily, as also will the two side ones. Sort the sections as they are taken out, putting all well filled, clear ones, as the first grade. Those not well worked to bottom and sides, and, therefore, not fit for shipping, make a second grade, and any only partially filled must be given back to the bees to finish, unless the honey flow has ceased; and in that event they must be emptied by the extractor.

Carefully scrape all propolis from the edges of the sections, and, if not already sold, store them in a dry, warm cupboard, protecting them from dust by tying in packages of four to six in clean paper; be very careful not to place anything having a strong odor near the honey, or it will spoil the flavor.

### Packing.

If the sections are sold to wholesale dealers for re-sale to traders, no further preparation is needed. To pack them so as to travel safely, not more than from four to six dozen should be put into one package, preferably the smaller quantity. Procure a strong wooden box, bore two holes in each end, about one-third down, and knot firmly into them rope handles, by which the box can be safely and easily lifted; put into the bottom of the box a bed of course hay and on this, place, quite close together, a layer of the "wrapped" packages of sections, leaving at least two inches between the sides of the box, and the sections. This space must be

filled with hay, tightly pressed in, and, to prevent possible damage to the comb, the ends of the packages, may be protected by straw-board or thin wood. Continue with layers of packages, filling in around the sides as before, until within two inches of the top, then fill up tightly with hay, and screw on the lid. Label the package carefully "Comb Honey. With Care!" Retailers of comb-honey prefer to have the sections sent to them glazed, the comb being then preserved from injury by careless handling, and, what is still more important, kept free from the dusty impurities unavoidably present in shops.

### Glazing the Sections.

For glazing sections, glass cut to the correct size may be purchased of any dealer in bee appliances, together with the strips of paper for edging, which, when packed round the angle formed by the glass and the wood, serve to fix the glass on. Waste glass can be cut to the size required, while neatly printed bands of colored paper can be used instead of the lace edging. They are more easily pasted on than the paper lace edging, and make much firmer and neater work, while they also give an opportunity of placing the names of the apiary, and retailer on each section. Neat cardboard cases, plain or glazed on one or both sides, and glazed tin boxes, are provided by supply dealers, for those who have but a small number of sections. Where large quantities are handled, the printed band holding on the two squares of glass will be found the best, and most economical.

### "Extracting" Honey.

The modern method of obtaining extracted, or liquid honey, has greatly improved its quality, and the use of the centrifugal extractor, compels the

abandonment of the skep system, of bee-keeping with its waste of bee life, waste of comb, and taint of sulphur; it also necessitates the adoption of the frame hive, which enables the gathered surplus, to be stored in frames, apart from the brood nest, and removable at will by the bee-keeper.

Honey improves in flavor and in density while ripening in the hive, therefore the frames should not be removed until they are well sealed over.

Fermentation is the great enemy of extracted honey, but it can only affect badly ripened honey, or honey exposed to moisture and warmth; so, should it be necessary to extract unripe honey, it should be returned to the bees for re-storing and ripening.

The full sealed frames of comb, having been carried into the store-room, should be sorted by holding up to the light, and all those containing dark or second quality honey separated from the better ones.

Uncap and extract the contents of the best combs, and then strain the honey through a bag made of cheesecloth, in order to remove all loose particles of wax. Tin strainers, with strainer, and honey tap, made to contain 56 lbs., are made, in which, if the honey is allowed to stand for twenty-four hours after straining, it will be freed from air bubbles, and can then be drawn into whatever bottle, jar, or tin, will best suit the market. Best honey is usually put in one pound or one-half pound glass jars, with metal screw lids having a cork wad inside the lid. To prevent any leakage, the cork wad should be dipped in melted wax, and placed on the jar while still warm, the lid being screwed down upon it.

The darker honey is more suitable for marketing in its granulated state. When extracted and strained it should be run into 14 pound or 28 pound tins, the contents of these being stirred

gently, now and again, while granulating. The stirring tends to produce a more even and finer grained honey. It may also be run into wide mouthed glass or earthenware jars, covered down with parchment paper, and stored in a dry place.

Dark and coarse flavored varieties may be sold for manufacturing and confectionery uses, or for the making of mead.

Medicine Hat, Alberta, Canada.

### AN INTERESTING MEETING.

#### Report of the First of the Series of Winter Meetings of the Worcester County, Mass., Beekeepers' Association.

BURTON N. GATES.

THE NOVEMBER MEETING was called to order Saturday afternoon, November 10, in Horticultural Hall. A good number of bee-keepers were present, considering the quality of the day for fall harvest.

The speaker of the day was Mr. Edward O. Orpet, Gardener for Eugene V. R. Thayer of South Lancaster, Mass. Mr. Orpet is one of Massachusetts' most capable horticulturists and as all gardeners should be, a bee-keeper. From this point of view, Mr. Orpet selected his subject, the "Benefits, Importance, and Relations of Bees to the Horticulturist."

In opening his subject, the speaker described some of the wonderful old gardens of Europe, with their massive walls in which are niches and shelves commonly supposed to be for statuary and ornaments. One of the chief and original purposes however, was the shelving of bees for the general betterment of the garden crops. This was the condition previous to the discovery of America. When people

came to this country, they brought their bees. So well established did they become that they menaced the Indians. They became an important factor in the fruit industry of the country. Then in the 19th century there came a decline in agriculture. It has had its direct results upon fruit culture today.

A few years ago Mr. Orpet revived the custom of the old country, getting some bees for the Thayer estate. Since he said he had never seen such results in his fruit. "I never had such crops, especially of small fruits, as raspberries, currants, and gooseberries; for the good of the shrubs the crops are too heavy. I have to thin. The results of the few colonies of bees are perfectly remarkable.

Every estate should have at least, five swarms of bees and not more than ten, is Mr. Orpet's estimate.

Bees may be an injury to some of the products of the estate, but this is of no account compared with the good they do. If the gardener is raising snapdragon, lilies, violets, mignonette, and the like, he must have a care that the bees do not fertilize the blooms and thereby cause them to drop. The value of snapdragon spikes have been reduced from \$1.50 to 50 cents a doz. in the course of a few days by the entrance of some bees into his greenhouse.

