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## **Moon's bee world : a guide to bee-keepers. Vol 3, No 1 December, 1875**

Rome, Georgia: A. F. Moon and Company, December, 1875

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# MOON'S BEE WORLD,

— A GUIDE TO —

## BEE-KEEPERS.

VOLUME 3.

DECEMBER. 1875.

NUMBER 1

### BEE-KEEPING.

We take the following from A Manual of Bee-Keeping, published by Robert Hardwick, 102 Piccadilly, London, England:

A traveler, who has much acquaintance with continental rural life, can not fail to be impressed, when journeying in England, with the small number of Bee-hives he sees scattered about, amongst either the cottages of the laboring classes, or the farms and courts of the gentry, compared with what he sees abroad: and when, perchance, his eye alights on a hive or two, he will nine times out of ten find only the ancient straw skep in use, and that probably badly made. The rustic mind, although now used to the innovation of steam plows and threshing machines, has been quite content to jog on with his Bees in the same manner that his Saxon forefathers did a thousand years ago. But what a life, and what a death for the poor Bees! the hives are probably reeking

with moisture, dirty and decayed, and when the industrious laborers have, in spite of all such disadvantages and neglect, filled them with Nature's luscious gifts, the fate in store for them is suffocation, with the horrible fumes of brimstone; and this procedure is not practiced by the poor and ignorant only, but in many cases adopted by the educated and opulent, if, by chance, they own a few Bees.

"Ah! see where, robbed and murdered in that pit,

Lies the still heaving hive at evening snatched,  
Beneath the cloud of guilt concealing night,  
And fixed o'er sulphur while not dreaming ill,  
The happy people in their waxen cells,  
Sat tending public cares.

Sudden, the dark, oppressive steam ascends,  
And used to milder scents the tender race,  
By thousands tumble from their honied dome,  
Into a gulf of blue sulphurous flame."

— Thomson.

Oh, ye large-hearted Philanthropist,  
Gentle Lady, and Reverend Pastor,  
whose charitable hearts would faint  
with horror at the like tortures inflicted  
on creatures of a larger growth.  
Why do you permit this? especially as

such practices are, independent of the cruelty to Bees, wasteful, costly, and unnecessary. To the honor of the Clergy, be it said, they as a class far outnumber all others who have adopted the modern methods of merciful Bee-keeping. Tell an ignorant laborer that his honey can be got from the hive, his Bees preserved to work for him again, and that no more honey will be required to feed 20,000 than 10,000 little mouths during the winter, and you would simply elicit an incredulous smile, he certainly would not be induced to try, however lucidly the process was explained; but show him how to do it, let him see the result, and he will another year, perhaps, follow the example set, greatly to his own benefit as well as to that of his Bees. To all Bee-keepers who are thinking men or women, I commend my little book, which, carefully studied, will give every necessary instruction by which they may become accomplished Apiarians, and a center of knowledge for the enlightenment of others.

Associations and societies for the encouragement of agriculture, horticulture, and various other sister sciences, have for many years abounded in England, but it was reserved for 1874, to see the establishment of the first one for the encouragement and promotion of Bee-keeping, when the British Bee-keepers' Association, presided over by Sir John Lubbock, sprung into existence, through the exertions of nearly all our own leading Apiarians, whose observations and writings have contributed so largely to apiarian science. The Association did me the honor to elect me honorary secretary, and the member's small annual subscription of five shillings, sup-

plemented by liberal donations for a prize fund, enabled the Committee to hold an exhibition at the Crystal Palace, in September, 1874, of "Hives, Bees, and their Produce," of far greater magnitude than was ever gathered in Great Britain before. Such competitive exhibitions surpass everything else as a means of improving all sciences, and the present advanced state of agriculture and horticulture, is mainly attributable to them. The Apiarian Exhibition formed no exception, an immense impetus was given to Bee-keeping, and multitudes of persons vowed to keep Bees, pleased and astonished at sight of the wonderful supers of honey, and the interesting practical demonstrations of Bee management that were shown, where the Bees, thanks to skill, coolness, and courage of the manipulators, seemed to set aside all will of their own, obedient only to that of their masters. The Association hopes to make these exhibitions annual, and to further by a variety of other means the advancement of Bee-keeping, both as natural science, and particularly as a means of bettering the condition of cottagers, and the agricultural laboring classes, as well as the advocacy of humanity to the industrious laborer, the Honey Bee. The expenses naturally attendant on these efforts to do good altho' not heavy (no officers being paid), can only be met by the addition of members to the ranks of the Association, and the hearty co-operation of all Bee-keepers.

Many persons reading my account of how the bees are to be used will naturally feel surprised, and, perhaps, doubt that they themselves could ever arrive at a point that would enable them to remove all the Bees from a

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hive, shovel them up or drive them about wherever they desire them to go, and will, perhaps, think they might as well be told to enter a lion's den and put the noble beasts through their performances after seeing the keeper do so. To those unaccustomed to Bees the doubt is reasonable; but there is no secret or charlatanism in the matter. A certain amount of courage must be present with coolness and quietness; the rest is easy if my instructions are followed. During the practical exposition of Apiarian manipulations at the Crystal Palace, more than one lady was courageously present in the manipulating room, by their own choice, without receiving any injury, although thousands of Bees, driven from their hives, were crawling and flying all around, while the spectators behind a glass screen gazed with astonishment both at the Bees and ladies. The facility of handling Bees is not of modern origin. A century ago, a Bee-keeper named Daniel Wildman, who was domiciled in Holborn, astonished London by his performances with these insects. He had an exhibition at Islington, the records of which, although we must take them "with a grain of salt," show that he had a considerable acquaintance with the fears and dispositions of Bees. It is said he could cause a swarm to settle almost instantaneously where he pleased, even on his head, remove them to his hand, a window, table, &c., at pleasure. This seemed wonderful; but the solution was simply possession of the queen—where she went, there went the Bees! To keep Bees in a merciful and rational manner it is by no means necessary to undertake all the operations I describe, or even adopt frame hives. If the

rudest form of hive, the straw skep, be maintained, it is yet not at all necessary to destroy the Bees to get their honey. Read and master the one chapter on "Driving," and the Bee-keeper can rifle their stores, yet preserve their lives and strengthen his stocks for next year, so that they will be able to do double work in reward for their master's humanity.

"Leave them happy in their copious store,  
A part they'll give; and why desire ye more?  
And must ye kill? Mistaken thought—ah!—  
shame,

No more involve them in sulphurous flame."

Cottagers can, if they desire it, gradually master all other manipulations in time. Gentlemen who are already adepts will willingly give all the help in their power. The cottagers of Scotland far exceed the English in the ability they display in Bee-keeping. The country gentlemen desirous of helping his poorer neighbors, cannot do a better thing than furnish pattern improved hives, and show how they are to be managed, supplemented, if need be, by a swarm of Bees which may be repaid out of its increase.

When an Apiarian can handle his Bees with impunity, their study becomes a fascinating pursuit, their doings are so truly wonderful—the temptation to inhale the fresh air and watch the Bees becomes too strong to be resisted, a man's mind and knowledge expand from the wonders he beholds. New friends are made, ideas are interchanged, inventive faculties are set in motion to fashion some aid for the Bees or their master, and many are the delights that spring from the contemplation of the busy throng. And then the children! what delight they exhibit to see the busy Workers set out or return from their labors in the

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fields; what lessons in mercy do they receive when they pick up the poor little Bees who, returning to their hives, fall chilled to the ground. Children are easily taught not to hurt the Bees, and they then discover the Bees will not hurt them. My own little ones, two or three years old, will stand before the hives peering into the entrance quite unmolested, and they will at my bidding allow the Bees to crawl over their hands—knowing they will receive no injury. Fear for the children need never deter any one from keeping Bees.

Amongst all naturalists there is a kind of Freemasonry which makes welcome the visit of any person with similar tastes; and if the Bee-keeper who is desirous of learning more, find himself in the neighborhood of a scientific Apiarian, let me counsel him to pay the latter a visit; he will, I am sure, be truly welcome to a sight of the apiary and a friendly chat, which must be barren indeed if both parties do not part wiser men. Many years ago, as an entomologist, I collected insects of another order. Whenever I found myself in a strange locality my first inquiry was for others of a similar taste on whom I made a point of calling—need I say I never met with a rebuff, but, on the contrary, made many pleasant friends.

One of the principal writers on the Bee was Francis Huber, an eminent naturalist of the last and present century. He was totally blind; yet even this great deprivation did not hinder him from becoming the greatest and most accurate observer of Bees that had ever then lived. His observations were made with the eyes and assistance of his servant, Francis Burnens, who, although a peasant, was a man

of great talent, possessing indefatigable energy and enthusiasm; Huber was also assisted by his wife. His observations and deductions made, although many of them have since been proved incorrect, gave to the world a wonderful store of facts hitherto unsuspected, and laid the foundation for the labors of many naturalists of later times. His "leaf hive" was the first frame hive; it was very valuable for observation purposes, and is yet often used, although not so convenient as some newer inventions.

