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Vol. V.

No. 7.

NATIONAL

# BEE JOURNAL



A MONTHLY MAGAZINE

DEVOTED EXCLUSIVELY TO BEE CULTURE.

EDITOR & PROPRIETOR  
MRS. ELLEN S. TUPPER,  
DES MOINES, IOWA.

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## JULY, 1874.

DES MOINES, IOWA:  
HOMESTEAD AND WESTERN FARM JOURNAL PRINT,  
313 AND 315 COURT AVENUE.



# NATIONAL BEE JOURNAL.

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## PURE ITALIAN QUEENS!

I have on hand, for the spring market, a limited number of Queens bred from select—price Five Dollars—and shall be able to furnish pure Queens throughout the season at reasonable prices. Nov-



# NATIONAL BEE JOURNAL

DEVOTED EXCLUSIVELY TO BEE CULTURE.

V.  
VOL. VI.

JULY, 1874.

No. VII.



Correspondents are especially requested to write on one side of the sheet only. Many of our readers doubtless have valuable practical ideas on bee culture, who feel incompetent to write for the public press. Send them to us in your own way, and we will "fix them up" for publication.

## OUR ITALY LETTER.

The day before yesterday, accompanied with M. Sartori, I took the Milan to Piacenza railroad. We started at 4:30 in the evening, and arrived at Codogno at 6:13. We thought that we would find there a bee-keeper who had bought some bees for us, and who was to bring us to his residence five or six miles farther in the country, but we were unable to find him as he had not yet arrived. While waiting for him we visited two churches to see the pictures which abound in the temples of Italy. There was nothing worth seeing. Then we called at the hotels in search of our man, but he was nowhere to be found. So, after eating some pears and grapes which Sartori bought for the small sum of four cents, we hired a carrier, who for six francs (\$1.20,) contracted to bring us to Castel-nuovo bocca d'Adda. I would have preferred to walk, but Sartori observed that we would arrive faster, besides he had a big basket to put the boxes of queens in, and a barrel to fill with honey, for he had bought the honey of the colonies

which would be destroyed after having been deprived of their queens.

Well, the buggy was large enough, but we had to put in the barrel, the willow baskets, and our persons. The conductor had his seat at the head of the buggy. Although being both of a corpulence a little beneath the average, yet there was little room left. Fortunately the road was very smooth, for at every jolt the barrel, put between us, rolled upon the one or the other. Had it not been to serve as a wedge, to prevent the barrel from rolling outside, I would have taken the conveyance of my limbs. It would have been better for my clothes, for the outside of the barrel was not of the greatest cleanliness, and in spite of my care to spread a paper between it and my individual, my linen suit, just fresh from the washerwoman, was no longer presentable, and I had no clothes to change, for we intended to return the same day.

Our carrier had boasted of the swiftness of his horse; indeed, for the first mile the animal was full with ardour, but afterward his pace slackened, and it was soon evident that we would be five hours to make five miles. The poor animal had not eaten for many hours when we started. I urged to stop at the next village to give him some oats, but our conductor refused. He had the best of all the arguments: his whip.

This slow way of traveling permitted me to admire the beauty of the sites of that charming country. We



had left the plains of Lombardy, where we could see wheat and corn fields limited by the innumerable mulberry trees, which are every year deprived of their leaves to feed the silk worms. We were ascending a hill from where we could see, not very far off, the city of Piacenza, (in English pleasing,) and the junction of the Adda with the Po. In the fields were some bands of ten or fifteen young women with big and flat silver pins arranged in rays beneath their heads. They wore short dresses, and were busy turning the bundles of linen, or making hay, or loading it upon wagons drawn by horses having bridles without bits. In the villages we saw some old women shelling corn with their hands, or picking or spinning hemp. While we were thus occupied and talking about the culture and the customs of the country, the horse stopped altogether, and refused to move forward. We jumped out of the vehicle, leaving master and barrel in full possession of our places, and after giving the conductor the name of our bee-keeper friend, we left him to help his horse with the shoulder and the whip, and we hastened to walk the remaining mile. When we arrived it was noon, and our host had not yet received the letter announcing our arrival. The postman brought it while we were at table discussing on the incidents of our journey.

As soon as out of the dining room we commenced to hunt for the queens. Our friend had bought thirty-two stands of bees in gums, which we were to deprive of their contents. They were nearly all after-swarms. After we had taken the queens the bees were given to his moveable comb hives, and the brood comb fastened in frames and introduced in his hives, and the honey put in the barrel. As all was ready, and his apiary, his tools, his room and all the surroundings were well appropriated to our work, we had done before night.

It was there that I experienced the

most severe pain that I have felt from the sting of a bee. I was standing in front of the apiary while our host introduced in one of his hives some frames filled with fastened combs, when a bee came as quick as lightning and stung me on the edge of the eyelid. For two hours I was unable to open my eye, yet my eyelid did not swell, and after two hours bathing with my handkerchief wetted with cold water, the pain subsided rapidly.

To honor as eminent a bee-master as Sartori, and a representative of the American bee-keepers, our host had invited some friends to partake of his supper. Among them I had the pleasure of finding a clergyman lately professor of history and theology in the seminary of Milan, who talked emphatically of the United States. He is an energetic man, who, although with moderate means, had refused to acknowledge papal infallibility, and who had left his position in consequence. He owned one colony of bees and two swarms. He gave us the queen of the second swarm, which we took on the next day. We took seven queens more at the apiary of a very intelligent young man who is a great amateur of bees, living with his father, who owns an estate numbering twenty-two families of *contadini* to cultivate his vineyards, fields mulberry trees, and to raise his silk worms. We visited his cellar, in which were, in two rows, more than twenty hogsheads of wine. That young man is very fond of bees, and writes often for the Italian bee journal *l'Apicoltore*.

After enjoying a good dinner in company with a parson of a village near Codogno who had come to Castelnovo to see us, we bade farewell to our hosts, and, comfortably seated in the buggy of the parson, we had soon travelled the distance between Castelnovo and the village of his parsonage. We found in his garden three elegant Chinese pavillions adorned



with climbing shrubs, and containing about sixty hives in good order. Although the garden seems small, yet amongst a quantity of flowers are grapes on trellises, and pear, lemon and fig trees. The parson was proud of his bees, as well as of his good wine, which we were obliged to taste before leaving.

In crossing the village he showed us the palace of the Marquis of Tallavicini, a nobleman well known for having been incarcerated in the Austrian dungeon of Spielsberg. The unfortunate man having been associated with the Italian patriots, the *carbonari*, who had dreamed of uniting Lombardy to Italy, was condemned with count Confalonieri Andryanc, and several others, to twenty years of *carcere duro*. He was imprisoned in a dark room, with heavy chains to his feet, ill fed, ill clothed, and without any news of the outside world. When put at liberty he had lost his health by rheumatism, and he returned to his palace to find his estates sold by the order of the Austrian emperor Francis, who took care himself to procure to his state prisoners all the suffering that he could imagine. One of the unfortunate men having one day begged of the director of the prison to present a request to the emperor in order to have some work to give exercise to his limbs, tired of an absolute repose for many years, the emperor commanded that every political prisoner be constrained to unweave a certain quantity of lint every day for the hospital, giving this instead of a work fit to repose the limbs of their inaction, a task tiresome for the eyes and the lungs, in a dark and ill ventilated room. Many of the prisoners died before the expiration of their penalty. Several were liberated after the death of the emperor Francis, who had filled the prisons of Milan, Venetia and the dungeons of Spielsberg with the best citizens of Italy; imprisoned for a word, a sign, ill interpreted by the suspicious agents of

the emperor. Two of these victims of the absolute power, Foresti and Maroncelli, came to New York, where they were received as martyrs of liberty.

The Marquis of Tallavicini is poor to-day, said the parson, yet he finds something to give to poorer than he.

Half an hour after leaving the parsonage the parson deposited us at the depot, and we were soon returned to Milan.

In my next I will narrate my visit to the palace where count Vidconti di Saliceto, editor of the *Journal l'Apicoltore*, and secretary of the society of agriculture of Milan, has his apiaries.

CH. DADANT.

Milan, Italy.

#### NOTES FROM CONNECTICUT.

We certainly cannot say the JOURNAL was tardy this time. The May number was in our hands at 3 P. M., 16th inst.

Sickness prevented my looking through our bees until a few days since. I found all alive and in fine condition except three stocks, one of which had lost its queen. The other two were prepared for winter as stated in the January number, except as their hives had no caps, a thick quilt was laid over the frames, and a board laid flat on top of the hives. As there was no chance for the escape of moisture except through the ventilators in the front end of the hives, the result was what might have been expected, mouldy combs and a large number of dead bees. In the twenty hives which had caps and a thick covering of cloth cuttings, the combs were as clean and bright as when put up last fall, and I don't think there was a pint of dead bees in the whole twenty hives. Does not this speak well for cloth coverings and upward ventilation?