As an insecticide for the bee-moth Mr. Orpet reports good results with cyanide of potassium (K Cn.) as used by horticulturists in the greenhouse. The proportions for 1000 cubic feet of space, are 1 oz. K Cn., 4 oz. H<sub>2</sub> So. 4 and water. Use a large iron or other receptacle for the sulphuric acid and water. Into this toss the cyanide, previously wrapped in a piece of paper. The speaker fumigates whole rooms with this hydro-cyanic gas. Remember that it is deadly poison. One whiff is sufficient to in-

jure for life the lungs. The method is recommended for the honey-house or store room. (See foot note).

The next meeting of the society will be on Saturday, December 8th, 1906 at 2:30 sharp. In January or February next there will be an all day convention or institute, when we hope to have a gathering from all over New England.

Worcester, Mass.

Altogether too dangerous for common use. The average bee-keeper had better stick to fumigation with sulphur.  
—Editors.

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### FROM TEXAS.

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#### A Lady Apiarist Winning Deserved Success.

MRS. A. E. ST. LEGER.

**B**Y THIS TIME, I suspect, many colonies have gone into winter quarters in the north, while here the bees are working, carrying in big loads of pollen, filling the combs with honey and humming as if it was spring.

Two weeks ago, while standing under an elm tree, I thought there must be a swarm on an upper limb, but there were bees about all the elms, and I discovered that they were in bloom. The prairie is bright with flowers, and my bees have given me more honey than ever before—such beautiful amber-colored honey, all nicely capped.

Many times I feared my pets would have to be given up as my husband (who is in poor health and for whose benefit we moved to the country, he giving up his practice as physician) would get so nervous every time I went near the hives; but little by little, he overcame his fear, when he found I did not get stung; and this spring he was so interested in them himself, that he helped me a great

deal. I was delighted, for this year I have been able to work without him begging me to "come away."

The article "Bees on a Poultry Farm," in the August number was very interesting to us, as we have lately started to raise white Plymouth Rocks; but I found out this spring, that it would not do to raise chicks at that time, as here the bees swarm early. The first, this year issued March 24, and the last, April 25, I had thirteen colonies and increased to twenty-four.

I hope some time to visit a large apiary. Several of my neighbors keep a few bees. In fact, two of them gave me my start, but mine were the first frame-hives I ever saw. My textbook and *The American Bee-Keeper* my teachers.

I wonder if any of the bee-keepers have tried the rice bobinet for veils. It is so much stiffer than other kinds, and stays stiff. After making the veil with an elastic band for the hat, and one in the lower hem, I stitch about 6 inches of broad elastic on the latter, at the back. Opposite the under-arm, it has a loop at the end, of tape. After drawing the broad elastic forward the loop is slipped over a button stitched on the front lower hem. It is so easy to fix, and the veil is held in place.

Wooster, Texas, Oct. 18, 1906.

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#### Buying and Cost of Bees.

Notes of Victoria Apiculture, from articles of R. Buehne in *Journal of the Department of Agriculture of Victoria*. (1906)

BURTON N. GATES.

**B**EES BOUGHT by the pound, which there is satisfactory, cost 2-6 per pound. A better method is to buy bees in a well established colony in modern hive. They are worth 2 pounds and upward. Colonies may be built up from three-frame nuclei which may be had for

from 10-6, up. The prices of bees in Victoria are evidently good.

The author also considers bees to be fewer than at one time, and "were much more profitable when kept in box hives, than today." He gives two reasons, which may account for this seemingly startling statement. In those days "disease did not visit them, and the natural flora, from which bees gather nectar, was much more plentiful than today." The prevalence of disease is the bee-keeper's fault, resulting from his ignorance and consequent neglect. He left diseased combs about the yard for bees to rob, thus spreading disease. (Only too true in America.)

Mr. Beuhne is in favor of our American views, that bees are very susceptible to odors. They detect the faintest personal odors. He says "odors of some persons, animals, and things are more objectionable to bees than that of others. Among odors which are most objectionable to bees are kerosene, camphor, eucalyptus oil, toilet perfumes, ants, raw meats and so on. None of these should be handled by anyone working with bees. Washing your hands ever so much will not entirely remove the odor."

Worcester, Mass.

### The Rheumatism Cure.

ROBERT JONES BURDETTE.

ONE DAY, not a great while ago, Mr. Middlerib read in his favorite paper a paragraph stating that the sting of a bee was a sure cure for rheumatism, and citing several remarkable incidents in which people had been perfectly cured by the abrupt remedy. Mr. Middlerib thought of the rheumatic twinges which had grappled his knees once in a while and, which had made life a burden.

He read the article several times, and pondered over it. He understood

that the stinging must be done scientifically and thoroughly. The bee, as he understood the article, was to be gripped by the ears and set down upon the rheumatic joint and held there until it had stung itself stingless. He had some misgivings about the matter. He knew that it would hurt. He hardly thought it could hurt any worse than the rheumatism, and it had been so many years since he was stung by a bee that he almost forgot what it felt like. He had, however, a general feeling that it would hurt some. But desperate diseases need desperate remedies, and Mr. Middlerib was willing to undergo any amount of suffering if it would cure his rheumatism.

He contracted with Master Middlerib for a limited supply of bees; humming and buzzing about in the summer air Mr. Middlerib did not know how to get them. He felt, however, that he could safely depend upon the instincts and methods of boyhood. He knew that if there was any way in heaven whereby the shyest bee that ever lifted a two hundred pound man off the clover, could be induced to enter a wide-mouthed glass bottle, his son knew the way.

For the small sum of one dime, Master Middlerib agreed to procure several, to-wit: Six bees, sex or age not specified; but as Mr. Middlerib was left in the uncertainty as to the race, it was made obligatory upon the contractor to have three of them honey, and three of them humble, or, in the generally accepted vernacular, bumblebees. Mr. Middlerib did not tell his son what he wanted those bees for, and the boy went off on his mission so full of astonishment that his head almost whirled. Evening brings all home; the last rays of the setting sun set upon Master Middlerib with a short wide-mouthed bottle comfortably populated with hot, ill-natured



bees, and Mr. Middlerib, and a dime. The dime and the bottle changed hands. Mr. Middlerib put the bottle in his coat pocket and went into the house, eyeing everybody he met very suspiciously, as though he had made up his mind to sting to death the first person who said "bee" to him. He confided his guilty secret to none of his family. He hid the bees in his bedroom, and as he looked at them just

"I smell bees. How the odor brings up—"

But her father glared at her and said with superfluous harshness and execrable grammar:

"Hush up! You don't smell nothing."