Wise little creatures are Bees! for they seem to be warned of the approach of bad weather by some particular instinct; it sometimes happens when multitudes are abroad very busy, they will on a sudden cease from their work; not a single one stirs out, and those that were away hurry home in such crowds that the entrance of the hive is too small to admit them. On such an occasion, look to the sky and you will, probably, discover some of those black clouds that denote impending rain. Whether the Bees see the clouds gathering, as some imagine, or whether they feel some other effects of the change in their bodies, is not yet determined; but it is asserted that no Bee is ever caught in a sudden shower, unless it be at a very great distance from the hive, or injured by accident.

Searching for wild Honey Bees in England, would, I am afraid, be an unprofitable task. In many country districts Bees are known to be located in certain hollow trees or roofs of houses; but the proprietors, although, perhaps, they would be glad to get rid of the Bees, would not so readily allow their house to be dismantled or their tree to be cut down. In Ameri

ca, however, they are not so particular, and many men make a living "Bee hunting;" others who do not follow it as a calling do not fail to take advantage of the find when it occurs.

The time that Bees will inhabit some stations is wonderful. Thorley tells that a swarm took possession of a spot under the leads of Ludovicus Vives, in Oxford, where they continued one hundred and ten years, from 1520 to 1630.

The way Bees are tracked is simple in the extreme.

"He fears no bailiff's wrath, no baron's blame,  
His is untaxed and undisputed game."

—*Crabbe.*

The following I extract from King's Bee-keepers Text Book:—

"When bees are at work upon flowers, a 'line' may be started by taking a piece of board upon which is a small piece of comb filled with diluted honey. You will also need a glass tumbler and a piece of brown paper, or dark colored cloth. Having found a bee upon a flower, place over it the tumbler and leave it inverted upon the cloth till the bee rises to the top. Wait till it has done buzzing, (that it may not get besmeared with honey), then carefully rise the tumbler and place it over the honey on the plate, wrapping the cloth around the upper part of the tumbler to darken it. The bee will descend towards the light when, coming in contact with the honey, it will commence loading up. Gently remove the tumbler while the bee is at work, and, stepping a few feet, place your eye near the ground. With the clear sky for a background it is easy to keep sight of the bee as it rises, describing several circles at first, then striking a 'bee line' for home. It soon returns with many others. When a number

of bees have got to work, cover them with the tumbler and, moving them along the line towards where the hive is supposed to be, again liberate them. Care must be taken not to go too far, or else the bees may not return. If the place is now supposed to be near, mark the line of bees by letting an assistant stick in range a few stakes. Again cover the bees and carry them a few rods right or left of the line in order to get a cross line.

Mark this also with stakes, then lengthen both lines by sticking more stakes, and the hive will be found where the lines meet."

An old book, Letters from an American Farmer, contains the following graphic description of bee hunting:

"After I have done sowing, by way of recreation I prepare for a week's jaunt in the woods, not to hurt either the deer or the bears, as my neighbors do, but to catch the more harmless bees. I cannot boast that this chase is so noble or so famous among men, but I find it less fatiguing and fully as profitable; and the last consideration is the only one that moves me. I take with me my dog as a companion, for he is useless as to this game; my gun, for no one ought to enter the woods without one; my blanket, some provisions, some wax, vermilion, honey, and a small pocket-compass. With these implements I proceed to such woods as are at considerable distance from any settlements. I carefully examine whether they abound with large trees; if so, I make a small fire on some flat stones in a convenient place. On the fire I put some wax; close by this fire, on another stone, I drop honey in distinct drops, which I surround with small quantities of vermilion laid on the stone, and then I

retire carefully to watch whether any bees appear. If there are any in that neighborhood, I rest assured that the smell of the burnt wax will, unavoidably, attract them. They will soon find out the honey, for they are fond of preying on that which is not their own, and in their approach they will necessarily tinge themselves with some particles of vermilion which will adhere long to their bodies. I next fix my compass to find out their course, which they keep invariably straight, when they are returning home loaded. By the assistance of my watch, I observe how long those are returning which are marked with vermilion; thus possessed of the course, and in some measure with the distance which I can easily guess at, I follow the first, and seldom fail of coming to the tree where the bees are lodged. I then mark it, and thus with patience I have found out sometimes eleven swarms in a season; and it is incredible what a quantity of honey these trees will sometimes afford, it entirely depends on the size of the hollow, as the bees never rest or swarm till it is filled—for, like men, it is only the want of room that induces them to quit the maternal hive. The first bees I ever procured were thus found in the woods by mere accident, for at that time I had no kind of skill in this method of tracing them. The body of the tree being perfectly sound, they had lodged themselves in the hollow of one of its principal limbs, which I carefully sawed off, and with a good deal of labor and industry brought it home, where I fixed it up in the same position in which I found it growing. This was in April. I had five swarms that year, and they have been ever since very prosperous. This business

generally takes up a week of my time in autumn, and to me it is a week of solitary ease and relaxation."

Bee-keeping is more or less carried on in civilized and many semi-civilized countries; from the cold inhospitable region of Siberia, to the sultry shores of Africa, we may find bee hives often in vast numbers. Spain teems with them; in the rural districts they are everywhere found, as also in Russia where, in the province of Yekarterinoslaw, there are nearly four hives to every human being.

In former times, Poland was celebrated for its bee-culture, and is still so now to some extent in the province of Lublin, it having everywhere else fallen into decay. The reason why bee-keeping is so industriously carried on in Russia is two-fold. Firstly, because the peasants use honey instead of sugar; and secondly, because wax tapers to the value of 1,200,000 rubles (nearly £182,500) are required for the churches. Buschen states the quantity of honey annually produced in European Russia to be 600,000 to 700,000 pounds (9,643 to 11,250 tons), and a proportionate quantity of wax.

In the United States, apiculture is carried on largely, both as a distinct trade and adjunct to other farming, with a great amount of scientific attention. Many of our most valuable apicultural improvements and inventions have had their origin there, and in no other country would the old straw skep and death-and-brimstone system meet with greater contempt.

California may, probably, boast of one of the largest and certainly the most productive apiary in the world; and its owner, Mr. Harbison, undoubtedly occupies the position of one of the foremost bee-masters, at any rate

as far as money-making from the business is concerned. This gentleman has now 2,000 colonies, which last year produced 150,000 pounds or 67 tons of surplus honey of very excellent quality, netting by sales the nice little sum of \$30,000! The labor in attending to these bees is done by eight young men who are apprenticed to the business; and some of them are very expert at apiarian manipulations.

Germany, too, boasts of many famous bee-keepers and in comparison with that Empire, Great Britain is far behind. Here, where one hive is kept, we might have a thousand; where one pound of honey is gathered, a ton is wasted. Vast quantities of honey are annually imported from France and the West Indies which should be supplied by our own rural laboring population who, in addition, might, as I have above stated they do in Russia, use it in lieu of sugar. According to the best authorities, it is impossible to overstock a neighborhood with bees—at least it never has been done—and, therefore, we may conclude there is no danger here. In Germany, many apiaries contain in close proximity 200 to 300 hives. Ehrenfels had 1,000 in three separate establishments, but sufficiently near together that he could visit them all in half an hour's ride. In Russia and Hungary, apiaries embracing from 2,000 to 3,000 hives are not unfrequent, and as many as 4,000 are often congregated together at one point on the heaths of Germany. It is calculated that in Hanover there are 141 hives to each square mile; and a German writer alleges that the bees of Lunenberg pay all the taxes assessed on their proprietors, and leave a surplus beside—this in a district so barren that it has been called the Arabia Petrea of Germany.

In former times, the Island of Corsica, comprising 3,790 square miles, paid to Rome an annual tribute of 200,000 pounds of wax, which presupposes a production of two to three million pounds of honey; and East Friesland, a province of Holland, maintains at the present day an average of 2,000 hives per square mile. These statistics could be indefinitely increased, and they show that, comparatively, Great Britain is bare of bees. I question if we have one colony per square mile.

Oettl says: "When a large flock of sheep is grazing on a limited area, there may soon be a deficiency of pasturage. But this cannot be the case with bees, as a good honey district cannot be readily overstocked by them. To-day, when the air is moist and warm, the plants may yield a superabundance of nectar; while to-morrow, being cold and wet, there may be a total want of it. When there is sufficient heat and moisture, the saccharine juices of plants will readily fill the nectaries, and be as quickly replenished when carried off by the bees. Every cold night checks the flow of honey, and every clear warm day reopens the fountain. The flowers expanded to-day, must be visited while open, for if left to wither, their stores are lost. Bees cannot collect to-morrow what is left ungathered to-day."