Gooseberries, currants, cherries and dandelions are in full bloom now, May 20th. Our bees are bringing in lots of pollen, and some honey, and I cannot tell you, Mrs. Editress, and



kind readers, what a pleasure it is to me, after having been shut up in the house since last November, to ride out, for your humble servant is a cripple, and obliged to go about in a traveling chair much of the time, and even when in best of health cannot walk except with crutches. And just here, Mrs. Editress, let me ask the readers of the JOURNAL if there is not some of them who have a friend or an acquaintance who, like myself, are unable to do ordinary labor, but might care for a few stocks of bees, and thus have a light, pleasant and remunerative out-of-door employment. If so, lend them your JOURNALS; help them to obtain bees, and also care for them. Well, well, where was I? Oh, yes; I had just rode out in my little apiary, and sat listening to the joyous tones of our industrious, happy little workers; and while I sat watching the busy bees and listening to their merry music, I quite forgot that there was ever any sickness, pain or sorrow in this beautiful world of ours. Soon I fell to dreaming, and in imagination I saw piles of jars filled with beautiful extracted honey, and would you believe me, I soon caught myself multiplying 23 by 60. You know I told you that our bees had given us an average of 55 pounds of honey per hive, &c. Well, like our old friend Novice, we are ever hopeful, and always expecting to do better in the future than we have done in the past. Indeed we mean to try; therefore we have laid our average surplus at 60 pounds for 1874. Yes, counting your chickens again, quoth wife, who has just looked over our shoulder.

We are sorry that our bee hive stand has met with so little favor among our brother bee-keepers, but think it because they have not got the right ideas of it, though we tried to make our description plain. It would seem from inquiries received, and remarks made in the JOURNAL that they are not well understood. Friend Whitmore says one objection would

be the labor required in making, and Novice says the amount of lumber, to which I will only say that if they had each made one before writing their articles, I am sure those objections would not have been given. To Mr. W's other objections I will add that as I have used the stands one year, and have failed to see any objections to the entrance being shaded, or out of sight, I must still think those objections groundless. Try them, friends, and then if it don't stand the test tell us all about it. Novice remarks that the sliding board should be clamped. You are right friend N., and we have so made ours, but forgot to mention it in directions. S. W. STEVENS.

Connecticut.

#### A NEW YORK LETTER.

Bees wintered well in this section up to the last of March. Since then the weather has been hard for them, and I hear of some bee-keepers losing heavily, but I think on the whole bees are coming through much better than last spring. I have to report only three stocks lost out of sixty. Last spring I lost forty out of eighty, and others around me lost about all they had, counting hundreds of stocks I think we can look into the future with more hope, and those that hold on, Barnum like, will come out all right. I wintered my bees last winter in a bee house built on purpose for wintering in, and I am very much pleased with it. R. B.

Oneida Co. N. Y., May 25.

#### BEE QUILTS AND FRAMES.

A very thin, light piece of cotton cloth laid on top the frames underneath the quilt will preserve the quilt and prevent smothering of bees on top of the frames. When the cloth gets waxed over, put it in a deep vessel, boil a few minutes, set off the fire, press it to the bottom, fill up with cold water, and when cool take off the wax, dry and iron your cloths, and it

is all right, and the quilts are right all the time.

Of course friend Stevens intends us to square the under edge of the comb before we let it down on the bottom bar, and the trimmings make beautiful guides for the top bars in empty frames.

I think his bee stand is too complicated and expensive to ever be a success with the masses. Keep this from brother Weight as I do not propose to bet anything on it.

Three quarter-inch metal screws screwed into the side bars of frames one-half inch down from the top bar, makes splendid hangings for frames, and will scarcely catch a bee.

I think I can manage light swarms and queen rearing, in frames 10x10, and strong colonies for honey getting in 10 deep by 15 wide.

MARTIN TERRY.

Missouri, May 23.

## HOW TO GET RID OF ROBBER BEES.

Robbers being very troublesome with me this spring, I will give you my remedy, by which I saved my bees. They attacked all my hives before fruit bloom came, and the weakest they conquered, making short work of it, getting but little honey. They were long, slim bees, the blackest I ever saw, and would fight like game cocks.

Early one morning I closed the entrance to two colonies which they had nearly defeated, for they could no longer resist their stealing. I thought I could catch them, and I did, as follows: I removed them to the cellar and put an empty hive containing comb with a little honey in it, in place of those I had removed. I nailed a piece of muslin against the entrance from the inside so as to rest on the bottom board. The bees in their haste to settle would pass under the edge of the muslin, but could not get back. During the day I caught enough for a nuclei, but as I do not

shelter thieves, I applied brimstone to them, and robbing ceased at once. I think they came from the woods. I have a good trail of them, and hope to get back my honey before the summer is gone, with interest.

E. RIEBSAMEN.

## THE BEST BEE HIVE.

I am aware that this is the all absorbing topic relating to bee culture and honey production. The results of efforts made in this business depend so much upon the hive used that the subject is worthy of the attention given it.

There is so great a variety of hives, and such a multiplicity of improvements, and so many great advantages secured by every improvement—the operators themselves being judges—that the community must give up the idea of such examination of them all as to judge with much confidence which is best. Those who have already taken stock in any particular hive, or have made improvements of their own, are generally, if not universally satisfied that they have the best already. Yet it may not be amiss to suggest a few important principles to be considered.

There are two important parts, or departments, in most hives now in common use: One the wintering and breeding departments, the other the department, or departments for securing surplus honey.

To secure surplus honey in the best shape for market and use, is the object or end sought, and the increase of colonies is no advantage, only as this object is secured.

Success in securing surplus honey depends very materially upon the size of the hives used. If only of 2,000 cubic inches, or less, they will be inclined to send out, according to both Quinby and Langstroth, from one to four swarms each. If the average is two new swarms each, the three colonies will do but little more than obtain a supply for the winter. The



keeper will get but very little if any surplus. If the hive is very large, say 6,000 or 8,000 cubic inches, they will not be likely to swarm, almost surely not if effectively shaded. This will then be a very large colony of workers, and will place as much honey in this hive as they would do in the other three had they swarmed.

In order to secure the surplus in the best shape for market, it has been customary to make such divisions in the hive as shall give room in the center of the hive—as is required for breeding and wintering the colony—with chambers upon the sides or top, or both, for small frames or boxes for the surplus honey.

In settling upon the construction of the hive it is necessary, or very desirable to secure simplicity, that it may be readily constructed, with comparatively small expense, and access to every part be so free that the bees will readily enter the surplus boxes to deposit their stores. Where these objects are most fully met we have the best hive for common use.

One important object to be secured is to control the swarming, so that we may secure the number desired, and all disposition to swarm more, be removed. This may be effectually accomplished by giving sufficient room in acceptable form, with proper shade and circulation of air to guard against heat.

It will be readily perceived that the breeding and wintering room, where the whole are operating in one hive, should be something larger where the bees who by swarming make three or more colonies, are all retained in one hive. I think 2,500 cubic inches would be best. With surplus honey boxes placed upon the sides of the hive, with no partition between the outer sheet of comb in the hive and that in the surplus boxes, but the glass in the end of the box, and that one-half inch or more narrower than the height of the box, leaving an entrance half an inch high the whole width of

the box for bees to pass directly to the guide comb attached underside of the top of the boxes, in reach of the bees on the outside comb in the hive, I think they will not delay entering upon storing surplus in the boxes. But no doubt the luck and chance bee keepers will fail to see it, and plod along with swarmer hives, obtain but little surplus, and every few years have them all starve to death but two or three swarms, and then start again. Those who have tried the plan know that 100 to 200 pounds of surplus may be realized from one colony per annum.

It is an objection on the part of many farmers that they can't handle moveable comb frames. Although it is undoubtedly true that frames give some advantages that are desirable, yet they are not a necessity, and to the farmer who will not use them, bars would be as well. I have used both bars and frames. My best hive that has given in different seasons 100, 140, 145 pounds, and in one season 200 pounds, has bars instead of frames. It has given me no trouble more than the old fashioned box hive, except it is a little more trouble to take off 200 pounds of surplus in boxes than to take off 10 or 20 pounds, but think almost any one would be willing to put up with that trouble.

JASPER HAZEN.

Vermont, May 6.

#### NOTES FROM TENNESSEE.

Owing to an exceedingly wet cold spring, general all over the South, bees have done very poorly, when they ought to have been gathering food from fruit blossoms and poplar blooms necessary for brood. They could not fly out owing to either cold weather or rains, and consequently all colonies that had used up their winter stores starved, or died out from disease. This was not the case with me, but with bee-keepers generally in the South. I call them bee-keepers; they keep bees and let them take care of



themselves. They are not bee raisers or apairians; we'll call them gummers. They will stick to the old gum, or if they have a frame hive treat it as a gum, and if the bees are lost or destroyed by the moth, they damn the hive and say it is no better than a box, when the fault is with themselves. I will make a few exceptions. We have a few intelligent bee-keepers south. When I say south I mean South of Tennessee. Rev. W. K. Marshall, of Shreveport, La., who attended the Presbyterian convention held here, called upon and remained with me one night. He is one of the most intelligent bee-keepers I ever met. Having plenty of leisure he devotes a great deal of time to bees, running two aparies, one in Shreveport and one in Texas. He has an observatory hive in his house all the time, studying their habits, traits, &c. He had one queen impregnated in confinement before such a thing was announced in the bee journals, but, strange to say, he has never succeeded in having another impregnated in confinement. He promised to write you about this and other matters. He is about to publish a book on bee-keeping for his friends in Louisiana and Texas. Others have come to me from Arkansas, Mississippi, and two gentlemen from Texas, who became interested in bee-keeping from reading my articles in the journals I write for. They came to me for instruction in queen raising and the general management of bees, and they say that more attention is now paid to bees than ever before, and in an intelligent manner. It will be the work of but a few years when box gums will be unknown in the South. I felt rewarded for all my efforts, for I have worked hard for the past four years to educate the farmers of the South to the importance of bee-keeping.