Whereupon Mrs. Middlerib asked him if he had eaten anything that disagreed with him, and Miss Middlerib said:



THE ASSOCIATE EDITOR.

MR. ARTHUR C. MILLER, IN HIS RUMFORD APIARY.

before putting them away, he half wished that the experiment was safely over. He wished that the imprisoned bees did not look so hot and cross. With exquisite care, he submerged the bottle in a basin of water and let a few drops in on the heated inmates, to cool them off.

At the tea-table he had a great fright. Miss Middlerib, in the artless simplicity of her romantic nature, said:

"Why, pa!" and Master Middlerib smiled as he wondered.

Bedtime at last; the night was warm and sultry. Under various false pretenses, Mr. Middlerib strolled about the house until everyone else was in bed; then he sought his room. He turned the lamp down until its feeble ray shone dimly as a death-light.

Mr. Middlerib disrobed slowly—very slowly. When, at last, he was ready

to go lumbering into his peaceful couch, he heaved a profound sigh, so full of apprehension and grief that Mrs. Middlerib, who was awakened by it, said that if it gave him so much pain to come to bed perhaps he had better sit up all night. Mr. Middlerib choked another sigh, but said nothing and crept into bed. After lying still a few minutes he reached out and got his bottle of bees.

It was not an easy thing to do with his fingers, to pick one bee out of a bottleful and not get into trouble. The first bee Mr. Middlerib got was a little brown honey-bee, that wouldn't weigh half an ounce if you picked him up by his ears. But, if you lifted him by the hind leg, would weigh as much as the last end of a bay mule. Mr. Middlerib could not repress a groan.

"What's the matter with you?" sleepily asked his wife.

It was very hard for Mr. Middlerib to say that he only felt hot, but he did it. He didn't have to lie about it, either. He did feel very hot indeed—about eighty-six all over, and one hundred, ninety-seven on the end of his thumb. He reversed the bee and placed the warlike terminus of it firmly against the rheumatic knee.

It did not hurt so bad as he thought it would; it did not hurt at all.

Then Mr. Middlerib remembered that when the honey bee stabs a human foe it generally leaves its harpoon in the wound, and the invalid then realized that the only thing that this bee had to sting with was doing its work at the end of his thumb.

He reached his arm out of bed and dropped this disabled atom of rheumatism linament on the carpet. Then after a second of blank wonder, he began to feel around for the bottle, and wished he knew what he did with it.

In the mean time, strange things had been going on. When he caught

hold of the first bee, Mr. Middlerib, for reasons, drew it out with such haste that for a time he forgot all about the bottle and the remedial contents, and left it lying uncorked in the bed between himself and his innocent wife. In the darkness there had been a quiet but general emigration from the bottle. The bees, their wings clogged with the water Mr. Middlerib had poured upon them to cool and to tranquilize them, were crawling aimlessly about over the sheet. While Mr. Middlerib was feeling about for the bottle, his ears were suddenly thrilled and his heart frozen by a wild, piercing scream from his wife.

"Murder!" she screamed. "Murder! Oh! Help me, Help, Help!"

Mr. Middlerib sat bolt upright in bed. His hair stood on end. The night was warm; but it turned to ice in a minute.

"Where in thunder," he said, with pallid lips, as he felt over the bed in frenzied haste, "where in thunder are them infernal bees?"

And a large "Bumble" bee, with a sting as pitiless as the finger of scorn, just then climbed up the inside of Mr. Middlerib's nightshirt until it got squarely between his shoulders; then it felt for his marrow and he said calmly:

"Here is one of them."

Mrs. Middlerib felt ashamed of her feeble scream, when Mr. Middlerib threw up both his arms and with a howl that made the windows rattle, roared:

"Take him off! Oh, land of Scott, somebody take him off!"

And when a little honey-bee began tickling the sole of Mrs. Middlerib's foot, she so shrieked, that the house was bewitched, and immediately went into spasms.

The household was aroused by this time. Miss Middlerib and Master Mid-

derib and the servants were pouring into the room, adding to the general confusion by howling at intervals and asking irrelevant questions, while they gazed at the figure of a man a little on in years, arrayed in a long night-shirt, pawing fiercely at the unattainable spot in the middle of his back, while he danced an unnatural, wierd, wicked-looking dance by the dim, religious light of the night-lamp. And while he danced and howled, and while they gazed and shouted, a navy-blue wasp, which Master Middlerib had put into the bottle for good measure and variety, and to keep the menagerie stirred up, had dried its legs and wings with a corner of the sheet, and after a preliminary circle or two around the bed in order to get up his motion and settle down to working, he fired across the room; to his dying day, Mr. Middlerib will always believe that one of the servants mistook him for a burglar and shot him.

No one, not Mr. Middlerib himself, could doubt that he was, at least for the time, most thoroughly cured of rheumatism. His own boy could not have carried himself more lightly and with greater agility. But the cure was not permanent and Mr. Middlerib does not like to talk about it.—New York Weekly.

### Chicago-Northwestern Convention.

The Executive Committee of the Chicago-Northwestern Bee-Keepers' Association take great pleasure in making the following announcement:

Through the kindness of friends it is possible to hold the next convention of our Association in the fine hall known as "Brunt Hall," in the Bush Temple of Music, corner of Chicago Avenue and Clark Street, Chicago. This is the same hall where the National Association met last December.

Arrangements have been made with the restaurant in the basement to serve good meals at very reasonable rates. The Revere House will lodge bee-keepers at their usual rates. This hotel is at the corner of North Clark and Michigan Streets.

Dr. C. C. Miller writes: "I don't know how much I can do toward making or marring the convention, but, Providence permitting, I'll be there."

N. E. France says: "So far as I know now, I can come."

C. P. Dadant writes: "I promise to attend your convention if possible."

Let us have a full attendance of all the bee-people (ladies and gentlemen) within reach of Chicago. Come and see the great International Live Stock Exposition, and spend part of your time at the bee-keepers' convention.