How long shall it continue to be said that we thus allow God's gifts to be wasted before our eyes? This has become an age of utilization. See the multitude of formerly "waste" products that are now made useful; and yet, throughout the length and breadth of this flowery land:

"Full many a flower is born to blush unseen,  
And waste its fragrance on the desert air."

—Gray.



I appeal, therefore, to the clergymen, the country gentlemen, and all those who, by their rank and position, are looked up to, and have influence with the laboring classes, and would say to them: Encourage by every means in your power the spread and growth of bee-keeping. Teach by the force of example what satisfactory results may be obtained by improved hives, and a more sensible and humane policy towards our interesting and industrious little fellow laborers; let it be seen that the produce of a dozen hives, with little labor, and scarcely any outlay, will suffice to pay the rent or find shoes for the little ones; and in the course of a few years, we shall find no cottage without its hive or hives, and the old barbarous system of bee slaughter will be quite a thing of the past.

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THE SOUTHERN KENTUCKY BEE-KEEPERS ASSOCIATION.

The Association met at Burksville, Ky., on Wednesday, September 15th, 1875; officers present: Dr. N. P. Allen, President; H. W. Sanders, Secretary; R. A. Alexander, Assistant Secretary.

The President called the meeting to order. Prayer was offered by Mr. R. A. Alexander of Warren county.

On motion the calling of the roll was postponed. The proceedings of last meeting were read by Assistant Secretary R. A. Alexander. On motion the same were unanimously adopted.

The following named persons became members of the Society:—

Jas. H. Richie, Burksville, Ky.; T. H. Hancock, Burksville, Ky.; Geo. N. Allen, Grider, Ky.; Ed. B. Pace, Marrowbone, Ky.; F. C. Baker, Burksville, Ky.; J. G. Allen, Grider, Ky.; Mrs.

Jane E. Allen, Grider, Ky.; Miss M. L. Allen, Grider, Ky.; Mrs. Lucy Hancock, Burksville, Ky.; H. C. Baker, Columbia, Ky.; Daniel E. Baker, Burksville, Ky.; J. B. Allen, Grider, Ky.; Mrs. H. M. Richie, Burksville, Ky.; Mrs. Josie Dunn, Burksville, Ky.; Mrs. Lou Pace, Marrowbone, Ky.; Mrs. Bettie Cheek, Burksville, Ky.; R. M. Cheek, Burksville, Ky.; Jas. A. Gilmer, Burksville, Ky.; M. G. Akin, Grider, Ky.; E. Ammons, Burksville, Ky.

President Allen made an instructive and interesting address which was favorably received.

A communication was read from Mr. Frank Benton of Knoxville, Tenn., and the Secretary was requested to return the sincere thanks of this Association to Mr. Benton, for the very valuable information contained in this paper.

Deferred business: The third question for debate, left over at the last meeting, was then taken up:—"What is the best vegetable to cultivate for bees to gather honey from?"

Mr. Cheek said he thought buckwheat the best, as it could be sown so that it would bloom in July and August, and furnish rich pasture for our bees when there was none to be had from other sources.

Mr. Alexander said, I would sow turnips in the fall, for early pasture for bees in the spring. It furnishes pollen in abundance. Then came fruit blossoms and white clover, which pays, not only for bee pasturage, but are valuable crops to cultivate. Then, there is mustard, catnip and buckwheat that are rich honey plants.

Mr. Hancock spoke as follows: Mr. President, I see no reason why these hills should not flow with milk and

honey. I now propose to become a teacher—have others do the manual labor and I will do the head work. I think we should cultivate the honey locust in hedges, and hedge up all this ridge land, and plant it in fruit trees, and sow it in white clover. The clover is fine for hogs, the apple crop is valuable, and if boiled and fed will pay better than making brandy.

Mr. Richie remarked, I think the honey locust a good honey-tree, but it will not bloom in hedges, and it is not pleasant to come in contact with, as it is full of thorns. I agree with Mr. Alexander in regard to the turnip bloom, as it affords early pasturage, that is invaluable.

The President said, that turnips and all the small and large fruits afforded excellent bee pasturage, but that the white clover stands at the head of the list as a honey-plant, affording the finest honey and the greatest yield of all the honey plants. The poplar, linn, sour-wood, and other forest trees might be cultivated with profit. For late summer and fall pasturage he would recommend catnip and buckwheat.

On motion, the President appointed the following committees, with instructions to report at the afternoon session:—

Committee on state of Bee Culture in southern Kentucky, with instructions to report the number of hives owned by the members of the Society, the kind of hive, the variety of bees, and their value:—

R. A. Alexander, H. W. Sanders, F. C. Baker, R. M. Cheek.

Committee on Questions for Debate at evening session:—

Wm. Cheek, T. H. Hancock, H. C. Baker, J. H. Richie.

Committee on Hives, Extractors, etc.:—

R. M. Cheek, James H. Richie, M. Hancock.

The Society adjourned till 2 o'clock P. M.

#### AFTERNOON SESSION.

The Convention met, President in the chair. The question was taken up:—"When should bees be fed?"

Mr. Alexander said, for stores to winter on, feed in early fall with sugar syrup in time for them to cap it over. To feed for brood raising in early spring, commence about six or eight weeks before the honey-harvest, so as to have them strong when the harvest comes.

The President agreed with Mr. Alexander, and said, they should be fed when they are gathering no honey, in the spring or in the summer, during long wet spells or excessive droughts. It was often the case that they would stop brood-raising; a little feed at such times paid well.

Mr. Richie said, he had found feeding for brood raising very beneficial. He gave an account of a natural swarm that he gave a sheet of brood comb, and in two weeks they had filled their hive full of comb, every cell being filled with honey, and not an egg or young bee could he find in the hive. The bees swarmed and he hived them in a new hive. They did well, filling the hive with comb, brood and honey.

Mr. Cheek said, the most important time to feed was about six weeks before the honey harvest was expected. To continue feeding up to the time the bees began to gather honey, then the hives would be strong in numbers, and the extractor could be used every four or five days.

The committee on Questions for

Debate reported the following, which was adopted:—

1.—The best time and manner of transferring bees.

2.—Moth preventatives.

3.—How to winter bees most successfully.

The committee on Extractors and Hives reported as follows, report adopted:—

We have examined some kinds of extractors and hives, and think an extractor with a stationary can the best, and recommend the Langstroth hive.

Your committee with instructions to report the number of hives owned by the members of this Society, the kind of hives, variety of bees, etc., have not been able to get a complete report from all the members, but beg leave to report the following:—

Number of black bees in box hives, 101. Value of same, \$505.

Number of black bees in movable frame hives, 284. Value of same, \$2,840.

Number of Italian bees in movable frame hives, 234. Value of same, \$3,765. Total \$7,110.

The question was then taken up, "The best time and manner of transferring bees?"

The President being called on, said, he preferred early spring for transferring, as there was but little brood in the hive then and not so much honey. The combs were lighter and could be handled easier and with better success. As to the manner, he would first blow in smoke at the entrance until the bees were subdued, then invert the hive and place on it a box to secure the bees, tie a cloth around to keep the bees from coming out, and by drumming on the hive fifteen or twenty

minutes, the bees with the queen, would pass up into the empty box, which could then be set on the old stand and the sides of the old hive could be pressed off, and comb, brood, and honey taken out, put in frames and hung in new hives. Preferred wire to hold comb in frame. Put the new hive with the comb, etc., where the old hive stood, or in a new place if preferred, and proceeded to hive as a natural swarm.

Mr. Cheek said, his manner of transferring was similar to Dr. Allen's, but preferred driving out the swarm, putting them in a new hive and waiting until the old hive would raise a queen before transferring.

Mr. Hancock said, he preferred to have a young queen to give the hive instead of waiting for them to raise a queen, as they would not lose any time on account of being queenless.

The remaining questions were left for debate at the next meeting of this Society.

On motion, the following persons were appointed to collect the best honey-producing plants in their respective localities, and send specimens of all flowers of a doubtful nature to the American Bee Journal, with the time of blooming, etc., requesting the true name; the committee requested to report at the next meeting of this Society:—

Wm. Cheek, Cumberland county, Ky.; R. A. Alexander, Warren county, Ky.; H. C. Baker, Adair county, Ky.; Dr. Stevenson, Barren county, Ky.; James Irwin, Allen county, Ky.; T. E. Shelton, Logan county, Ky.

The thanks of this Society were tendered to the Grange for the use of this hall, and to the citizens of Burksville, for their hospitality.

On motion, the Association adjourned, to meet on the third Wednesday in October, 1876, at 10 o'clock A. M.