Bees are now doing well, plenty of honey being gathered and brought to market, in fact the market is overstocked, and but little demand. Have

to take 25c a pound for fine box honey. We have taken 50 pounds of box honey from one stock, made since May 15, now June 5, and none have less than 10 to 20 pounds each surplus. My common bees have done much better than my Italians, in fact gathered nearly twice the quantity of honey, and did not receive half the care I gave my Italians, and are not any stroger, (all strong,) for when other persons were allowing their bees to starve I was feeding mine, and making them strong. I wish you success with your JOURNAL. I like it, and every one to whom I have shown it like it. It is better suited to average bee-keepers than any journal published, for there are a great many persons who would take a journal but say it is of no use to them, as they are but beginners, and the articles are too far ahead for them. This is so. For a journal to succeed it ought to have such articles in it as to suit all tastes, the educated as well as the uneducated bee-keeper. Yours nearly fills the bill. Many silly questions are asked me, but I answer them, and I hope you will do so, for what appears as clear as glass to me may be as dark as smoked glass to others. Before one can read an essay they must learn their A B C's; so with bee-keepers. They have to learn the rudiments before they can understand and appreciate a fine article. In this way I began and created an interest in bee-keeping here. More anon.

A. J. MURRAY.

Tennessee.

#### NOTES FROM MISSOURI.

One year ago in March last I purchased ten colonies of Italian bees at a cost of about \$120, which were then and are still, I believe the only Italians in the county. I had also purchased the right to the county for N. C. Mitchell's Buckeye bee-hive and moth trap, and with the bright side of bee-keeping set before me in Mr. Mitchell's publication, many of which I had read, together with some



other works. I had no practical knowledge of the business whatever. I set out with bright hopes of soon reaching a fortune, or at least of gaining large profits for the time and money expended.

Well, a year soon slipped away with the following results: From the ten colonies I succeeded in making no swarms and raised no queens to sell, (had expected to sell at least 100,) invested over \$100 in Buckeye hives, most of which I still have on hand empty; amount of money made out of pocket during the year about \$150. But I am by no means discouraged. Last year was one of the worst ever known in this country for bees, hundreds of colonies starved to death during the summer months. While I have lost confidence in the big stories told by some bee culturists, I still have confidence in my little pets, and believe they will yet abundantly pay me for my labor and expense.

In March last I began to carry out your directions for spring management, blanketing and feeding, but no sooner commenced feeding than the strong colonies seemed determined to rob the weaker, and despite all my efforts three of my weak colonies were robbed, and died during one of the cold days in March. They are now doing very well; have made up five new colonies, and prospects are extra good for an abundant honey harvest.

I now have a few questions which if you will be kind enough to answer you will greatly oblige a "new beginner" who has many troubles.

Can I manage any way to keep my Italians pure? I see a great many blacks appearing among them, and few have the three bright yellow strips.

Can queens be successfully reared in nuclei boxes that hold but one frame?

Can I divide colonies (if so, how?) without raising queens?

How can I prevent swarming, so as to get more surplus honey?

I can't get along without it; "like a ship without a rudder" would be my operations in the apiary without the JOURNAL'S visits.

WM. A. GARDNER.

Missouri.

[We sent the little book of directions, and think you will find all your questions answered in it and in JUNE JOURNAL.]

#### NOTES FROM INDIANA.

The spring has been very cold and backward here, and bees have not done much so far. Since it has got warm enough, it has been so very dry there has been but little honey in the flowers. Have heard of but two swarms this spring. Some bees starved the last of April.

A. BOYD.

Indiana.

#### JOTTINGS FROM IOWA.

Our bees are doing remarkably well. In fact, the best success has been ours since the terrible winter of 1871-2.

I once had a colony of bees leave the old colony and go at once to the forest without first alighting. I also had a transferred colony once leave a full hive of brood. These things are rare exceptions, and need not influence us.

A. J. COOK.

Iowa.

#### NOTES FROM LOUISIANA.

We have had the worst season for bees in this parish that was ever known. The honey harvest was cut short by rain for 15 days, and the north wind and drouth from 10th April to the present, and no rain yet.

WM. W. SMITH.

Louisiana.

#### NOTES FROM ARKANSAS.

Bees are gathering but very little honey, on account of the long drouth. It has not rained but little in this locality for near two months; however, they are storing a little surplus. Brood rearing continues rapidly. Some are working in boxes. My bees are all nice Italian in fine condition;

hope we will have sufficient rain soon to enable our bees to store considerable surplus.

M. PARSE.

Arkansas.

### HOW TO KILL BLACK QUEENS.

I will give you a little of my experience in killing black queen bees. I took two queens and a few worker bees out of two stands and inserted Italian cells in stead. I put them in separate wire cages, and, wanting to kill the queens, I submerged them all in a pail of water. After full three hours, being sure they were entirely dead, I took them out, and on examining them found they showed signs of life, and now three hours after they are all lively. So I think that is not the right way to kill queens.

JOSEPH CLIZBE.

Woodbine, June 5th.

### MAY-WEED, OR DOG FENNEL.

In last number of the JOURNAL I notice an inquiry in relation to dog fennel. The proper name of this plant is *maruta cotula*, a native of Europe, but now scattered over the whole United States. The flowers are white, and whole plant strong scented, though to many people not unpleasant. There is also a variety with yellow flowers that is very abundant in the far western states, though I have never noticed it at the east, and I am inclined to think it is a native here. I have never noticed bees on the flowers. The yellow variety is much stronger and more unpleasantly scented than the white. H. A. TERRY.

### DO BEES MOVE EGGS?

In one number of your JOURNAL I noticed an inquiry in regard to bees moving eggs and larvæ. I will relate my experience. Two years ago my husband found a small swarm hanging to the limb of a tree. They had made a few small pieces of comb, were queenless, and growing beautifully less.

As we had no bees at the time, he made a small box hive for them, and they seemed to like their new quarters very much. At that time he was hunting bees in the woods, and nearly every day brought honey and large quantities of brood in every stage from the trees to the house. Of course our little colony worked upon the honey which was mashed in falling the trees, and left near the house. Our hive stood about thirty rods from the house. In the fall, or in the last of August, we took them up, and found nearly ten pounds of nice honey in bright white comb, no brood, but three queen cells, two capped and one uncapped. The queens were large, fine ones, and the only reason we could give for their being there, was that they had taken the eggs or larvæ from the combs which were brought from the woods, and carried them a distance of thirty rods. Courageous little fellows. I could have cried over their destruction.

MRS. J. Q. ADAMS.

Michigan.

### ANSWERS TO CORRESPONDENTS.

I notice some one calls for country names and country talk. I will attempt to make a few remarks, and perhaps some criticisms, as I have had some experience, from five years old to almost three score years.

In June number, page 128, J. B. R.: Your bees must have been robbed, as they could not have consumed so much store in so short a time.

It is easy enough to have your queens fertilized. Make a two-story high hive, fill with small boxes, say four, with proper passages to outside, this to be arranged over a strong colony that has plenty of Italian drones. When your queens come out of the cells, the drones will soon find them without the queen going into the open air. In doing this you must place a queen cell with brood and adhering bees—say two hundred—and



also some comb with honey in the cells, and one frame of empty brood comb; and in twelve days after hatching she will commence laying. You must make frames to hold the comb that you put in your nucleus, and shut them up until the second day, evening, to prevent robbing, or you will have all your labor in vain, but don't smother them.

Page 120: Yes. That weed you mention is golden rod, or *tisquiquin quinikibuss verdentius*.

I'll risk your pitching in if you have the pure Italian, but if you have hybrids they will do the pitching.

Page 132. Mr. Ohio: A king-bird has no crop, but are classed with the carnivorous fowl, and you are right about their taking the worker bee from flowers, when drones are not out. They also eat worms and beetles. They have a kind of stomach-gizzard similar to a hawk.

To winter bees it matters little where they are, north or south, in cellar or in open air. The main point is to keep them dry, and shut air tight at bottom, and large ventilation at top. I don't care if its a hole four inches in diameter, they will winter safe, especially in hive patent No. 107,732.

There is no such a thing as bee dysentery where bees are kept properly. Bees will freeze to death in a damp hive, and there is usually a little brood in the center of the cluster, and when the bees are all dead and rotten there comes in that dreadful disease foul brood. Bah! foul nonsense.