The meetings will be as follows: Wednesday, Dec. 5, 10 a. m. to 12 m.; 2 p. m. to 5:30 p. m.; and 7 p. m. to 9:30 p. m. Thursday, Dec. 6, 9 a. m. to 12 m.; and 2 p. m. to 4 p. m.

Question-Box All The Time.

Everybody come and make this the biggest and best bee-keepers' convention ever held in Chicago. Reduced rates on all the railroads.

George W. York, Pres.

Mrs. N. L. Stow, Vice-Pres.

Herman F. Moore, Sec.

Executive Committee.

"The community has no bribe that will tempt a wise man."

"Do we call this the land of the free? What is it to be free from King George, and continue slaves to King Prejudice?"

"In the district of Chicago, U. S. A., there was such a mild winter just passed, that a very good crop of clover honey was anticipated."—Australian Bee Bulletin, for September.

**MR. BENTON IN INDIA.****Horrible Experiences of Our  
Government Apiarist in  
the Far East.**

F. GREINER.

**I**T HAS BEEN insinuated by certain people that Mr. Benton has a soft snap. Such as are inclined to entertain any such view will do well to read the following which I take from a letter written by him to a friend of mine, under date, May 20, 1906, at Simla, Himalaya Mt's. India:

"Down in the plains of the Punjab, I was terribly bitten by mosquitoes, and being quite exhausted from over-exertion while getting the giant bees in the jungles, I found the fever taking hold of me. By increasing the doses of quinine, which I had been taking, the fever seems to have been checked, but I imagine the malaria is working out in the form of boils. I have half a dozen or so continually, and now one big carbuncle on my neck.

"An English captain tells me that if he stays down in the plains during the hot and dry season, he always has fever, or is covered with boils.

"Sir Tho. H. Holdich, late deputy superintendent of East India survey, says, in a recent authoritative work of India, when treating of its climate and the danger of disease: 'Neither plains nor hills, jungles or deserts, are altogether free from that slow, but most pernicious influence which is called malaria.'

"The geographical distribution of the worst forms of that pernicious poison, (or of the particular species of mosquito which distributes it) is worth attention. There are many forms of the malady known as Indian fever; and inasmuch as it claims more victims in a year than all other diseases put together, it is probably the greatest

barrier that exists to the development of European life in the country. It becomes a subject of paramount interest to all students of Indian physiography.

"Not all the well-known precautions with which all the travelers in the wilds of India are acquainted will avail against the thorough saturation of his system with malarial poison if he remains long in these jungles.

"Then, too, one gets so worn out, if he tries to work at all—he would, even without working. In the plains of the Punjab, where I have been, the temperature ranges from 90 degrees F. to 120 degrees F., in the shade, often not below 108 degrees for days, and 130 degrees to 170 degrees in the sun. The wind blows hot and dry as though it came from a fiery furnace, carrying with it great blinding and dense clouds of dust. For hours, day after day, this takes place. Rarely during April, May and June a shower comes, and the heat turns one into steam as soon as it has fallen. The sun burns his fiery path through a cloudless sky from morning until night for days, weeks, and even months. Everything shrivels and withers; the birds pant for breath and seek shelter, even coming into houses when not shut out; cattle and stock collect under the banyan and pipal trees which resist the dry weather best. Water for irrigation is not abundant in the northwest, and where it is withheld every blade of grass withers and soon becomes brown. Bare earth and rock are the prominent features of the landscape. Insects abound. Snakes creep in the waste places, and wild animals roam more freely than when men dare venture out against them. Twenty thousand people die annually in India from snake bites; tigers kill over two thousand. These are the pleasures of India! and is what I fled from into the mountains, but now that my work up here is large-

ly finished up. I must soon return to the fiery furnace.

"If all goes well, I shall likely be starting from Calcutta to Singapore and the Philippines by the time this letter reaches you. When I was in the middle of this letter, we had quite a perceptible earthquake. One year ago a violent earthquake in a valley 100 miles west of here, destroyed villages, etc., and 20,000 people were also killed."

### PENNSYLVANIA STATE CONVENTION.

To Be Held in Harrisburg Next Month.

Editor American Bee-Keeper:

Will you please announce that the Pennsylvania State Bee-Keepers' Association will hold its third annual meet-

ing in Harrisburg, Jan. 17, 18, and 19, 1907. The first session will be on Wednesday evening, the 17th, and the last session on Friday evening, the 19th. This will be in connection with several other agricultural meetings to be held at that time, and there will be an exhibit of bee products and apiary supplies. An excellent program is being prepared, the details of which will be announced later. The railroads will give rates which can be obtained by writing to the secretary, L. R. White, Harrisburg, Pa., or to the president, Prof. H. A. Surface, Harrisburg, Pa.

Thanking you for this, and hoping to have the opportunity to reciprocate favors, I am, Yours very truly,

H. A. Surface.

Economic Zoologist and President of Pennsylvania Bee-Keepers' Association.



## The Bee-Keeping World

Staff Contributors:  
F. GREINER, ADRIAN GETAZ



Contributions to this Department are solicited from all quarters of the earth.

### Repeated Mating of Queens.

Mr. Ignotus has a long article in the *Revue Eclectique*, concerning the repeated mating of queens. A number of observations from different sources are quoted showing that often queens mate two or three times. The causes of such repeated mating are discussed. Among the quotations there is one from Prof. Vogel, who has examined a large number of drones with a microscope and found quite a number impotent. Should a queen mate with such a drone, there is a strong

presumption that her desires not being satisfied, she would mate again. Another observer, Mr. Pierrard, thinks that sometimes the male organ may be extracted from the queen too soon by the bees. Mr. Pierrard thinks that in order to allow the hundreds of thousands of spermatozoa contained in the male organ to pass into the pouch of the queen, a certain length of time is necessary. His opinion is founded on the observation of a queen coming home, and finding a perforated zinc that he had placed at the entrance. The excitement caused by her move-

ments induced the workers to extract the organ at once. The next day, the queen mated again. He has seen several queens mate three times. His method consists in placing a perforated zinc at the entrance of the hive after the time of day that the queens go out, (about two o'clock) and then observe them when trying to get in after they come back.