N. P. ALLEN, President,

H. W. SANDERS, Sec.

[We are surprised to see the above Association recommending a northern Bee Journal to its members, in the face of the fact that the BEE WORLD is a southern bee-keepers' guide, and is far better adapted to the wants of such readers than one so far north. We place great confidence in the correctness and soundness of the advice contained in the columns of the A. B. J., but its usefulness is not so much felt south as north. For the purpose of giving the south a guide to profitable bee-culture, the BEE WORLD was established, and its success has been so great that we flatter ourselves that such an omission as the one alluded to above was not intentional.]

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HOW I MANAGED MY APIARY IN 1875,  
AND MY REASONS FOR IT.

—  
R. M. ARGO.  
—

FRIEND MOON:—The September No. of BEE WORLD is just at hand, this Nov. 29. Who is to blame? Had it come on time, there are several items I would like to have answered to in the October number. But the time having passed I will write at present on the reasons for managing my apiary as I did this year.

Every apiarian should endeavor to manage his bees according to the aim for which he is running them in a particular season, as, for instance: Should queen raising and the multiplication of his bees be his object, he must expect little or no surplus honey,

unless the season is an extra good one; as the swarming and dividing of the bees necessarily keeps them weak, so that comb building and winter storage is about all that could reasonably be expected of them. In queen-rearing, the strong stands are expected to furnish the nuclei, also a few frames of brood and honey, thus tending to weakening the apiary as to honey.

But should the apiarian's aim be honey exclusively, the management would then be quite different. The increase of colonies would be regulated according to the season, and strength of the colonies. The surest and most economical mode I know of how to make artificial swarms without weakening an apiary in the least, is to take a frame each from two very strong stands, with the bees on them, and place them in one end of an empty hive, putting in a partition board. You might take a third frame, of sealed honey, from a third hive if there was not enough sealed honey in the two frames of brood. In eight days open this nucleus and count the cells, then determine how many stands are very full of bees, and about ready to swarm, or what number of swarms you think is prudent to make, so as not to weaken them, as, for instance, suppose you had thirty stands, very strong; you can then take five empty hives, and two frames for each of them, taking one from a hive, replacing with empty frames, or what is better, comb frames if you have them. Then on the tenth day, at evening, open the first-made nucleus, cut out five cells, (if there were at least enough to leave one in the nucleus), and place these cells carefully in the other five nuclei. In a few days these cells will hatch, and by the time the young queens are

laying each of the thirty old stands can spare at least two frames each, which will fill out these six nuclei to strong swarms at once without apparently weakening the old ones. It will be understood that in this last transfer of frames, the bees must be brushed back into the old hives, as only sealed brood with the young bees just emerging from the cells is needed here.

Last spring, having wintered my bees successfully, I sold more than half my apiary,—nearly four hundred dollars worth—thus reducing my apiary to about thirty-four stands. But many of them being so weak and reduced, after the late freeze, I could only call them about twenty six stands and eight weak nuclei. I determined to run about fifteen for honey, and the remainder for increase of bees, queen raising, etc. Knowing how short, fickle, and uncertain some seasons are here; that some seasons the flowers only contain honey for a few days, as in 1873, I kept these fifteen stands very strong as to bees; and, just as I expected, there was but a few days' yield of honey, and these few days were not connected. They were broken by storms, wind, and showers,—some weeks yielding honey one day, some two, some three. These fifteen strong stands, being kept in readiness, took advantage of the few days of honey yield and gave me 1,334 lbs. of extracted honey, besides laying up for winter. But the others, with all the queen-rearing nuclei being built up into strong stands as to bees and combs, put the increase to seventy-eight; but about fifty of them had to be fed for winter, at a cost of about ninety dollars. I cannot say that I increased too fast, from the fact that I have a good sale of bees every spring;

but had I made a little less increase, I may not have had but half the feeding to do. I would rather have only increased to fifty, and had no feeding to do; or, if it had been possible, I would rather have only increased to forty, and got three times the amount of honey I did, as I consider twenty cts. per pound a good price for extracted honey at home.

The stand that gave the most honey was one whose queen I sent off, giving them another, which they killed, and still failed to raise one; and when I gave them a cell, which hatched, it turned out a drone-layer, thus keeping them three weeks or more without brood to care for, in the midst of the honey season while full of bees. Some apiarians say if you remove the queen the bees will not work well; but if this is a fact, then this case was an exception to the rule, for this stand gathered nearly twice as much as any of the rest. They took a fertile queen at last, are now full of bees, and needed no feeding for winter. The last time I extracted this stand, all the sealed brood was out, and every cell from top to bottom sealed with honey, a thing I never saw before. This shows what bees can do when they have nothing else but storage of honey to attend to; and also what amounts of honey and care it costs a stand to attend to the eggs and brood-rearing. What would have become of this stand, or any queenless stand at a time of great honey yield, if, after giving it a fertile queen I had not extracted the honey? Of what use would she have been, having no empty space in the hive to lay, without the extractor? I may not have got one tenth the honey I did.

One apiarian who began this spring,

ninety miles north of me, with twenty-nine stands; fed to his bees three hundred pounds of honey to keep them alive; ended with nineteen stands and yet had to feed for winter. I call this good management, for his aim was honey and he kept his stands in readiness for it; but it did not come, even for a few days. I had no feeding to do during the honey yield, and had I not seen there was a yield, I would have allowed no increase, but rather a decrease like the above apiarian.

As queen raisers have brought the price down so low on queens as to leave no profit at all where a man can get twenty cents for his honey, I expect to run my apiary for honey next season. Bees all right up to the present time.

*Lowell, Ky., Dec. 1, 1875.*

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A LETTER FROM SHREVEPORT, LA.

W. E. PAXTON.

MR. MOON:—My wife charges me with being smartly "Moon"-struck, and I do own to being bee-side myself a little. At any rate I very much appreciate Moon's bee literature, and have embarked, to some extent, in bee-culture. Last spring I bought three colonies of Italians, in movable frame hives, which, besides increasing to five, yielded me about two hundred pounds of delicious honey, besides laying away a plentiful store for their winter use. I am so well pleased with my first year's experience, that I have purchased my neighbor Jones' entire stock, and, with ten hives left in my care, have a snug little apiary of thirty eight colonies; most of them in fine condition, with abundant supplies. Six colonies I find rather weak, and I have begun to feed them for the

double purpose of sustaining them, and also to stimulate the queen to multiply and replenish, these warm days in November. In the absence of patent feeders, which I could not easily procure, I bought some small tin plates about five inches in diameter. These I fill with syrup made from choice brown sugar, four pounds to the quart, putting straw across to afford the bees a resting place while feeding. These I place in the back part of the hive, in a place made vacant by the removal of extra frames. To prevent the necessity of removing the top board every time I fill the plates an auger hole is bored in the top board just over the plate, in which I insert a long-handled funnel into which pour the syrup. The funnel is then removed and the hole stopped with a cork.

This is one of the best honey-producing districts in the state. The valley of Red River, from Spanish Lake, just above Natchitoches, to the Great Raft, near the State Line, including that network of smaller lakes, known on the maps as Caddo Lake and Wallace Lake which finds its outlet through Bayou Pierre, together with Bistenaue, Saline and Black Lakes, furnish abundant bee pasturage. The low lands, besides innumerable willows, produce a rich variety of flowers, dewberries, and May haws in the early spring, a thousand nameless flowers in constant succession during the summer; and the golden rod and tangle foot late in the fall—the latter still in bloom (Nov. 19). White clover seems to be indigenous to Red River soil. On the border of these Lakes there is also a good deal of linden. On the hills adjacent there is much hickory from the leaves of which ex-

udes a saccharine matter known as honey-dew.

We have, however, one draw-back. Among this rich abundance of bee pasture we have the bitterweed, very much resembling dog-fennel, which begins to flower about the middle of August and continues in bloom until frost, and in sheltered places long after. The honey and the comb made from this plant is of a rich golden color, but very bitter. Fortunately, however, this pest, of which the bees seem to be very fond, is disappearing before the wild sage, very much to the relief of bee men and dairy men, who are equally annoyed with it. We have also the wild coffee, of which the bees seem to be very fond; but there is not enough about me to determine the character of honey it yields. It blooms from the first of July till frost.

Wisdom is the aggregate of human experience; so by putting our experiences together, we bee-keepers may become as wise as the little insects we patronize.

*Skrevoport, La., Nov. 19, 1875.*

[We are glad to hear from you, friend Paxton. Many of our northern readers have but the faintest idea of the resources of your State, and we want the facts fully written up concerning them.]

Three years ago two young ladies of Oakland, (Cal.) having just completed their education, went to Los Angeles and formed a co-partnership in bee-farming. With their scanty savings in school teaching, they got possession of some bee pastures, kept on teaching and extending their business, and secured two hundred stands of bees. Last week one of the partners brought to this market 2,500 lbs. of white sage honey, and has another 1,000 lbs. coming. The names of these worthy examples of tact and industry are Miss Emma Smith and Miss Josie Lindley.—[Pacific Rural Press.