Page 133: Bees swarming out in early spring, and hives full of honey. Too much honey is worse than none. Well, you will learn something as long as you live in your right mind. That is even so: Bees will leave a hive full of honey where there is no space for breeding their young. If your bees ever do such a silly trick again, and you have no empty hive, just take out the two center cards of comb and honey clean to the top of

the hive, and then return the bees to their old home; and the next time they swarm it will be a swarm of bees that will gladden your heart.

Page 138: Royal jelly is correct. But it is the larvæ of drones they use, hence the power of the queen to rear drones. And still further: The queens reared in the larvæ of black drones won't be as pure as those reared of their own.

I presume that somebody will pitch into myself and Alfred for this bit of information we have discovered by patient and constant watching. If any one so inclined will remove a queen from a flourishing hive supplied with plenty of store and brood, and close the hive for eight days, and then examine it, they will find plenty of fine, plump capped queen cells. Do not forget to supply them with water.

Page 145: The American basswood, linden and linn stand in the same relation to European linden that the tamarack of America does to the European larch.

Page 144, queries and answers: 1. He means forming nucleus (or making swarms, or nucleus swarming, laughable,) or dividing or composing a colony by taking frames from different colonies. He had better let that alone for awhile.

2. I have known of instances where black bees swarm before commencing queen cells.

3. He means in hive or nucleus. Capture queen and drones, and cage. No, not in prison.

4. In nucleus? Yes. Correct in almost every instance. The first class of queens I raised thus it rained almost incessantly for two weeks. The twelfth day they appropriated space for about 7,000 worker cells, and I watched constantly to see if they would come out, but failed to see them outside the hive.

5. Answer correct.

6. I don't think bees sleep; they certainly rest. I have marked the size of the comb in the evening and



found it three-quarters of an inch lower in the morning.

7 and 8. Correct, if I am any authority.  
BEE SMITH.  
Michigan.

#### NOTES FROM ILLINOIS.

The hive of bees you sent me came all right. They seem to be doing well. The hive became so full I was afraid they might swarm, so divided them last Saturday. I made a hive of a goods box, and put the queen and one comb of brood with most of the bees, into the new hive. The rest of the brood, with about as many bees as you sent me, remain in the old hive. I notice to-day they are building a large cell, which I suppose is to rear a new queen in. If there are new queens to come out, I suppose they must be in the card of brood that I put into the new hive with the queen, hence I will have to divide them again. I have left the bottom board as it was when you sent it. Is that the way, or should it be loose and a little inclined? If so, how is the hive supported if it does not rest on the bottom?

I took off the honey board for fear they would be too warm.

Should there be an opening in the upper part of the hive for ventilation?

Is the hive you sent the bees in like those you use? If not, how do they differ?

I think I should like them best with boxes on top. I can find sale here for nice box honey better than for extracted honey.

JENNIE S. FRENCH.

Illinois.

#### NOTES FROM LOUISIANA.

The native population here are not much educated, especially in English, and being mostly stock raisers and small farmers, are superstitious, and are averse to believing there is much to learn about bee-keeping. One seriously contended a few days ago that the drones make all the honey.

Another came to see our bees and said he had just had a fight with a swarm of bees, which stung him badly and ran away. I showed him how I held a nucleus hive with three frames against a swarm, and had them all in in five minutes. I happened to have an over full hive from which I made a queen rearing nucleus, inserting in empty frames, with which he was delighted. He intends to have some next year.

There is great astonishment at my success, and many JOURNALS and moveable comb hives will be wanted as soon as a crop is made.

J. B. RAMSEY.

Louisiana.

#### SALT FOR BEES—UNFERTILE EGGS.

##### ANSWER TO MR. M'GAW.

Having noticed bees hovering around the dung hills and the tannery pits, I thought it was salt that they were after, and to test it I gave them salt water, which they took eagerly.

This is my mode of giving it: I fill a gallon jug with water, after having put in it one handful of salt. When the salt is dissolved I invert the jug upon an earthen plate covered with a small piece of heavy wool cloth. The salt water runs on the plate, and is drunk by the bees without their running the risk of being drowned. If the bees are slow in finding the jug, I put on the plate a small piece of dry comb.

When the bees have plenty of brood, two stocks will drink as much as a gallon every day. They drink more in wet than in dry weather. Since I gave salt water I have never seen my bees around the dung hills.

When I commenced to raise Italian queens I have had, at two different times, queens laying unfertile eggs. As I had used in and in breeding, I supposed that the mating of my queens had had that bad influence. After having introduced a new blood



in my apiary I have had no more such mishaps to deplore, so I advise Mr. McGaw to give his queens a chance of finding some drones not related with them, and the unfertile eggs will disappear from his apiary as they have disappeared from mine.

Illinois.

CH. DADANT.

### OUT OUT THE CELLS.

On Saturday hung two frames of honey and brood in an empty hive, caged a queen and hung her between them; removed a strong stock of bees from its stand, and set the hive with caged queen in place of the stock removed. Enough bees went back to old stand to make a good swarm. In two days the queen was on the comb all right. Two days later the queen was still all right. Four hours afterwards they swarmed and settled, and when hiving them found the queen that had been given to them, examined the hive that they came out of, found several queen cells, had not cut out any. Seven or eight days (the books say,) is the time to examine for cells, but this one swarmed naturally in four days and three hours after the queens were changed. Now if the swarm had left and the remaining bees had raised a hybrid queen, I should have been almost certain that I had given them a hybrid queen.

Illinois.

C. W. GREEN.

### ARE THEY BEES, OR HORNETS?

I started last spring with four swarms, and have ten full colonies and seven strong nucleus in full size frames. Had five gallons of honey extracted last Monday, 15th. My bees are from Mr. Treffell, of Ohio. He sold them to me for Italians, but some are mixed, I think. Some have one, some two, and some three yellow bands, and the queens are dark. I prefer a yellow bee, and our young queens produce bees with one and two bands, some yellow and some

black. I also have one queen that raises drones with white heads, some white and some black. What are they? Are they bees, or are they hornets, or what are they? Did you ever see the like? How shall I keep those white heads, as they will soon kill them off? I want to raise some queens, and I want to use those drones.

There are a curious set of beings in Indiana; some say bees will stay and work better in a hive with a home made queen. A man here told me he saw a queen cut out of leather and tacked in the top of a hive to keep the bees from going off, and they were doing well. How is that for high?

I want an answer to this in the JOURNAL, which is a comp'le work.

J. F. ROGERS.

Indiana.

### RAISING QUEENS.

Every bee-keeper should rear the queens needed in his own apiary. He can't afford to buy them, for a good queen from a reliable breeder will cost him not less than five dollars. (*En passant*, I have no queens for sale.) Nor can he afford to have his bees rear them in the usual way, for in that case many of his full stocks must be without laying queens for two or three weeks. In that time a good queen would lay enough eggs to make a strong colony of bees. A fertile queen should be ready to introduce to every new stock as soon as possible after its formation. For any one to be able to raise queens acceptably, it is only necessary to understand and observe a few simple principles.

1. Queens are but fully developed female bees, and are reared from the same eggs or larvæ as workers, the difference being produced by the size and shape of their cells, and the quality and quantity of the food upon which they are nursed.

2. Every stock of bees having comb containing worker eggs or young



worker larvæ, and a sufficient number of worker bees to generate a comfortable degree of warmth within the hive, when deprived of their queen, will rear one or more young queens.

3. As a general rule two queens will not stay in the same hive at the same time; one will destroy the other. Nor will a queen permit sealed queen cells to remain in the hive where she is sovereign; she will destroy them, or leave herself with a swarm.

4. Queen cells are capped over about the eighth day after the egg was laid, and hatch out eight days after being capped over, or from ten to sixteen days from the time the stock was deprived of their queen.

5. The young queen usually mates with the drone when four or five days old, and begins to lay on the seventh or eighth day of her age. She meets the drone outside of the hive, and while on the wing.

Keeping in view those principles or laws in the economy of bees, and exercising a fair amount of common sense in the practical application of them, the bee-keeper will be at no loss to know how to raise the best of queens to supply his own apiary, or the market, if he desire.

He has first to select the queen he wishes to breed from. She must be removed from her stock, or her stock from her. I prefer to take all her cards of brood except one or two, together with the adhering bees, and place them in a hive on the stand on other stock. I then fill up the old hive with cards of brood and bees from a strong hive. I thus keep the stock of my breeding queen strong, and have the stock that is to build cells also strong. In this way I think I get better cells and better queens.

About eight days after this I start as many nuclei as I find cells sealed over in the new made hive. My nucleus hives take in the full sized frames from my other hives, but not so many. I form each nucleus with two

or three cards of brood and bees from full stocks. Two days after starting the nuclei I give to each a sealed queen cell. This is readily done by cutting out the cells with a small bladed knife, having about an inch square of the comb around each cell, and by inserting the cells in holes cut in the combs of the nuclei. If the cells will not remain in their places, they may be fastened with common pins. When once in the bees will soon make them fast.