Mr. Kalinski, of Swientani, (Poland) is of the opinion that a double fecundation is rather the rule than the exception. Two cases are quoted of Italian queens producing both pure Italian and pure black workers as far as their color show. He thinks that such cases show a double fecundation and that an ordinary mis-mating would show all the bees of an intermediate color or at least approximately so.

The opinions quoted are unanimous in saying that the queens are mated only at the beginning of their life and never later.—*Le Revue Eclectique*.

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### SWITZERLAND.

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#### Thinks Blacks the Best.

Dr. Brunnich, of Zurich, criticizes, in a long article (in *Bienen Vater*) the Doolittle method of rearing queens. The doctor concludes that this American method is illy fitted for rearing good queens with the native bees of Switzerland. He holds, that no other bee can "hold a candle" to the native black bee, claiming that many hundreds of years are necessary for a bee to adapt itself to resisting conditions in any country, and when they have once adapted themselves, as the bee in Switzerland has, cannot easily be outstripped by new-comers. The native black bee fits well into the peculiar conditions of Switzerland and what

has been gained by many years of breeding, he says, came very nearly being lost again by the imprudent importations of other races or varieties. He counts up four different or distinct properties as belonging to the "Switzer-bee," viz: 1. "Beginning to rear brood extensively quite late in the season (not till April). 2. Greatest longevity of bees with giant colonies, and yet but medium amount of brood. 3. Early discontinuation of brood-rearing. 4. Proper or most favorable amount of brood during the season.

According to the doctor's experience the most profitable colonies are not those, which have the most prolific queens, but those whose queens can keep the hives fullest of bees with the smallest amount of brood in the combs. Such colonies will excel. Queens which can do such work have to be reared under normal and most favorable conditions. It should not be expected that even the best colonies should bring 15 or 20 such queens to perfection at one time, and to demand of a colony to rear several lots is folly. When a colony rears six or eight good queens that should be the limit—more should not be expected.

At the close of his article Dr. B. enumerates a fifth good quality of the Switzer bees. He says, they swarm very little and can be depended upon to supersede queens at the right time, usually in the fall. He also gives the different methods he employs in queen-rearing. As he prefers naturally built cells he contracts the brood-nest of his breeding stock and feeds, thus inducing the swarming fever in those indisposed to swarm. The gleaner of this considers this method the best, and omits what the doctor further says on the subject. He also thinks, if more queens were reared in this fashion, we might hold the good qualities our bees already possess.

## GERMANY.

### Prices of Stock.

Hives, bees, queens, etc., may be bought in Germany at the following prices:

Double-walled, packed hives for one colony, \$2.26; for two colonies, \$3.93. These hives are ready for use.

All brood and extracting frames are made of material one-fourth by one inch, and such material is largely sold by the foot or meter, a meter being equal to 39.368 inches; one hundred meter of frame material being sold at 42 cents. The bee-keepers to cut it themselves.

Full colonies in light shipping boxes are offered in Neue Bztg. at about \$3.50. Driven swarms, (just the bees) weighing four pounds are offered at \$1.00 in September. Queens, at 60 cents up to 93 cents. Honey extractors may be bought from \$2.30 to \$5.00; a jar similar to the No. 25 jar, at \$2.49 per 100.

### Good Advice.

Good advice as given by Roth, in *Imkerschule*: When moving bees, select the night-time, have hammer and nails at hand, keep smoker in readiness, never leave the team hitched to the wagon when loading or unloading bees; attend to this work yourself.

### Yields in Germany and America.

The average returns from apiaries varies as much in different parts of Germany as it does in the United States. Some bee-keepers make complaints and speak of a poor honey season when their yields are from 15 to 20 pounds per colony, others think they had a good season with a yield of 10 pounds.

In America, Doolittle obtained in the poor honey season of 1905, over 100

pounds per colony. The gleaner has attained such an "enormous" yield only twice inside of 30 years.

Drones are said to fly further from the hive than workers, by a writer in *Rhein. Bztg.* He observed when moving a colony two miles, many drones returning to their old stand, but no workers.

Leipz. *Bztg.* says that the aroma and the color of extracted honey is improved by exposing it to a long continued sun bath. It was also observed that the candying process of such honey was deferred by the sun bath, especially when such honey was not sealed.

## EGYPT.

Apiaries are not numerous in Egypt. Schroeder reports in *Ill. Monastsbl.* of an apiary which he, after long search, found in the little village, Esbesas, that the twenty-five colonies, which it contained, stood on two high benches. The hives were of cylindrical form, mostly of clay—some made of sticks. They were coated with droppings from the cattle, mixed with sand in such a way that each lot of hives formed one body. The owner of the bees, Halem Harnodi, obtains the honey by opening the hives first at one end, then at the other, smoking back the bees and cutting out the comb.

### The Honey Crop of Europe.

According to a statistical report issued in Germany, the honey-production in the different European countries is as follows: Germany produces annually, forty million pounds, and has nearly twenty-one million colonies of bees. Spain produces 38,000,000 pounds from 1,600,000 colonies. Austria-Hungaria produces 36,000,000

pounds of honey, and has about 1,550,000 colonies. France produces 20,000,000 pounds. Holland, 5,000,000; Belgium, 4,000,000; Greece, with only 30,000 colonies of bees, produces 2,800,000 pounds, as against Russia's 1,800,000 pounds, with 110,000 colonies.

Denmark produces 1,800,000 pounds of honey. It is estimated that the value of all this honey is equal to a little over ten million dollars.

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### **Apis Dorsata.**

After reviewing all that is known in regard to *Apis dorsata*, Herma-Meyer concludes that the big India bee will be of no practical value to the bee-keepers of Germany. Even as a means of crossing upon other honey bees, he entertains no hopes whatever, saying they do not cross with species of honeybees found in Northern India, which are closely related to the European bees. "As far as we know," he also says, "the tongue of *Apis dorsata* is not materially longer than that of the bees we now have, and we will have to find other ways to unlock the sweet treasures hidden in the red clover blossoms. (It would seem that the United States ought to be in a position to tell by this time what the facts are in regard to length of the tongue of *Apis dorsata*, as well as many other facts connected with this bee).