#### INTRODUCTION OF ALIEN QUEENS.

The apiarian world is greatly indebted to you, Mr. Editor, for your able and interesting article on 'Bees feeding Encaged Queens,' in the September number of the present volume, p. 90. The principle there laid down, as deduced from actual practice, is one of great importance to all cultivators of the honey bee, although, as a rule, it has exceptions.

That, 'unless there be hatching brood in a hive the safe introduction of an alien queen by the honeyless cage cannot be relied on,' is undoubtedly a maxim which must henceforth claim the assent of all. In three cases during the month of July last, I inserted alien queens by means of my queen-cages, in stocks which had become queenless after swarming, there being neither brood nor eggs in either of the three hives, with the exception of a small quantity of drone brood on the point of hatching,—the young queens having been lost on their hymeneal flights some twenty-five days previously. Two of these stocks received the queens, after twelve hours' imprisonment, with every symptom of delight. The third neglected the prisoner, leaving her to perish from starvation.

In these experiments the center comb in each hive was removed, and the cage so placed that the queens could not help themselves to food. In all these instances there were young bees of not more than a few weeks old, and these, doubtless, performed the office of nursing bees to the imprisoned queen-mothers.

But how shall we explain the fact I am now about to relate? Whenever I have received Ligurian queens from you, on taking the black queen from

the cage and putting the Ligurian in her place, I have almost invariably given the said black queen to the bees which had accompanied the Ligurian sister, engaging her under a wire pipe-cover on the small piece of comb in which the Ligurians had travelled, and in nine cases out of ten, the black queen has been gladly welcomed. Shall we say, then, that in these cases also, the travelled bees had not passed beyond the nursing age?

This is certainly possible, but, perhaps, scarcely probable. However this may be, the safest plan in all cases is, to place the cage where the queen can help herself to food. To show the obstinacy of bees, occasionally, in refusing to receive a stranger-queen, allow me to relate an experiment made only last week in my apiary. Having a Ligurian queen which I have prized highly, on account of her color, size, and strain, I was anxious to remove her from a weak stock to the head of a large and flourishing colony of black bees.

The black queen was duly removed, engaged twenty-four hours between two brood combs, and replaced by the Ligurian, which after a short imprisonment was introduced to the hive. From the agitation of the bees at the entrance, and the peculiar fluttering noise from the interior of the hive, I had no doubt that the newly-introduced queen was encased. After several hours of suspense, in a vain hope of a cessation of the commotion, on opening the hive, I at once discovered the well known little ball of clustering bees which betokens an encasement, and from the center of which the poor queen was quickly released and recaged uninjured.

Four times was this operation re-

peated, after imprisonments of various periods, but always with the same result, until at length, wearied with the obstinacy of the bees, after more than a week's trial, I withdrew the queen—sprightly, uninjured, and in fine condition—and presented to the rebels an unimpregnated princess, which was immediately, and with every demonstration of joy, received as their chosen ruler. As regards this princess, more anon.

To another set of rebels which refused a queen, I yesterday applied the fumes of fungus, and while comatose, introduced into their midst the rejected one, with her body-guard. This morning I had the pleasure of seeing her perambulating the combs with every mark of attention from her new subjects. Out of numerous introductions by means of fungus, spread over many years, I have not experienced a single failure, nor do I think that the effects of the fungus have been in the slightest degree injurious to the bees. To all, save skilled and practiced apiarians, I strongly recommend this plan of introduction. One invariable effect of the fungus is excitement, lasting for one or two days, during which the bees exhibit every symptom of having lost their queen, but if the hive be examined the newly introduced queen will be found perfectly happy amongst, and honored by, her people. The excitement gradually calms down and the work of the hive progresses as before, or even with greater energy. Indeed some of my strongest and most flourishing colonies have received their queens unconsciously.—[British Bee Journal.

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This is the first number of volume 3; have you renewed?



## GUIDE COMBS.

When using frame hives it becomes an absolute necessity to secure straight combs, and as the bees have no knowledge of their owner's preference, they are very likely, if untaught, to build their combs the way their fancy teaches them, and they often do not forget that the line of beauty is a curve. Now to induce the bees to build straight, it is only necessary to lay the foundations of the combs for them, and this is done in various ways; the simplest is to cut up good clean worker comb into straight strips (which need not be more than one or two cells thick), and cement these with melted wax on the underside of the top bar of each frame, taking care that the mid rib of the comb is exactly in the center of the bar, and that the comb is the same way up as it was built. A useful cement, always ready for this purpose, may be made by bee's wax dissolved in its weight of benzole. It should be rubbed smooth on a slab of glass or stone, with a spatula, or thin table knife. A layer of this should be spread down the center of the bar, and the thin strip of comb pressed on to it, in the same manner as a brick-layer would lay a brick. After a few hours' exposure to the air, the benzole will totally evaporate, leaving the wood, wax, and strip of comb firmly united, and the bees will be found to work readily on it. In default of comb, the purpose will be answered by drawing a line of molten wax down the center of each bar; the line of wax need not be more than a quarter of an inch broad, nor thicker than an ordinary playing-card, but it is necessary it should be straight; the Bees will accept that as the foundation of their

comb, and work accordingly. A much more elegant and effective way is to furnish the frames with artificial combs, the method of making which is thus described by "A Lanarkshire Bee-keeper." Premising that these artificial combs are wax sheets, impressed on both sides by means of plates of type-metal, with a fac simile of the central part or foundations of a comb of worker cells which the bees readily convert and finish into real combs, the cradle of their future young:

„Although there may be different methods of making wax sheets, such as using a belt of oiled cloth, glass dippers, or wood, perhaps the latter for the amateur will be found the best. The first thing to procure is the genuine wax thoroughly cleaned; next obtain a sufficient size to dip the sheets in, so that their length will be of the width of the vessel, which is best made on the same principle as a glue-pot. Having the wax melted, it is well that a supply be kept to fill up as the material is exhausted in the dipping pot. A vessel should next be obtained of sufficient size to admit the dippers, two in number, made of the best yellow pine, perfectly free from stakes, knots, or resin galls, and not more than a quarter of an inch thick, tapered off at the point. This vessel must be filled up with cold water and the dippers steeped therein for some time previous to the first dipping, and be plunged in after every dip to keep them cool, so that an even surface of wax will adhere to them. Having all in readiness, as described, the operator must now try his hand at dipping. The dipper must first be taken hold of by both hands, to shake the water from it; then take it in one hand, and give a sudden plunge into the melted

wax and quickly withdraw, until the dipper is clear, let it hang for a second or two until the wax stops running from it, then give a gentle wave of the dipper with its two sheets for the purpose of cooling them. If the wax has been of the proper heat, two perfect sheets will be ready for lifting from the dipper with a common table knife. Lift the top edge of the sheet, then catch it with both hands, and draw it from the dipper, and it will be found to separate from the wet dipper easily; then lay the sheet on a flat table, turn the other side, and repeat the process. If the sheets are not of a sufficient thickness with one dip, the process may be repeated. If the wax crack, or adhere very thinly, it is a sign it was too hot; next time it may be allowed to cool a little if this were the case. It will, perhaps, be as well to remark that the vessel holding the wax, and the dipper, must be of larger dimensions than the sheets are required, in order to allow of pruning, which may be done in the following manner: Lay the sheet upon a flat board, having another piece of wood as a pattern the size the sheet is required, lay this on the top, then with a pocket-knife cut to the size. The sheets at this stage are now ready for pressing, which may be done in the following manner: Mix a little soapsuds in a basin, and with a sponge wet the plates; having now your sheet handed to you by an assistant, who has warmed it moderately at the fire, place it between the plates and apply the press, with a turn or two the work is done; now slacken and separate the plates, and if they have been well soaped the perfectly impressed and straight sheet is easily lifted. A piece of thin wood must be used above the

plates, well fitted, so that the press (a common copying one will do) presses it equally."

"An inspection of a sheet of comb will show that the division of the opposite cells is made by a thin partition wall common to both. Now the substance of this is said to be only the 1-180th part of an inch, while the artificial ones are between the 1-30th and 1-40th of an inch, more than four times the thickness of the handwork of the bees themselves. It would be in vain to attempt to furnish sheets of wax at all approaching this delicate fabric; the impressed sheets are quite as thin as they can be, to bear the handling which is requisite for fixing them in the frames. We find, however, that this thickness is no disadvantage; the bees speedily excavate and pare the artificial sheet so as to suit their own notions of the substance required, then with admirable economy they use the surplus thus obtained for the construction of the cells. After a sheet is partly worked at by the bees, it is interesting to hold it up to the light and observe the beautiful transparency of that part of it contrasted with the opaqueness of the part not yet labored on."