The nuclei should now be examined about once a day to see that all goes on right. If the queen is not perfect when she hatches out, or is not as well colored as desired, destroy her and give another cell. As soon as she begins to lay, she is ready for introduction into a full stock. I prefer, however, to build up her nucleus into a full stock. This I do by removing her cards to a full sized hive, placing the hive on the stand of the nucleus, and adding cards of brood and bees from full stocks until I have it as strong as I desire. But if it should be desired, the queen can be removed, and in a day or two afterwards another cell given to the nucleus.

During the last week in May and the first two weeks in June I took about ninety gallons of honey from twenty-six stocks. From the hive containing my imported queen I took twelve gallons of honey, besides enough cards of comb and brood to make another good stock. All this honey was made since the first of May.

M. C. HESTER.

Indiana

## AN EXPERIMENT IN SWARMING.

Many writers advise beginners to let experiments alone, and I think it good for general advice; but I think one may be allowed an occasional experiment on a small scale, if the risk is only the loss of a few dippers full of bees. For the sake of variety I tried a novel manner of forming a



new colony, which is purely original, and without expecting that it will in the least add to the valuable knowledge of the science, I thought I would communicate "one way" of artificial swarming to the readers of our nice JOURNAL. I first placed a clean sheet over a wide board on the ground, and a common box hive upon that, the front elevated by blocks about two inches. Then I armed myself with a soft hen's wing, a dipper, and saucer. I brushed nearly a dipper full of bees from a hive where they were clustering in a large cluster on the front, and placed the saucer over them as quickly as possible, while I carried them to the empty hive; then carefully turning them upon the sheet, I sprinkled them with water, and they were soon hanging upon the brood comb and honey which I had placed in the hive. I then went to another box hive where they were clustering on the outside and repeated the operation. I had bees from five different hives, and enough to make a good sized colony. After getting a little settled they commenced a raid upon the brood, and in a short time had chewed the comb to scales, and had dragged out eggs and young bees. The next morning they appeared more rational, but towards noon came out of the hive in good order and settled on a limb. I then carefully put them into a new patent hive and gave them more brood. They now seem contented and industrious, and I think they will have a queen in a few days. As soon as I know more of their progress I will report.

MRS. J. Q. ADAMS.

#### NOTES FROM CALIFORNIA.

Our honey is superior to most honey of this State, our apiary having many advantages over others. It is a thousand feet above the valley, where the air is pure, light and clear, free from dust, and the surrounding country abounds in manzanito, sweet thorn, and artemesia, three of the

finest honey producing plants in the world, and the hot mineral water, which the bees sip all through the season, holds in solution salt and iron, which tends to keep the bees healthy. We think it an antidote for foul brood, at least so far as we have tested it. Dr. Smith, (who owns these springs,) had given him a swarm of foul brood the summer of 1866, which he transferred into a hive washed with the water, and set near the springs. They showed no more signs of disease, and it is still healthy and forms one of our present number.

Again, this spring we purchased a few swarms of Dr. Montgomery, one of which was badly diseased. We cleansed it similarly, and have seen no more signs of the disease. All through the winter, when not confined in hives by cold rains, the springs will be surrounded with bees, some of whom unfortunately get too close, and take too hot a bath for health. Taking all into account, the honey is much clearer and finer flavor than in other mountain apiaries, and the valley honey bears no comparison whatever.

#### QUEENS WITH BROKEN LEGS.

A short time ago I had a queen that had lost one hind leg. She would lay more eggs at a time than any other queen I have, but did less good. She never deposited an egg in a cell without there was a bee behind her to receive the egg, and deposit it there for her. She would drop from three to four eggs at a time, and used her hind leg to press her body before dropping the egg, running her foot over her body two or three times. This motion with her leg would throw her body to one side, and she would drop her eggs where she did not intend to. There was no disposition shown to supersede her, so I killed her, and introduced another.

There is a place near here where a



lady has twenty-five or thirty swarms of bees all in good condition, and she knows as well what they are doing as she knows what is going on in her house. They are all through swarming, and no indication to swarm, but every little while she finds a swarm of bees hung up over her hives. It seems that all the bees that swarm center to this place, which is a small grove of fruit trees in the center of the town.

BEE-KEEPER.

Florida.

## ACKNOWLEDGEMENTS.

It is with great pleasure that I hereby acknowledge the receipt of the beautiful premium Italian queen you sent me the 15th ult., which was received and successfully introduced the 19th, being *en route* four days. She is pure Italian, and very prolific, and I have no doubt her progeny, which will appear within a week, will prove purity of fertilization, of which I will notify you when it appears.

With many thanks,

J. M. CARLTON.

Indiana.

I received my queen all right. I like the looks of her much.

Bees are doing nothing, and have not for a month past.

A. K. BROWN.

Texas.

The premium lady arrived safely, and is safely and completely introduced, not according to your little book, which I do not happen to possess, but as I have often read from your pen. No eggs as yet, but she has only been in a few hours. I have no more fears for her safety. Many, very many thanks. Now I'll have the pure Italians. She is the fourth one I have had.

M. A. BILLS.

Michigan

pecially their name. We constantly receive letters in which the State is omitted, often the post office, and sometimes even the writer's names are omitted. These letters contain money, or orders for bees or the JOURNAL, and as we cannot answer them, we are obliged to wait until we receive a second letter abusing us for want of attention to them, before we know where or who they are from. Meanwhile the post office is charged with stealing the money.

At the last meeting of the N. A. B. K. Society, the following resolution was adopted:

*Resolved*, That the Secretary make an official report, in pamphlet form, of the proceedings of our annual meetings, as soon as he has the funds to do so.

All that desire to become members, and have the proceedings, should send immediately their names and post office address, and the annual membership fee of \$1.00 to Abner J. Pope, Secretary, 170 Park Avenue, Indianapolis, Ind.

Mr. Quinby has so arranged his new Smoker that he can send it by mail safely. This is a great saving to purchasers. We are satisfied that no one can fail to find this a most valuable aid in the apiary. One who has used ours constantly since it was first received says, "I would not be without it whatever it cost."

Subscribers frequently remit to us money to be applied on old subscriptions, and also on new subscriptions. In doing so we would like to have them state the time, and to what number they wish the back pay to apply, as the books of the former publishers are not in our possession.

Correspondents in writing us for the JOURNAL, or on business, should be careful and give the name of their post office, county, and State, and es-

Subscribers who wish to change the address of the JOURNAL should give the name of the office where it has been sent, as well as that to which they wish it sent.



# Editorial Department



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JULY.

DES MOINES, IOWA.

1874.

## NOTES FOR THE MONTH.

This year in this locality the flow of honey will continue through most of July. Before this number of the JOURNAL reaches our readers the hives containing old and new swarms will be full of honey, and if they have been well managed will contain also large number of bees, and much brood. If surplus honey is the object, and no increase of colonies is desired, we have now only to keep the bees supplied with empty comb or empty space, so that while all the honey is gathered that is possible. The queen will still be depositing eggs, from which will come bees to gather the honey from fall flowers. The extractor may be used—whenever there is surplus honey in the frames—even if there is a possibility that in the latter part of the month there may be a dearth of honey. If such a season comes and you find the bees losing instead of gaining in weight, it is well to feed some colonies: for instance, any that are raising brood fast, or any that from neglect have ceased rearing it altogether. We often find such combs side by side in the same yard. To the first, if a little food is given, it operates as a stimulant, and they do not stop, even if the yield of honey outside is over for the time, while in the second instance, if space be given and food to stimulate, the queen begins to lay with new vigor.

For several years we have practiced a method which we recommend with confidence to those who care more for a rapid increase than for surplus

honey. From the time white clover blooms until the linden harvest is over, we keep every colony strong in number, and supplied with plenty of empty comb, if possible; if not, with space to build it. We use the extractor freely when we can do it without interfering with brood. At the close of the linn harvest we divide all our colonies, taking care to have a supply of young queens ready, so that no hive shall be queenless. During August and the fall months then all make strong stock colonies, in any year good for wintering, and in some years we secure also surplus honey from all by aid of the extractor.

If this plan be attempted with any but strong colonies, and without a supply of young queens, we cannot warrant success, but any one can have very strong ones and a supply of queens by last of July or first of August if they will take pains for it.

Those who wish to do even more than to double their hives in August, may do so by devoting time to it, and being willing to take the chance of having to feed much before winter. Bees may be "made" very fast if you know how, and are willing to work to that end.

## AN ANXIOUS BEGINNER

requests us to give him and many others the A B C of queen rearing. We will try.

1. As to the best time to rear them: While any time between the appearance of drone brood and frost is good, we find that queens are more easily



reared during an abundant flow of honey than at other times, and we advise beginners to be sure that honey is being gathered freely by the bees before commencing.

2. Best style of nucleus hives: We have all our nucleus hives, or hives for queen rearing, made so as to contain two or more frames of full size. These are much more easily managed than smaller ones. These hives may be as nicely made as you please, or as plain as possible, simply a box to hang two or three frames in, with a snug cover.