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### **Our Advantage.**

American bee-keepers are surely at an advantage as compared with those of the fatherland. It is ruable in Germany to feed all new swarms in order that they may fill their hives with comb and store an ample supply for winter. The American bee-keeper not only expects the new swarms to fill their hives, but to give a nice surplus besides.

### **Worked on Red Clover.**

J. Markardt reports in Schleswig H. Bztg. that his bees worked beautifully on red clover this past season. He says that on account of a change in the atmospheric conditions, red clover began to yield honey after July 28, to such an extent that his bees could work successfully on the blossoms. His Carniolan bees stored twice the amount that the blacks did from this source.

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### **In Line With Heddon's Pollen Theory.**

Editor Freudenstein addressed the bee-keepers at Marburg, on the subject of wintering bees. He gave a sort of history of his wintering method which, in brief, is nothing else but the use of sugar for winter food. From what Mr. F. says, it appears that he has had marvelous success in wintering on sugar. Dysentery is a thing which gives him no trouble. His bees always come out strong in the spring. He removes all the honey if possible, and feeds sugar instead. In one case, having a colony afflicted badly with dysentery, in mid-winter, he brushed the bees off the soiled combs, substituting clean, empty ones; then he fed sugar syrup. The colony became quiet at once, dysentery disappeared, and the bees became healthy and proved a good profitable swarm the following season. Freudenstein says he will pay any one \$250.00 who loses a colony with dysentery if he has prepared it according to his instructions.

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### **BRAZIL.**

#### **Tropical Troubles.**

Schenk, former editor of *Braz. Bienenphlege*, gave an interesting account of "Apiculture in Brazil," before the bee-keepers' convention at



Leoben, Austria. He says that the bee-keepers expect a good honey flow for ten months of each year. Principal honey plants are, first, a kind of locust; second, the Asondo Caballo, a forest tree, very abundant, and clothed with a continuous flowering robe for several months. But even with this advantage, bee-keeping does not always pay. The season of 1905-1906 was a failure. Grasshoppers destroyed nearly all vegetation and drouth finished it. About 90 per cent of the bees were lost before the drouth was broken. After this, the honey season was excellent for six months. Many inhabitants use soap and kerosene boxes for hives; they make one side movable, which enables the farmers to cut the contents from them.

#### GERMAN-EAST-AFRICA.

##### Novel Hive Stands.

According to a reporter in Phalz Bztg. this country is most favorable for bees and honey production. The honey flow is a constant one. The natives (negroes) use hollow logs for hives and hang them to the branches of trees. The sight of a fig tree with 50 hives hanging from its limbs is no uncommon sight. Next to harvesting the honey this putting up the hives includes all the work that is done by the honey producers, for the stocking up of these hives is automatic. The contents of the hives is cut out four times during the year.

The German farmers somewhat imitate the ways of the natives. They put out decoy-hives and kerosene boxes, and when these are filled, they add another box—upper story—filled with frames. Some use honey extractors to obtain the honey.

The honey is reddish in color, seems sweeter than the honey gathered in

Germany. Then honey is largely used in place of sugar by the colonists.

The most common bee—*Apis mellifica* Adansonii—has its own markings, the thorax having a reddish color. The bee is smaller than the German bee and not very vicious.

##### The Summer's Death Song.

(James E. Richardson in Everybody's Magazine.)

By Old Shamong the sands lie sere and lone  
 'Twi'x cedars and the gray, sand-shal-  
 lowed sea;  
 The long day there the lone winds wax  
 and flee,  
 Sped on through skies that will but  
 mask and moan  
 The more when they return. . . . Afar  
 and prone  
 Where all the glittering beaches hold  
 their glee,  
 They keen one long-drawn tuneless  
 threnody,—  
 All sounds of grief in one sheer mono-  
 tone.  
 For now upon the sun-forgotten land—  
 Rank, seething marsh and crumbling,  
 mournful dune—  
 Dark Winter lays her dread-compelling  
 hand;  
 The wild geese huddle homeward; the  
 lone loon,  
 The fierce, black brant ride speeding  
 o'er the sand,  
 The pale forest thickens to the bitter  
 moon.

##### How Doth!

(From the Yonkers Statesman.)

Teacher—What is it that bees make,  
 Tommie?

Tommie—Sore spots, ma'am.

"If the laborer gets no more than the wages his employer pays him, he is cheated, he cheats himself."

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We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered. The date printed upon the wrapper label of your paper indicates the time to which you have paid. Our subscribers will confer a favor by observing the date, as noted, and promptly renewing or requesting the paper discontinued at expiration of time paid for, as may be desired.

Some of our Northern dealers still continue to report the market by quoting low grades as "Southern." The

American Bee-Keeper declines to make use of the word "Southern" in this connection. It is an obvious injustice to every progressive Southern producer; and we are gratified to note that our contemporary journalists are likewise doing some wholesome editing along the same line. (H)

Mr. W. W. McNeal, the affable apiarist and clever scribe of Wheelersburg, Ohio, writes that he had a good time with the bees last summer, secured a fair crop, of exceptionally good quality, and that the bees are abundantly supplied for winter. The fall flow, Mr. McNeal says, was good. Bee-Keeper subscribers will be pleased to learn that Mr. McNeal will be among our occasional contributors for 1907. (H)

Hildreth & Segelken, New York, advise that there is not much demand for extracted buckwheat. Judging from the large offerings, they think there has been a heavy crop of this class of honey, the nominal price of which, on the 9th ultimo, was six to six and a half cents. Kansas City reports a good demand for both comb and extracted. Honey moving along slowly, and quality very satisfactory, is the report from Boston. (H)

**Position of Combs in Extracting.**

Mr. F. G. Herman, in the Michigan Farmer, says:

"When the uncapped combs are put into the cages of the extractor they should be so placed that the bottom-bars go around first, for thus the honey is more easily thrown out, as it leaves the cells in the direction of the pitch given to them by the bees when they are building the combs."