When a sheet or strip of this impressed wax is properly fixed to the bar, it is certain to be the guide and foundation of a straight comb. It is not necessary, although advantageous, that the sheet should be, when fixed, the whole perpendicular height of the comb; given a fair start of 3 or 4 inches, the bees will continue in the same line to the bottom of the frame. For supers, two or three inches will be found sufficient, and will dispense with the necessity of fixing natural decoy combs. To these wax sheets the

Scotch Apiarians owe the remarkable and beautiful regularity of their show supers in Stewarton boxes.

The best way to fix these sheets in the frame is to cut with a saw the bar half-way through, insert the edge of the wax sheet, and run a thin stream of molten wax down the angle formed by the junction of the sheet and bar. The bar may be cut in two, and the sheet being inserted between the two halves screwed or tacked together again, or it may be cut through with a keyhole saw nearly its whole length, the edge of the sheet passed through and made secure by passing a heated iron over the upper surface of the bar; or fix a strip of wood, half the width of the bar, with brads to the underside, place the wax sheet against this, and tack another strip up close against it, and the artificial comb will then be firmly fixed in the center of the bar. The idea of impressed wax sheets is elegant and ingenious; and if worker combs are needed it may induce the bees to continue the pattern set, but as in the case of supers, if drone or worker combs are immaterial, plain unimpressed sheets will answer every purpose.—[A Manual of Bee-Keeping.

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A SOUTHERN BEE-KEEPERS' SOCIETY.

JAMES ANDREWS.

SIR:—In the November number of the BEE WORLD we were glad to see a proposition to establish a Bee-Keepers' Society in the South. It should be done, and, like yourself, we are willing to contribute liberally to attain it. Now it can be done, and let's do it. All that is wanting is a little energy, and the co-operation of a few to put

it on foot. In getting up the Maury County Bee-Keepers' Society, I took it upon myself to get up the names of as many bee-keepers in the county as I could. I then wrote a postal card to each, naming a day, hour, and place of meeting, which was slowly responded to at first, but by getting a few together, I increased the number of names materially, and at the second meeting we had a good turnout; and I feel that we have our Society on a good footing.

I would suggest that some active, energetic bee-keeper in every county of each of the Southern States take similar steps and organize in their respective counties County Societies; then let each County Society elect one or more delegates to a State Society, and have it organized; and, finally, let representatives be elected from each State Society to meet at some designated place and organize a Southern Bee-Keepers' Society.

To these ideas I would further suggest, to carry them into execution, that we, the bee-keepers in the different counties in the Southern States, meet on the first Saturday in April, 1876, and organize County Societies, and at the same time elect a delegate to meet at the Capitol of their respective States on the first Thursday in July, 1876, to organize a State Bee-Keepers' Society; and then at each of these State Societies let them elect say from two to five delegates to meet at say Atlanta, Ga., on the first Thursday in October, 1876, and organize a "Southern Bee-Keepers' Society." Let us hear from others.

*Secretary Maury County Bee Keepers' Society, Columbia, Tenn., Dec. 6.*

[Your suggestions are good; all it needs to insure success is preconcerted action on the part of those interested.]

## HOW I MANAGE MY BEES, No. 1.

REV. M. MAHIN

Every bee-keeper seems to suppose that he has the very best hive in existence, and hence there is little prospect that there will ever be, in this country, entire uniformity in the style of hives and in the size of frames. The hives I use are not just like those used by any of the leading bee-keepers of the country, and although it would be presumption in me to assume that they are the very best, they suit me very well.

I am using three styles. No. 1 has frames in the brood chamber fifteen inches deep and twelve inches from front to rear, outside measure. Resting on the brood chamber is a surplus honey chamber of the same size, only it is but  $6\frac{1}{2}$  inches deep, containing frames  $6\frac{1}{2}$ x12 inches, outside measure. When the bees are expected to store honey in the surplus honey frames the honey board is laid on the top of the upper section, and the whole hive is thrown into one chamber. Bees will store honey in the small frames much more readily when they do not have to leave the main hive; and the queen will not deposit eggs in these frames, except in cases in which there is little or no drone comb in the main hive, when she will sometimes occupy drone comb in the upper section. As I use an extractor that does not do much harm. When the bees are not storing honey I put the honey board on top of the brood chamber, and set the upper section on it. An outside cap  $\frac{1}{2}$  inch larger every way than the upper section covers it, resting on cleats nailed  $\frac{1}{2}$  inch below the top of the lower section. For out door wintering and for all other purposes,

I find this to be a very good hive. One advantage of having frames not more than twelve or thirteen inches from front to rear, and in my view it is a great one, is, that in forming nuclei the shape of the hive admits of a more compact clustering of the bees. There is the same advantage in the case of weak swarms in winter and spring.

No. 2 is a two-story hive, having frames  $10\frac{1}{2}$ x12 inches, and having the outside cap like No. 1, only deeper. For extracted honey I have seen no hive quite equal to this. The lower section having from eight to twelve frames affords ample room for breeding, and the upper will be mostly free from brood, and when forage is abundant will yield twenty-five pounds per week of extracted honey. If the extractor is used too freely there is danger that the bees may be left in bad shape for winter.

No. 3 has the lower story of No. 2 and the upper story of No. 1. I find it difficult to decide concerning the comparative merits of these three styles. Last winter I had twenty colonies in the deep hives, and the same number in the shallow ones. Those in the deep hives wintered better than the others, and did better all summer, owing to the better stand they got in the spring. There was not the same difference in former years. When I began bee-keeping I used movable bottoms, but now I nail the bottoms to the hives.

For ventilation I have an inch hole, with wire cloth tacked on the inside to exclude bees and other insects, on each gable of the outside cap, and two or three holes of the same size in the honey board. When the heat renders ventilation necessary, I open the holes

in the honey board, and lay over them little blocks cut from an inch board, having an inch hole through them, with wire cloth tacked on one side. This is the most perfect arrangement for ventilation I have ever seen. The bees keep up a continual fanning at the entrance of the hive in hot weather, and with my arrangement for giving ventilation the cool air rushes in at the openings in the outside cap, and down through the ventilating blocks on the honey board, and thus reaches every part of the hive. A hive thus ventilated admits of work being done in it during the hottest days of summer, and if sufficient room be given for storing honey and rearing brood the bees will rarely swarm.

My frames are of the simplest kind. They are made of stuff about  $\frac{1}{2}$  inch thick and one inch wide, the same material being used for top, sides, and bottom. The top bar projects  $\frac{3}{8}$  of an inch over the sides and rests on rabbets in the front and rear of the hive. Nails are driven in near the bottom to hold the frames apart, so that they may not come nearer together than  $1\frac{1}{2}$  inch from center to center.

*New Castle, Ind., Nov. 12, 1875.*

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HOW TO MAKE NEW COLONIES, INTRODUCE VIRGIN QUEENS, AND ITALIANIZE BLACK BEES.

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DR. JEWELL DAVIS.

MR. EDITOR:—I wish again to call the attention of the readers of the BEE WORLD to the method of converting colonies of black bees into those of Italians. This we do by the use of the Queen Nursery, in the following manner:—Put into the cages of the Nursery, between the tins, a few cells of sealed honey, in new comb if possi-

ble. Then cut from the combs of a pure Italian stock, as many queen cells, large and fully developed, as you have prepared cages with honey, as above; and suspend a cell in each. Great care should be taken to have the best cells, and not injured by bruising, handling, or jarring. The Nursery cages thus being supplied with pure Italian queen cells, and feed for the virgin queens as they hatch, so that if the bees fail to feed them (as they sometimes do when not gathering much honey), they need not starve. We then close the doors of the cages and adjust them in the Nursery frame. Then having removed a center comb from a strong black colony, we put the Queen Nursery into the place from which the comb was removed, to remain there until the queens are hatched, which will be in three or four days, if the cells were not cut from the combs too early, or before the ninth or tenth day.

When the queens emerge from the cells, each cage containing a virgin may be removed from the Nursery frame, and placed in one of the adjacent combs of that colony, on either side of the Nursery. The cages are so placed in the combs by cutting out a piece among the brood just large enough to receive them. Then go to other colonies of black bees, and take out two combs filled with brood and honey, having brushed off the bees, place them in a new hive far enough apart to receive another between them; now open the Nursery hive and lift out one of the combs with cage and virgin queen, with all the adhering bees and place it in the new hive, between the two combs prepared to receive it, immediately closing up this new hive.

On the next day open the hive and liberate the queen from her cage. Before doing this, you can, however, spray the bees and queen with perfumed sweetened water, so that the bees will have something to do while her ladyship appears at liberty among them; but we deem this seldom necessary except at such times as when the bees are not gathering honey liberally, and are very cross.