When you wish to begin queen rearing select a choice queen in a good colony, and remove her to any other hive from which you have taken the queen. Leave the hive queenless about eight days, and at the end of that time you will find some queen cells started, usually from 10 to 20. Divide the colony now into as many parts as you have cells, putting one cell in each little hive. If you have not brood or bees enough to make all strong, young bees and sealed brood may be taken from other hives to supply the want. A comb lifted out and put with the bees adhering into another place, will retain all the young bees. If these small hives are set near where the old one stood, they will catch up in about equal parts; the old workers that are in the fields missing their old home they will enter these, and finding familiar combs will be satisfied. In this way, from one colony we have made five, six, eight, and ten small ones. These must be watched; if one has too few and another too many bees, the places may be changed to equalize them, or one or more of them may be put in the place of some other hive whose location has been changed a yard or two. If any of them need feeding, as they probably will, it must be done regularly. Each one will now have a young queen, which, if you have pure drones and no others, will be soon a valuable queen. If you have

black drones also, it is uncertain. When these queens are laying, they may be removed and other cells inserted, or fresh brood be given them and they allowed to rear others. Started in this way, with a little care they will be permanent institutions through the season, and may be made useful in many ways. In the fall several united will make a good colony for winter. Many queen breeders use smaller and less expensive hives, and rear queens in cheaper ways, but we have given what we consider the best way for beginners.

#### HOW WE USE THE EXTRACTOR

We have generally on hand a good supply of empty combs. When we wish to extract honey from any hive we open it, take out any frame that may need emptying; put empty ones in their place, close the hive, brushing the bees from the frames in front, and that hive needs no more attention. When we have extracted the honey from those combs we open another hive and put the comb just emptied in the place of such full ones as we take from that, and so proceed until we are done with all, and then go over again in the same manner.

Honey in July and August may be safely removed every three days from hives. We still adhere to our practice and put no combs into the extractor that contain much brood, and especially unsealed brood, which need all the honey they can have for the maintenance of new brood. Combs that we put in empty may be placed near the brood and will be used by the queen for her eggs.

We do not claim to get the utmost advantages of the extractor, but we do think we use it in the safest way. To get the most honey from a hive, during the season, it must have bees, and there must be a succession of bees hatching. Extracting honey from combs containing less *may not* interfere with this, as some assert, but we prefer to leave honey in the combs for



this brood rather than to throw it out and feed it back to them.

When the flow of honey is good and a colony strong, it is well to have surplus boxes on the hive. They will build comb in them freely, and we have had such boxes filled while using the extractor every third day on the combs below. We do not think it is ever yet understood how much honey a strong colony will gather if judiciously assisted during a good honey yield.

It is possible that during the past three weeks there may have been errors or delay made in the shipment of queens, ordered of Mrs. Tupper; if so, severe illness, and from which she is now confined to her bed, must be the only apology she has to offer. Shipments have been made, and orders filled as promptly as possible under the circumstances.

The lady who sometime ago ordered glass honey jars from us, will please write us and send her address. It has been lost, and the jars coming back to us, we fear some mistake has occurred.

We can furnish honey jars of three and two pounds capacity by the dozen or gross. Also attractive tumblers, in which extracted honey sells readily.

ITALIAN BEE CO.

A writer in the *Bee World*, in giving "Recollections of Other Days," says: "When a marriage took place, the young couple, in true bee style, left the old place and set up for themselves." Now that is not bee style. The youngsters among the bees kick the old folks out of the "old place," to shift for themselves, while their children not not take the old homestead out all the wealth it contains. Another "style" they have that looks equally as unfilial. As soon as the young mother has children old enough and they run out of other work, they amuse themselves by killing all their mother's husbands and make a widow of her.—D. L. A., in *Philips' Farmer*.

## NOTES AND Queries

Can you tell me what makes my bees leave the hive, when I hive them after they swarm. I had one colony of Italians and they have swarmed three times. Each colony has deserted their hive from two to four times each. I tried the last one in a common box hive. I thought likely they did not like the Clark's patent hive I have.

B. M. LINGLE.

We cannot tell without knowing more particulars. Perhaps you did not shake the hive sufficiently; perhaps it was too smooth inside. A frame full of stores from some other hive would have kept them. In our early bee-keeping days we hived a large swarm in a black walnut box hive and had the mortification of seeing it go to the woods the second day. On examination we found that the inside had been planed smooth as glass by the carpenter. The bees had made several attempts at fastening their combs to it, and seeming to know it was useless, had left for other quarters.

We think the most common reason why they leave hives is the heat. A pail full of water emptied over the hive soon after the bees are put in it, and plenty of shade for some time is necessary.

I have not as yet achieved a brilliant success at bee culture, partly because other duties have crowded the bees from proper attention, and partly for the want of a good honey harvest. This country is new, and until this year no fruit blossoms, and there seemed little else for bees. There are as yet very few bees in the country, and no organized effort for apiculture. A year ago found me with only two colonies, and honey-producing plants being very scarce, I did not dare divide my stocks; watched them closely for a long time thinking they might possibly swarm. Finally gave up watching, when on the last of August both colonies started up and astonished me by sending out two swarms. I hived them, and was again surprised to find one swarm leaving, and in spite of all efforts it went to the woods. This season I gave a queenless colony a sheet of brood in order to keep the colony up until I could procure a queen. The young bees would crawl from the hive almost as fast as hatched,

and many were lost. I had to close the hive to save any of them, and fed them at night by pouring syrup into the comb. Can you inform me why they left the hive? I now have a colony with a great many drones, which are being destroyed. I have looked all my JOURNALS over, but find no reason given for the production of so many drones, nor treatment for the same. Please give me light and oblige. Pardon this long letter, and I promise greater brevity in the future.

RACHEL S. TENNEY, M. D.

Montgomery Co., Kans., June 15, 1874.

We can give no reason for the young bees crawling out in the way described. Will some one who has seen such an instance answer?

There is no good reason to be given why bees have so many drones; but if the hive is well filled with worker combs there can be few drones reared, though some worker comb may be lengthened out to accommodate a few about swarming time.

One of the most important economies of the bee hive consists in getting all hives filled with worker comb.

Will bees live and do well in a country where there are no dews? I expect to move to Colorado next spring, and want to take my bees with me. Which will be best to take our native or Italians?

Missouri.

G. I. JONES.

All reports unite in calling Colorado one of the best honey producing climates of the world. We had not thought about the absence of dews as having any bearing on the matter. Take your bees with you by all means. We consider the Italians best in all respects, in any locality.

The most of the bee-keepers about here still use the old box hive, and know (or rather think they know) too much to learn from books. I am a new hand at the business, having kept bees but two years. I use the moveable frame hive. Have ten stocks at present, all black bees, but intend to Italianize this season. I have made it a point thus far to increase stocks only as fast as I gain in experience. I have never taken the amount of box honey from my stocks that I read statements of in the BEE JOURNAL.

I would like to ask a few questions which I would be pleased to have you answer through the BEE JOURNAL.

1. In moving frames from hives do you first subdue the bees, or perform the operation as quick as possible and before they become irritable?

2. Will bees store as much honey in boxes, when the extractor is used, as when it is not?

3. Are hybrids more irritable than black bees; will they gather as much honey or more honey.

4. What will neutralize the poison of bee stings and prevent swelling? I have tried several remedies which I have seen mentioned, but have found nothing as good as milk. Rubbing it on a few times will almost entirely prevent swelling with me. I would like to know if others have tried it.

C. AULL.

Lenawee Co., Mich.

It is better to subdue the bees before disturbing them; it is easier to keep them quiet than to subdue them after rousing their anger.

Some years bees will store honey in boxes above, while the extractor is used often on the combs below, but you cannot expect to have as much honey in boxes any season as if you did not use the extractor.

We have never heard of milk as being useful to neutralize stings, and am glad to know of it, as we always have that at hand.

About one hour ago I heard from the bees by my messenger who went to see about hives, &c. He tells me that bee-keepers up there say it will be better to move the bees in the fall, when the weather is cool; for by the time swarms are ready it will be very hot. I think they are croakers. Therefore I apply to headquarters. The distance is seventy-five miles, part of the road very rough. Is it better to move the nearly empty hives in hot weather, or the full hives in cool weather?

Texas.

S. J. NEWCOMB.

We have never lost bees by moving in hot weather when combs are filled with brood, and think there is little risk if care be used. But we have lost them when attempting to move in cool weather, when bees are numerous, combs full and brittle.

My favorite way to divide is to remove the old hive and place the new one on the old stand as you direct. In dividing late in the season I invariably get too many of the bees in the new hive. How shall I remedy this?

The next day exchange the places of the hives. This will usually equalize them.

Three years ago I bought seven Italian queens and introduced them all successfully. There was



seventy-five stocks of black bees in this neighborhood at the time, and by much persuasion and hard work, I have finally got rid of all black bees for a space of ten miles square. I had first to convince people that the Italian was better than the black bee, then transfer their bees to better hives containing moveable frames, then Italianize them for nothing, and in many cases I had to make their hives. Every body thought I had got cracked a little on beeology, but now we have above eighty stocks of Italian bees in and around Woodbine with moveable frames, and several good men and women interested in their culture. People will read about extractors and movable frames, and it is all Greek to them until some one shows them it is all plain. Bees, from being considered a nuisance, have become a valuable property, and sought after.