This is another very plausible theory—"as old as the hills"—which practice fails to substantiate. It was generally

advocated twenty-five years ago; but careful tests and close observation demonstrated the fact that if a moderate speed were maintained for a reasonable length of time, there was no perceptible difference in results obtained, regardless of the "pitch" or the position of the comb in the machine. However, some of the most extensive and practical apiarists, who are "nice" about their work, have expressed a decided preference for the method of slinging the top-bar ahead, in order to avoid having it daubed with honey, and consequently disagreeable to handle, as well as obviating the daubing of quilts where such frame covering is in use. (H)

#### The Season in Western Pennsylvania.

November 12. Mr. W. J. Davis, Youngville, Pa., reported "some snow," and bees all snugly in winter quarters.

Mr. Davis does not care for more than about 100 colonies, and has reduced his apiary to this number. His crop of honey for 1906 was only about 1,000 pounds, in the comb, mostly of a dark grade.

By the way, Mr. D. reports an unusually heavy trade in queens during the past season, and states that the only advertising he has done, was to keep a card in the Queen-Breeders' Directory of the American Bee-Keeper.

Mr. Davis is in the red raspberry country, and this source of honey supply, as well as of luscious fruit, proved very helpful to the bees last season.

#### Feeding Experiences.

The excellent article by Mr. Getaz, in our November issue calls to mind some personal experiences in late feeding in winter—relation of which may prove interesting to others.

A piece of board six or seven inches wide, and long enough to go across the inside of a hive body, had two holes bored through it, each hole being large enough to admit the top of a fruit jar, and being so close together that jars stood in them would touch each other. Across the under surface of these holes wire screen was tacked and around the outer edge of the same surface a narrow rim of half inch thick strips of wood was nailed.

The colony to be fed had the cover removed (and the mat also where one was used) and an empty hive body placed on top of the hive. The prepared board was then slipped in and placed so the two holes were over the cluster. Then folded mats or newspapers were packed down each side of the board to prevent any drafts. Honey diluted one-third with water or a boiled sugar syrup was used for food, and the jars filled with it had a single thickness of cheesecloth tied over their tops, and they were inverted in the holes. The cheesecloth rested against the wire cloth and gave the bees access to the food. The food was heated to 100 degrees F. On each side of the jars were placed several very hot bricks wrapped in old carpet or paper, and over all was put sufficient covering of paper or carpet to prevent much upward radiation. The entrance was closed to barely half an inch in width. Under such conditions the bees usually took down all the food in a few hours, unless the colony was very small. If the food is too thick the bees are not only slow to take it but fly out more, presumably for water, because when one jar had water and the other thick food they took quite a lot of the water.—(M.)

"When our life ceases to be inward and private, conversation degenerates into mere gossip."

### Uses for Honey.

The true, dyed-in-the-wool bee crank looks upon and advocates honey as the most perfect food, and the sovereign remedy for all the ills that flesh is heir to. To such extremes do some of them go that they bring ridicule upon themselves, but nevertheless some of the seemingly odd uses they put it to are really much better than they sound, and for ailments honey is quite as efficacious as many of the more expensive remedies of the druggist.

Honey poured upon cooked bacon, sausage and some other meats is really very palatable, and much relished by many persons, strange as the combination may sound.

Honey and the juice of a lemon in equal parts well stirred together, taken a teaspoonful at a time will allay many a troublesome cough. For more obstinate ones, the addition of a teaspoonful of glycerine stirred into the honey and lemon juice will be found helpful.

To break a heavy cold, take once in three or four hours, a pint of hot water into which has been stirred two big spoonfuls of honey, the same of cream and as much cayenne pepper as one can readily take up on a dime. Abstain from any other food for twenty-four hours.—(M.)

### A Honey Story.

Here is a very clever story that has been going the rounds. The American Bee Journal likes it so well that it keeps it on the galley and runs it every little while:

A New Hampshire newspaper man, who is very fond of honey, visited a near-by city, and at one of the hotels was served with some delicious honey. He enjoyed it so much that he told his wife all about it when he returned home.

On his next trip to the city she ac-

companied him. They visited the same hotel, and when the noon meal was served, he said to his wife that he hoped they had some more of the honey.

It did not appear, however, and beckoning to the waiter, he said: "Say, Sam, where's my honey?"

He was almost paralyzed when that worthy grinned and replied: "She doan work here no more, boss; she done got a job at the silk mill."

The wife received a handsome new dress before they returned home, after making a solemn promise not to tell the story.

### To Our Correspondents.

Some of our esteemed correspondents may wonder why their communications have not appeared in The Bee-Keeper. This may explain it:

We have received a number of interesting letters which could have been used, either in part or entirely; but they were closely written with a lead pencil on both sides of the sheet, leaving no room for editing. While all letters are welcome and are read with interest, it is often difficult to find time to transcribe letters, which we may desire to use. Simply because the writer has disregarded the simple requirement of using a pen, leaving ample space at margins and between lines and using but one side of the sheet, interesting matter is often "sidetracked," with hopes of an opportunity to fix it up for the printer.

We cordially invite every reader of The Bee-Keeper to write fully and freely upon all matters of interest; and especially request that letters for publication shall be written as suggested.

(H.)

"If you would get money as a writer or lecturer, you must be popular, which is to go down perpendicularly."

**Studying the Bee.**

Is the bee a mere reflex machine, or is it a creature endowed with reason? The bee masters of old thought them the latter, and many modern writers follow in the same belief. If they are right, then their only hope for progress is to establish schools for bees where instruction in all branches may be given, hence we may soon see classes in "larval nursing," "nectar selection," "pollen picking," "portaging and packing," (ramming) and "etiquette towards royalty."

The more progressive of modern bee masters consider the bees sensitive machines on which they may play at will as soon as they learn the keys. The "keys" are the laws governing bee life, and are slowly becoming known, and already the advanced apiarists, those who have broken away from the old school, have become adept in handling even the few keys they have become familiar with.—(M.)

**Pictures for the Bee-Keeper.**

The American Bee-Keeper wants good photographs of interesting subjects, for publication. If you have a camera, write to the editor, Fort Pierce, Fla., and learn how you may have your pictures finished without any expense to yourself. We have a complete and extensive photographic department, under skilled management, and shall gladly develop all films or plates that have been exposed on apian subjects, and finish one print from each, for our subscribers, without charge.

During 1907 The Bee-Keeper proposes to use lots of photographic engravings in its pages, and to have them well printed on good paper. Let us all work together for a fine array of nice pictures. Our photo department is at the service of our readers the world over. Write us about it.