Proceed thus until each cage and comb with virgin queen is placed in a new colony. These new colonies are built up into full strong ones by adding combs of brood from black colonies, always brushing off the bees so that no strange bees are added to them, except from the hatching brood, and these do not interfere with the queen.

By the above it will be noticed that the virgin queens are never placed in jeopardy among strange bees, but are set at liberty among those with which she was hatched, and of the same scent, where she is kindly treated. It must be noted that no old queens should be introduced into these new colonies by the change of combs above required, thus endangering the life of the new queens. It should be further noted that the addition of brood combs are better made after the young queens are fertilized. By this plan also you avoid the frequent loss of queen cells by the bees destroying them, as they often do when placed in a queenless colony. The cages can be removed from the new colonies within two days after the queens are liberated from them. It is well to notice while removing the cages, if the queens are all safe.

*Charleston, Ill.*

NOTES FROM SHELBYVILLE, ILL.

J. W. JOHNSON.

DEAR BEE WORLD:—Hoary headed winter put in an appearance this morning, introducing us to a slight snow. Snow has fallen all day, though it mostly melts, the weather not being very cold.

I have my bees snugly "housed" on their summer stands, where I still persist in wintering, and, so far, with success. Though the learned doctors and doctresses of bees strongly insist that such a course is not safe; that it produces dysentery, foul brood, cholera, mildew, disease, and death. Now this has been my course for years, and I have not had a case of dysentery, foul brood, cholera, or any other disease, in all that time; and but one death, and that from sheer neglect on my part.

Up till now, we have had but a few days that bees have not been on the wing more or less, which I do not regard as the best indication that bees will do well. An open winter I regard as unfavorable. I think when winter-time comes, WINTER should come; and generally, when it does so the health of both man and beast is better than in what we term an open winter,—one of slosh, mud, sun, rain, heat, cold, and thunder, as we had yesterday.

I allow no upward ventilation, none from below, and very little near the center of the hive. I do not wish any of the warm air to escape. Have dry, empty combs for the bees to cluster in. Another thing, I want my dry sheets of comb on one side of the hive, and not in the middle as some direct. My reason for this is, that the bees will take the honey clear from the combs as they need it, and

therefore will not be found scattered over all the combs, as I have seen where one or two sheets of dry comb were given in the middle of the hive.

*Shelbyville, Ill., Dec. 8.*

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PRACTICAL HINTS.

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DR. J. P. H. BROWN.  
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HOW TO PROTECT COMB FROM THE MOTH  
LARVAE.

Bee-keepers should never melt up good worker comb, but carefully save it for guides, and for filling up frames so as to give the bees a start in the spring. It can be very easily protected and saved from the ravages of the worms by fumigating it with sulphur. For this purpose procure a good sized, tight dry-goods box. Nail supports across near the top upon which to suspend your frames of comb. If you have loose comb, you can lay it across the tops of your frames. Cut a hole six inches square at the bottom of one side of the box through which to pass your fumigating materials. Fit a slide to this hole. Use several thicknesses of old blankets or carpets for a cover.

Prepare your brimstone matches by passing ribbons cut from a newspaper through melted sulphur. This should be melted in a shallow iron vessel, and great care taken not to get it too hot or it will ignite, and give off sulphurous acid fumes which are very injurious to the lungs. Break up these sulphur ribbons into pieces about three inches long. Lay about a half dozen pieces on a small plate; ignite, and at once pass the plate through the hole in the box and close the slide. Every hatched worm in the comb will be killed, and it is quite probable that the sulphurous fumes will destroy the

vitality of all moth eggs. Allow the box to remain closed at least twenty-four hours before removing the comb.

LOOK OUT FOR ANTS.

When the weather gets cold, ants will sometimes collect over or near the ends of the frames under the honey-quilt, where it is warm, and sponge on the bees. If not dislodged, a large nest of these vermin will consume considerable honey.

HIVES.

Now is the time to think of getting hives, honey boxes, etc., ready for spring operations.

If you make your own hives, select well seasoned lumber; put them together accurately and substantially and well paint them. Hives thus made cost a little more, but are the cheapest in the end. The reader must here bear especially in mind that the use of frames in hives is public property;—that he can make and arrange them just as he has a mind without caring a "continental" for any patent. It is also well to recollect that large yields of honey are less dependant upon this or that sort of a hive than THE MAN.

BEE PASTURAGE.

Those who intend sowing white Dutch clover for bee forage should lose no time in doing it. In our climate it must be sown early so as to get rooted before the hot and dry weather comes on. If sown late, it is very difficult to get a stand. It will grow in a sandy soil if sufficiently rich; but it thrives best where there is some clay. Save your poplar timber. Plant young trees of it in your low lands. If you want shade trees in yards, select the varnish tree. It is a fine bee tree and very ornamental. It grows well in this latitude, and further South. The linden is a good bee

tree, but it is of such slow growth that it takes many years before it produces a return.

*Augusta, Ga.*

—o—

FRUITS AND FLOWERS OF FLORIDA  
AND GEORGIA.

—

H. J. P.

EDITOR BEE WORLD:—According to your description of a recent visit to Florida, this beautiful and inviting country, with its semi-tropical fruits, ever blooming flowers, and delightful atmosphere, is indeed a blissful abode for bees.

This I fully believe, without a doubt, but what a pity you did not meet up with a man of Parlange's success, who would have finished up the fairy-like picture by assuring the bee world that the road to a quick fortune commenced at the gate of a sweet orange grove, or near the forest and woodland where the wild, sour, and bitter-sweet varieties bloom so abundantly, and where the balmy breezes, laden with orange blossom perfume would regale the slumbers of the bee-keeper, while dreaming of his future fortune, loaned out in Georgia at two per cent. per month.

I visited the greater part of Florida some years ago, and cannot say that I was very favorably impressed; not sufficiently ever to make it my home in preference to this part of Georgia.

While I believe that a scientific apiarian would be as successful in obtaining as large yields of honey as could be had in Louisiana or California, I do not think he could obtain any more, nor do I believe it could be done with the native bee, as I imagine their instincts teach them that no necessity exists in Florida climate for storing large surplus supplies.

Admitting that the Italian bee, and the constant use of the extractor would give the marvellous results spoken of by some of your acquaintances formed while in Florida, what is your extracted honey worth, even if it survives the fermenting atmosphere of Florida and averages as good as that of the higher clover latitudes?—about one dollar a gallon in New York, and no demand. Shipped there in bulk and kept waiting for a purchaser, no great length of time would elapse before it would rate in quality with Cuba honey, the meanest in the world, and seventy-five cents considered an extravagant price for it. A run, as long as the novelty lasted, might be made in the Northern cities on orange flower honey in glass boxes, as it has, where in the comb and fresh, the peculiar and delightful taste and smell of the orange blossom. A small profitable trade might also be made on early queens shipped to parties higher up, but I do not believe that, as a specialty, the honey business will ever enrich any one until the populace learn to prefer it to sorghum; and it is a mystery to me that any human being, living in the country, should continue to buy and eat the common syrups of the market, when the poorest man can as cheaply raise an elegant article of honey.

As to the orange, lemon, pine apple and banana business in connection with bee-culture, an occasional freeze and a certain scale insect, with nip in the bud, when least expected, all your fond hopes of realizing the aforesaid two per cent.

I regret that Georgians are becoming infected with the Florida fever. Years ago the tide flowed toward Texas, and to-day many a Georgian,



now mouldering in Texas soil, might still be alive, if they had been able to return to their homes. It is strange to me what an influence a few colonies of emigrants, fleeing from a climate unfit for anything to live in except an Esquimaux, should have on a people living in such a delightful climate as Middle Georgia, and I can only attribute the fact to a disposition to speculate in lands, while the orange mania lasts.

So much for Florida. As to Georgia, her resources, climate and scenery are a grander combination of the useful and beautiful than any other State on the face of the globe can boast of. I could write pages portraying the grandeur and advantages of our old State, but your space will not permit, and I am reminded that I have digressed from my subject; therefore I will wind up my article by describing a Georgia Apiary.

Imagine a plantation of one thousand acres of high dry hematite land, in the shell limestone region, level as a floor, in proximity to several railroads, educational advantages unsurpassed, water pure and sparkling, no pestiferous insects, distressingly healthy for doctors, and the land fertile enough to make, with guano, one bale of cotton to the acre, or thirty or forty bushels of corn and all the grains and grasses in proportion.