I have twenty stocks of Italians which I have just finished hauling to the linn timber, which is two miles off. People laugh at me for taking my bees to the timber during linn bloom, but when I show them the results they will turn their tune.

L. C. BUTTE.

Iowa.

You have taken a good way to Italianize your bees. There is no better way for your neighbors as well as yourself. If bee-keepers generally would take this course we could easily have Italians in their purity.

I wonder some one has not found out my way to fasten combs into frames: Warm on a stove or any smooth hot iron or rock the side and edge, and it adheres.

Please publish how a beginner can raise queens. Describe minutely.

I have not yet received those Alsike clover seed promised me.

WM. GRISHAM.

Georgia.

We have sent Alsike to all, and our supply is exhausted. Will send buckwheat instead to all who have failed to get Alsike.

I would like to ask a question about your frames for surplus honey. Do you have a box that fits on the top of the hive, and place the frames so the bees can get all around them, the same as in the body of the hive?

How often would you extract honey from the body of the hive during the linden bloom?

Our bees all wintered well. We tried an experiment of wintering small swarms, as we wished to save the young queens to take the place of any that might die through the winter. To one of these queens we gave about a teacup full of bees in the fall, to another less than a pint, and to the other about a pint. Those swarms all wintered well and saved their queens. We also wintered one swarm of old bees. They were all

hatched in August, and as Mrs. Tupper had said in one of her BEE JOURNALS that bees hatched in August and fore part of September would all be dead before winter, we had but little hope of saving them. But they wintered just as well as any of our bees, and by the last of May they were our strongest swarm, so you see the wisest of bee-keepers are sometimes mistaken as well as the rest of us.

We have one queen that raises pure blacks and hybrids, probably the result of mating with both a black and an Italian drone.

Minnesota.

MRS. M. E. CHANDLER.

Our friend will see in this number the views of Mr. Adair in regard to old bees. According to his views bees are old or young in proportion to the work they have to do. If this view be correct, the bees of that colony hatched in August had poor pasturage that fall, and so did not "work out" their allotted days.

Our boxes are placed on top of hives, the small frames hung in them just the same as in the larger ones, the bees allowed to go all around them. Unless this is the case they will be glued to sides.

We like such letters as this, and are glad when any one is disposed to try experiments for themselves, even if they do seem to find errors in us.

I did not observe any drone comb in the hive but there might have been some.

1. Do bees ever swarm before drones appear?
2. If I put on receptacles for surplus now will they be as likely to swarm as if it were deferred?
3. Novice maeks his hives 14 $\frac{1}{4}$  inches inside to receive ten frames; does that not crowd too much?

STEPHEN YOUNG.

We have often seen bees swarm before a drone had appeared in the hive from which the swarm came.

2. Putting surplus boxes on the top will not prevent swarming after the bees "get the fever," as we have had them swarm with plenty of room on top and at the sides. If room be given them very early, especially if it is below the brood combs, it seems to act as a preventive in most cases. If combs are emptied frequently by means of the extractor, during swarming season, there will be no disposition to swarm.

3. Fourteen and one-fourth inches

wide is the regular size where ten frames are used. If combs are straight as they should be, they will not crowd, and unless near together the bees lengthen out the cells.

Please send me eight ounces, or as much as you can, of pure *propolis* for medical purposes, for a doctor friend of mine. Send bill. If not tell me who can. Honey season over June 25th—thirty days—and extracted over 2,000 lbs. of honey from sixteen hives, and increased to twenty-eight hives. Will make four more tomorrow. Only one hundred pounds of comb honey. Where can I sell the extracted honey by the pound? and price.

H. NESBIT.

Kentucky.

This letter from our friend reminds us to say that bee-keepers, at this season of the year, will do well to save all the *propolis* possible. We often have calls like this, and could sell a considerable quantity if we had it. Those having any will report, and we will send them customers.

I bought six stands last fall, and lost one this spring. Now I have sixteen old and young. I think we are having a good season for bees so far.

J. B. CRIPPS.

Marshall Co., Iowa.

About thirty years ago I commenced bee-culture in the old way, robbing in the fall by knocking off the heads of round hives and taking out the honey to the cross-sticks. I soon quit that plan and adopted the barbarous plan of killing. Twenty years ago I commenced with common box hives with caps on top that would hold from fourteen to forty pounds of honey, which I have sold for 12½ to 20 cents per pound. My bees have done well until the last two years. The per cent. for the last twenty years has ranged from 30 to 200 per cent. on the capital; a larger per cent. than any of my other stock, and money. Now in my seventy-first year, being unable to work hard I shall make a new start in bee culture. I have adopted a plain moveable comb hive, and shall turn my attention closely to it. At another time I will give you my experience on wintering, &c.

G. TRULLINGER.

Bees have been doing very well here so far this season, but it is most too dry now. I have taken an average of forty-eight pounds from all of my bees, except the nuclei, and some from them.

West Virginia.

E. W. HALE.

The Italian bees for W. S. Curtiss arrived here in the best possible condition, but the small comb had slipped down in the frame. I put them into a No. 2 King hive this evening, and more docile

bees I have never seen. I shall advise all bee-keepers known of wanting Italians, to send to you for either stocks or queens..

White clover here is very abundant, and the season bids fair to be a good honey season. I have known quite a number of second swarms, and it is very early for second swarms as they very seldom come off before the 16th or 15th of July.

H. L. JEFFREY.

Connecticut, June 22, '74.

Have got two and a half barrels honey; white- and Alsike clover; are gathering some yet; extract from thirty-three colonies.

J. L. WOLFENDEN.

Wisconsin.

Our bees are doing well this summer. From twenty-six we now have sixty-six, all doing well. I will tell you my way to manage natural swarms. I place the hive where I wish it to stand, then I take the water sprinkler and wet them well, and shake them down in a basket, and take to the hive and put down in front of the hive. They go in and stay every time. I have had as many as six swarms in one day. I attend them all alone, and I take the quickest way. When the bees swarm they get up such heat they rather like the water, but perhaps you already know all this.

There are very few Italian bees in this county. We like your JOURNAL well.

MRS. M. A. RINGLAND.

Iowa.

I was taking out some honey boxes to-day, and found brood in them. They are placed above moveable comb frames about 12x12, and the boxes 5 inches square by 12 long, with small entrances. That was quite an unexpected discovery to me. I will be glad if some one can suggest why such a freak of Madam Queen.

T. I. JENNINGS.

Missouri.

April the 28th I hived two swarms, one at 12 M and the other about 3 P. M. and on Wednesday the 6th day of May they had their hives full, top and bottom. There are nine large frames below and 16x6x9 in the top, but not all capped over, as the harvest closed as suddenly as it came on. It was the finest, heaviest honey I ever saw, and all gathered from the wild China tree. I had others that did well, but not as well as those two. But they have done nothing since until the last day or so. They are now working on the Mesquit tree bloom, and on the sumach, which is just coming on, but what comes next I can't say now. Will let you know in the next.

A. K. B.

Corsicana, Texas, May 24.

No other branch of industry can be named in which there need be so little loss on the material employed, or which so completely derives its profits from the vast and exhaustless domains of nature, as bee culture.



## Miscellaneous.

### NATURE'S MEANS OF LIMITING THE INCREASE OF BEES.

[From Phillips' Southern Farmer.]

In the *American Naturalist* for May, is an excellent article, by Dr. A. S. Packard, Jr., the editor, on "Nature's Means of Limiting the Number of Insects." After showing how useful birds and small quadrupeds are in the work of reducing the number of injurious insects, and checking their depredations on the crops, fruits and other necessities of man, he continues as follows: "In fact, this indiscriminate slaughter of small quadrupeds and birds tends to destroy the balance or nature. There is a law of equilibrium in the distribution of the number of animals may be seen in a moment's examination of well known facts. The codfish is known to lay several hundred of thousands of eggs, and yet such is the destruction of life that few of the eggs are left untouched by other animals; and of the young that hatch, it may be safely said that only a pair of adult fish remain. Only two eggs of the original hundreds of thousands result in accomplishing the end for which so many were laid. So among the insects. The queen bee is known sometimes to lay, during her whole life, more than a million of eggs; during the height of the breeding season, under the most favorable circumstances, laying from 2,000 to 3,000 eggs, and yet how slight is the increase in the number of the honey bee. It would be an interesting study to trace out the causes that cut short the lives of so many bees. Then look at the aphides or plant lice, with their anomalous reproduction, by which the young are produced like the buds on a tree. One virgin plant louse was found by Bonnet to bring forth on an average about one hundred young, and so on for ten generations; now add up the number of young produced