**The Bee-Keeper Leads.**

The American Bee-Keeper voices the most progressive spirit of the bee world of today. The helpful, useful and interesting discoveries, practices, and appliances will be found first described in our columns. Many things which we gave our readers a year or more ago are only just appearing in other papers and other valuable items they are still ignoring. The moral is, if you do not want to be behind the times, you must needs read the American Bee-Keeper. We believe that we are justified in saying that during the ensuing year, we shall present to our readers the description of more discoveries in bee life and of more help in practical bee culture, than any other two papers in the country, for we have got the goods, and furthermore, we have some of the most painstaking, investigators and experimenters devoting their energies in these lines to our benefit.—(M.)

**The Massachusetts Society Meets.**

The first of the winter series of meetings of the Massachusetts Society of Bee-Keepers was held in Boston, Nov. 17. While the attendance was not as large as usual, the customary interest and enthusiasm was quite as much in evidence as ever. One of the features of the meeting was an address by Capt. Knight, a veteran bee-keeper, on how he got a bumper crop while his neighbors did not do half so well. The key-note of his practice was forced swarming made at the moment when it would be of the most value, which is to say, about one to two days before the bees would swarm naturally.

Heretofore all meetings have been held in the afternoon, but during the coming winter, the experiment will be made of holding some of the meetings in the evening, for the benefit of such members as are unable to leave busi-

ness or work in the daytime. Mrs. Richardson, the energetic secretary, and Mr. Farmer, the genial president, kept things moving right along.—(M.)

### Newspaper Extracts.

A small army of Russian bees, twelve thousand strong, buzzed into lower Courtland St., New York, the other day, from a dozen hives in which they were supposed to be imprisoned. Like all invaders they swooped down unmercifully on the unsuspecting and left unpleasant memories behind them. Business men were stung from Broadway to the North river. When the invaders were finally routed, shopkeepers and policemen compared and agreed that the sting of a Russian bee is worse than teeth pulling by the painless method.

The bees were on a cart in transit from Jamaica, Long Island, to New Jersey apiaries. When they had given a few examples of their sting they were easily induced to flock about a

Pittsburg, Oct. 7.—The Humane Society is after G. K. Stevenson, a fashionable grocer, for cruelty to animals. Stevenson had a large display in his window. In the center there was a glass beehive with live bees working, so that their operations were visible. A man who claimed to be an authority on bees passed the store today and was horrified at the sight. He declared that the bees could not work that way without exercise and that they would slowly die an awful death if they did not have a chance to move about.

The Humane Society looked up the matter and found he was correct. They notified Stevenson that he would have to send the bees to the country for exercise, and he agreed to comply with their demand, after a wordy altercation, in which he was threatened with arrest.

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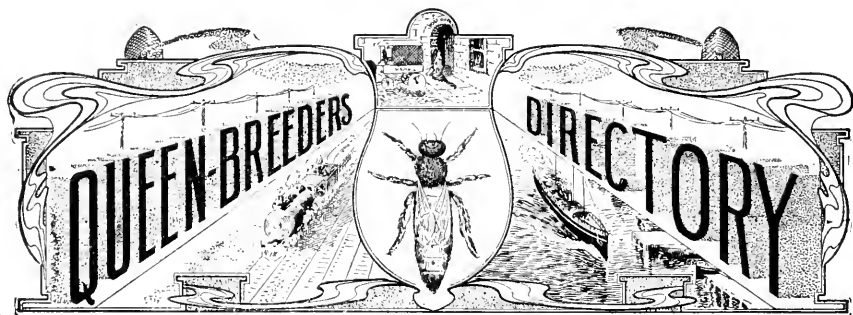
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**HONEY AND BEESWAX MARKETS.**  
(Dealers' Selling Prices.)

Albany, N. Y., October 29.—Clover (fancy) 15 to 16; No. 2, 14 to 15. Mixed, 12 to 13; Buckwheat, 12; Extracted, white 7 1-2, mixed 7 to 7 1-2, buckwheat and dark 6 1-2. Advise shipping honey by freight only. H. R. Wright.

Chicago, Nov. 7.—The market is taking honey, both comb and extracted, in a very satisfactory way. The price of No. 1 to fancy comb is 15 to 16; off grades, 1 to 2 cents per pound less. White extracted, 7 1-2 to 8 cents; amber, 7 cents; dark 6 to 6 1-2. All of this is governed by quality, condition and package. Beeswax, 30 cents per pound. R. A. Burnett & Co.

Kansas City, Mo., Nov. 7.—The supply of honey is light, with good demand. We quote our market today as follows: Comb, \$3.00 to \$3.25 per case of 24 sections; Extracted, 6 cents to 7 cents. Beeswax, 25 cents. C. C. Clemons & Co.

Worcester, Mass., Nov. 7.—The supply of honey is moderate, with very good demand. Comb honey sells at 15 cents to 16 cents. W. H. Blodget & Co.

Cincinnati, Nov. 3.—The honey market is rathner quiet at this date, owing to the market being flooded with comb honey; selling slowly at from 14 cents to 16 cents. Extracted amber honey selling at 1 1-2 cents to 6 1-2 cents. White and fancy white grade find sale at from 7 1-2 cents to 8 1-2 cents. There is not so much moving as one might be led to believe. Beeswax is dragging; however, we continue to pay 29 cents and 30 cents for a bright, choice yellow article. The Fred W. Muth Co., 51 Walnut St.

New York, Nov. 11.—Comb honey: There is a good demand, principally for fancy stock of both white and buckwheat honey. Mixed and off grades are more or less neglected. Receipts have been quite heavy of late, but there is no over-stock whatsoever, as the demand has been good right along. We quote fancy white at 15 cents; No. 1 at 13 to 14 cents; No. 2 at 12 cents; buckwheat and mixed at 10 to 11 cents per pound. Extracted honey: Demand good, especially for fancy grades. Prices are ruling higher. We quote California white sage at 7 1-3 cents to 8 cents, light amber at 7 to 7 1-2 cents, amber at 6 1-2 to 7 cents per pound; lower grades, in bbls. at 55 to 65 cents per gallon, according to quality. Beeswax quoted at 29 to 30 cents per pound. Hildreth & Segelken.

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