Imagine on the south side of this plantation a hillside, sloping down to a basin or immense swamp flat covering thousands of acres, as rich as any known in Florida, and the home of every growth excepting the tropical plants. While thousands of linden, crab apple and other sweet blooming honey trees abound which are exceedingly

scarce in Florida. On thirty or forty acres of this hillside is planted a great variety of fruit trees; nearly at the end of the slope, close to the orchard, and near a low bluff dividing the red upland from the bottom land is located the apiary, consisting at present of fifty or sixty stocks of Italians, in Moon's Improved hives. In February and March the fruit trees are in full bloom, a little later the poplar [white-wood of the North], persimmon, the many varieties of gums, berry trees and blooming shrubs and plants keep the bees busy until the swamp becomes redolent with the perfume of fragrant wild flowers, which continue in bloom until the Christmas frosts set in. The bees are not confined in winter quarters more than thirty or forty days, and very seldom more than three or four days in succession. Therefore no winter protection is needed. Why then should we and our bees not be happy, in a climate possessing such advantages? What better country does a poor man want? and how many poor men from Georgia have ever been benefitted by these exploring expeditions to Florida orange groves, Texas cattle ranches, or California gold mines?

Our agricultural interests are languishing. We have not yet adapted ourselves to the new state of affairs. We need the ready capital and the sturdy blows of our intelligent Western friends to assist us in developing our immense resources. Let us, therefore, divide up our large tracts of land, and, if necessary, give away alternate sections to emigrants, and invite them to settle among us, instead of accompanying them to Florida or any other wild State.

## Notes and Queries.

Subscribers are especially requested to write short notes on the honey prospects, weather, time and duration of the bloom of different honey-producing plants, price per pound for honey, &c., &c. for this column.

Bees stored about six pounds to the hive Oct. 31st, and Nov. 1st, 2d, and 3d.—W. B. RUSH, *Pointe Coupee, La., Nov. 28.*

I am keeping bees "for fun," but they have grown up on me, so that I must do something more than look at them. From five colonies a couple of years ago, I have forty-five first-rate ones, in Langstroth hives. I have made no money, but, like the Irishman at the wake, "have had lots of fun.—AMOS S. COLLINS, *New Orleans, La.*

I enclose d'tt. on New York for BEE WORLD one year. I read the copy you sent me from cover to cover, not omitting even an advertisement. I am well pleased with it. My only regret was in seeing a column devoted to advertising the prospectus of the Montreal Witness, one of the most rabid and fanatical sheets published in the world. Possibly it is your privilege to advertise every thing that offers, that is not positively immoral. Still, I cannot believe you have any idea of the manner in which the Montreal Witness villified the South, and its most eminent citizens before, during, and since the war, holding her people up as a nation of murderers and inherent dealers in flesh and blood. It may be desirable that the people of the South should obtain good evangelical papers and periodicals. Surely plenty exist in the South without going into a foreign land to assist our enemies by subscribing to a sheet whose success is owing to having pandered to that fanaticism that has left the South in ruins to-day. Pardon me if I have offended your views or principles, by my expressions; but I have been so much offended by the false statements about the South, published in the Witness, to which I subscribed as a temperance paper, that I am loth to see the people of the South deluded into supporting it.—EDWARD PERRY, *Denison, Texas.*

We were not aware of the character of the paper, supposing it to be just what it claimed. We thank you for

your criticism, and affirm that, had we known that its tendencies were such as to deride anyone for openly supporting his most honest convictions, the prospectus would not have been inserted. We greatly regret the appearance of the prospectus in our columns.

I have five or six barrels of honey on hand, all more or less granulated, for which I am willing to take 12½ cts. per pound, delivered to the steamboat here, or 16 cts, delivered to purchaser anywhere in the United States. Please give the address of all the honey merchants you can in Georgia and Alabama, and tell me, if you can, how to find the address of all the honey dealing men in the country. I will send samples to any wishing to buy.—W. S. WINN, *Burtonia Landing, Yazoo River, Miss.*

We cannot give you the addresses of the honey merchants of the different cities in Georgia and Alabama, nor of the northern buyers. Postal cards addressed to the leading grocers of the cities nearest to you might lead to a sale. If you ship to the northern cities the freights and commissions will absorb your profits.

What shall I do to keep my bees from robbing? It seems as though, if I was to open the hives at this time of the year, as you did yours when I was at your apiary, the other bees would eat them up.—WM. MCGHEE, *Center, Alabama, Dec. 1.*

It is more than likely your bees need feeding, which you can do at night, being careful not to spill any of the syrup around the hives, as the smell of food in winter on pleasant days incites them to rob. Where they have had a taste of honey from another hive, it is necessary to close the entrance of the besieged hive so that but one bee can pass in or out at a time.

# MOON'S BEE WORLD.

A. F. MOON & CO.,

Cor. Broad and Elm streets., Rome, Georgia.

DECEMBER, 1875.

## TABLE OF CONTENTS.

Bee-keeping	1
The Southern Kentucky Bee-keepers' Association	8
How I managed my Apiary in 1875, and my reasons for it—Argo	11
A letter from Shreveport, La.—Paxton	13
Introduction of Alien Queens	14
Guide Combs	16
A Southern Bee-keepers' Society—Andrews	18
How I manage my Bees, No. 1—Mahin	19
How to make new Colonies, introduce Virgin Queens, and Italianize black Bees—Davis	20
Notes from Shelbyville, Ill.—Johnson	21
Practical Hints—Brown	22
Fruits and Flowers of Florida and Georgia—P	23
Notes and Queries	25
Editorial	26

## BEEES IN FLORIDA.

From Jacksonville we proceeded to Quincy, Gadsden county. This is a fine little town, located in one of the best counties in the State for farming. The lands are rolling, well watered with streams of clear water, adding vastly to the beauty as well as value of the surrounding country.

We came to Quincy to ascertain its advantages, with a view to locating an apiary at or near there. In visiting the surrounding country, we found almost everything favorable to honey-raising. In the ravines grew the poplar, sweet gum, sour wood, magnolia, wahoo [linden of the North], and many other kinds of trees that bees gather largely from, besides the wonderful growth of flowers which carpet the earth everywhere, filling the air with their fragrance, beautifying the landscape beyond comparison, and leaving

the visitor but to feel that he is truly in the "land of flowers;" whether it is a good bee country remains to be seen. At present the orange is attracting the attention of the people; five years hence they will turn their many advantages into more varied pursuits, and bee keeping will come in for its share of attention.

We were invited to go out into the country a few miles, and look at the apiary of a bee-keeper, who was deeply interested the culture of bees, had invented a hive, and was running some thirty or forty colonies. His hive was constructed on somewhat novel principles, one of them being in placing the brood nest above instead of below. It took nearly half an hour, with the aid of a chisel and knife, to open one of them containing bees. We pitied the bees, and would have offered our services and advice had we been sure it would have done any good.

Some gentlemen living near the Appalachian river, who I conversed with, stated they usually rob their bees from two to three times a year, often getting from thirty to forty pounds to the hive. The hives are three and a half feet high, by twelve inches square, inside.

We saw no honey except in the hive; this was light colored and well flavored. That examined at Jacksonville was about the same, both in color and flavor. The quality of honey is pretty apt to be good if made from either white clover, poplar, linden, or orange. There are plenty of flowers, whose names we are not familiar with, which produce an excellent honey, also. Thousands of the flowers in this State produce a honey that is almost tasteless, and is quite dark.

Our friend, Mr. Carlin, was so well

pleased with Quincy and its surroundings, that he made arrangements to locate an apiary there, and has already ordered material from New York for that purpose.

We do not deem it wise to advise any one to go to Florida to go to bee-keeping, if his location is already a good one, as the State is comparatively new and undeveloped, as far as practical bee-keeping is concerned. But if appearances are any indication, the State is head and shoulders above any other we ever saw. In Orange county, a friend who went there this fall writes us, bees are seldom seen. In fact, during a residence of three months at Lake Eustis he has not seen them visiting the flowers in his vicinity, nor heard of any; and he thinks it will be a good place for Italian queen raising, as the risk of impure fecundation will be very small. He took from this city some ten or fifteen colonies of pure Italians, no doubt the first ever taken up the St. John's River. Farther North the forests are full of them, the inhabitants always finding no trouble in keeping their tables well supplied with honey, said to be of excellent quality.

---

#### SEASONABLE HINTS.

We cannot too strongly urge upon our readers the necessity of examining their bees, and more especially in locations where the honey harvest failed prematurely. In such places the bees had commenced to raise brood, but the yield of honey suddenly being cut short, they were left with an almost certain prospect before them of death by starvation before spring. The BEE WORLD columns need not undertake, editorially, to point the way to success-

ful bee keeping when its many contributors are so ably teaching its readers the proper manner to conduct an apiary. We had rather it would be the vehicle for conveying the opinions of the successful, practical bee-keepers of the whole country, than to exclude them to give place to advice which, though it might do in a small portion of the country, would not prove of such general value. Hence, for "Seasonal Hints," we direct our readers to every page of the BEE WORLD, leaving matters of a general nature to be discussed here. Look to your bees!

---

#### LITERARY.

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