by those of, say, ten broods, and we have the enormous number of 1,000,000,000,000,000, or a quintillion young, all descendants of one plant louse." Prof. Huxley estimates that such a number of aphides would weigh as much as five hundred millions of stout men, or more than twelve times as much as the whole population of the United States, even though the whole 40,000,000 were full sized men. But Prof. Packard says only a pair or two of all these survive, by which the species are represented in winter, as all the others are destroyed by their natural enemies and the vicissitudes to which they are exposed. We do not propose to controvert the point attempted to be made by these statements, but he must have a wrong understanding of the bees and their habits or he would see that his statement about the fecundity of the queen did not strengthen his position. The bee and the plant louse are the antipodes of each other in their generation. In a whole hive of bees there is but one individual that can, or ordinarily does, increase the race; and the others are either barren or males. Each aphid is a fertile female that does not lay eggs, but produces living young without the intervention of the males. There is no male plant louse, for, as Dr. P. states, "the young are produced like the buds on the tree." The young plant louse begins to produce young in a few days, so that there is often ten generations in a season, and unless there was some means in nature of limiting their increase, the world would be covered by them a foot deep in two years. With the bees it is different. The million or more of eggs that one queen can lay never produces a fertile insect capable of multiplying the species, except when necessity compels, and if favorably hived and managed all of them mature barren workers, until old age and exhaustion induce the production of a queen to take her place, and not for the purpose of mul-



tipling colonies, although that might follow the rearing of more than one queen. From the connection, coupling the queen bee with the codfish, and the plant louse, the inference would be that the 2,000 or 3,000 eggs laid daily by the queen produced perfect animals, like herself, that at maturity would be alike productive, and he adds that "would be an interesting study to trace out the causes that cut short the lives of so many bees." It is an interesting study, and has been so much so that most any well-informed bee-keeper could save the Doctor the trouble of investigating the matter somewhat as follows:

1. There is but one bee in a hive, however populous, that can lay eggs.

2. The vitality of a worker bee is limited and exhausted by six or eight weeks' labor.

3. The queen bee lays eggs (except a few) only when the workers are laboring, and, consequently, the normal population of a hive is the number of young that can be produced during the average growth and lifetime of a single bee. If the queen lays 3,000 eggs daily (the highest number stated by Dr. P.) and the lifetime of a laboring bee averages forty-nine days, and its growth twenty-one, a single colony would number 210,000; and should the queen cease to lay for that length of time, the lives of the whole population would be "cut short" by death from exhausted vitality, and the colony become extinct.

4. The queen bee can deposit eggs only when she has cells to put them in, consequently the number in one hive will be "limited" by the room she has to lay in. If her brood-nest is small, as is often the case in the hives in general use, the number of her increase will be correspondingly small; but, as in such hives, the room for depositing honey is insufficient for even the small number of workers produced, the equilibrium of the colony is destroyed, and an effort is

made, instinctively, to avert extinction, and other queens are produced, and the greater part of the bees, with the cramped queen, emigrate from the hive and seek a home where they can indulge their instincts with less restraint.

5. The queen, when left to herself, lays her eggs compactly together, and will not go out of her brood-nest to deposit eggs (except drone eggs occasionally), consequently she may often be limited in room for ovipositing when there is abundant room in the hive. Now, as only young bees can produce wax and build cells in which the older bees can store their honey, so soon as the wax workers are not produced in sufficient numbers to furnish storage room, disorganization takes place among the workers. Or if there be plenty of cells in which to place honey away from the brood, the bees will not store bee-bread there. It is always placed in the cells contiguous to the brood, and as the supply is greater than the necessities of the growing larvæ, when they are few, it further contracts the brooding room by being packed in the brood cells as fast as they are vacated, and there is not room for all of it in its proper place, and the same result follows as in the other instances.

It is only under such conditions as these that an increase can take place, naturally, in the number of communities, so that it may be easily seen that like causes produce opposite effects on the laws by which the plantlouse and the honey bee increase. To increase the colonies of bees the queen must be restricted in her laying; unlimited ovipositing prevent the increase. With the aphides, each individual being endowed with the same powers of reproduction that the first parent had, if unlimited in its ovipositing, the result is just the opposite, and nature uses different means to prevent a destructive multiplication.

6. Even among bee-keepers there



is misapprehension of what constitutes age in bees, as instanced in the "old bee theory" of loss in wintering bees. The vigor or vitality of the worker bee is determined as to duration by the amount of labor she performs and not by the number of days or weeks she has lived. A worker matured in the working season, if she labors incessantly, will have passed its adolescent state and be incapable of generating wax, feeding the larvæ or rearing queens in two or three weeks, but if hatched at the close of the honey season, and does not labor, she will still be a young bee, so far as any of the labors of the hive require, the succeeding spring. Bees do not "rust out;" they "wear out." The economy of the hive is such that the queen ceases to lay whenever the bees cease to labor, and when all the conditions necessary to the maintenance of a perfect equilibrium is understood, I can see no reason why bees may not be so managed that a colony may be kept up to its full strength the whole year.

The "lives of many bees" are not "cut short," in the sense which Dr. P. uses the expression. Birds catch a few, but I have never known serious damage to result from their depredations. The toad occasionally takes a bee for breakfast or supper. Occasionally mice get into badly constructed hives and do harm. The bee moth frequently finishes the destruction of a colony that inattention, bad management or bad hives has reduced to the verge of extinction. No strong colony is ever hurt by them.

From insect enemies, which Dr. Packard considers the most powerful agents in checking the increase of other insects, the bees suffer but little in this country, as the larger insects dare not attack them, and but few if any of their parasites have been imported. The hornet is accused of entering hives and making prey of the queens, but there are not two well authenticated instances of the hap-

pening of such a thing. Dr. Kirtland, somewhere, reports having witnessed one of them. The bee louse is unknown in America. Of the true parasites, such as live within the bodies of the bees or their larvæ and thus produce death, investigation has not been sufficient to detect any, although it is probable that what is known as the "bee disease," or "bee cholera," results from attacks of intestinal parasites, either animal or vegetable, and that it is either intestinal animalculæ or fungus. The microscope can alone determine this.

I have no doubt of the fact that several causes have operated to produce the mortality that has destroyed the bees during the last six years, and that bee cholera, so called, is not one but several distinct agents of destruction, which, in the absence of proper investigation, have been considered one. Unsuitable food has no doubt produced dysentery and other diseases; fungoid parasites and intestinal animalculæ may have assisted, but until some systematic scientific investigations are had we will likely be in the dark. Our Government, State and Nation still consider bee-keeping too small a business to extend to it any assistance, and our naturalists would greatly prefer to speculate on the habits and instincts of some extinct fossil bug or worm to dealing with the practical realities of so useful an insect as the honey bee.

D. L. ADAIR.

Hawesville, Kentucky, June 1, '74.

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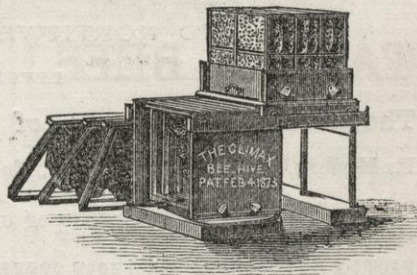
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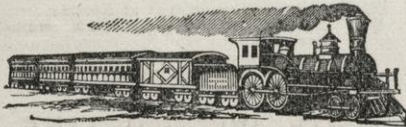
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WESTWARD.		TAKING EFFECT	EASTWARD.	
Leave.		MAY 17TH.	Arrive.	
No. 3.	No. 1.		No. 2.	No. 4.
7:40 p. m.	7:30 a. m.	Keokuk.....	4:00 p. m.	4:15 a. m.
8:58 "	9:05 "	Farming't'n,	2:33 "	2:25 "
9:38 "	9:55 "	Summit .....	1:42 "	1:28 "
10:22 "	10:52 "	Eldon.....	12:40 "	12:30 "
11:00 "	11:50 "	Ottumwa ...	12:00 m.	11:45 "
11:47 "	12:35 p. m.	Eddyville...	10:53 p. m.	9:55 "
11:50 "	12:40 "	Transfer.....	10:48 "	9:50 "
12:10 a. m.	1:00 "	Oskaloosa...	10:25 "	9:30 "
12:55 "	1:45 "	Pella.....	9:38 "	8:40 "
2:38 "	3:30 "	Altoona.....	7:47 "	6:47 "
3:10 "	4:30 "	ar D's M's lv.	7:15 "	6:15 "
12:00 m.	7:45 "	Gr'd Junct...	4:00 a. m.	1:00 "
	10:15 "	Ft. D., l'ye...		10:30 a. m.
Arrive.			Leave.	

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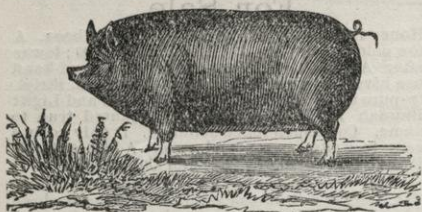
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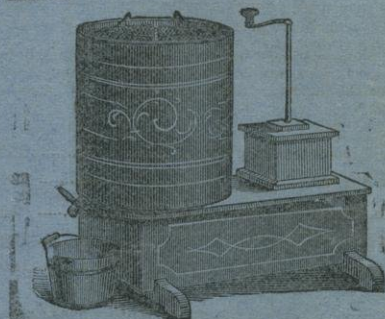
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