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MOONS' BEE WORLD,

— A GUIDE TO —

BEE-KEEPERS.

VOLUME 3.

MAY, 1876.

NUMBER 6

Maury County Bee-Keeper's Society.

The Maury County Bee-Keeper's Society held their regular quarterly meeting in the Circuit Court Room on last Saturday, April 1st, 1876.

Present: W. S. Rainey, President; Wm. J. Andrews, Secretary and Treasurer; S. D. McLean, Travis McLean, A. B. Biffle, David Staples, W. A. Alexander, W. F. Moore, N. B. Sowell, —Timmons, J. C. McGaw, J. C. Moore, —Estes, T. J. Pickens, Wm. Gilmer, J. H. Gregory, Jno. B. Bray, of Giles county.

Owing to the inclemency of the weather and rumor in regard to small-pox, there was not as good an attendance as usual.

The minutes of the last meeting were read and adopted.

Mr. J. B. Bray, of Giles, asked and obtained permission to offer a few remarks. He thought our Society a good thing, and a step taken in the right direction. He would ask if we propose to hold all our meetings at

one place, and suggested that we hold meetings at different points. He would like to have the Society hold a meeting at Culleoka—that if we would do so we would be met by a number of bee-keepers from over the line.

The Secretary stated the constitution provided that the meetings should be held at such time and place as a majority of the members present at any stated meeting may determine: that at the last meeting it was agreed to hold the present meeting at his residence, as queen rearing was the topic for discussion, that it might be amply illustrated in the hive, but we had had a very cold snap, which had retarded making any progress in that line; in view of which fact he would move that the question of queen raising be carried over to the next meeting, and that another meeting be held at Columbia the 1st Saturday in May; that one be held at Culleoka the 1st Saturday in June, and the next regular quarterly meeting in July at Columbia, which motion was seconded by

J. C. Moore. Mr. J. C. McGaw thought that a meeting at Culleoka would be for the benefit principally of the bee-keepers of that section, and would suggest that the bee-keepers of that section organize a society, and then let us meet with them jointly on the first Saturday in June. The Secretary's motion was adopted.

Mr. Staples asked if we proposed to discuss the subject to-day.

The President replied that it might as well be opened to-day, and concluded at the next meeting.

Mr. S. D. McLean, who was appointed at the last meeting to prepare an essay on "Queen Rearing," then arose and read the following:

QUEEN REARING AND ITALIANIZING.

Among the varied operations of the apiculturist, the subject of queen rearing and Italianizing is a very important one, and should receive a due portion of that care which is essential to success. To note some points bearing on the subject is the design of this sketch. The most essential requisite is a queen of undoubted purity, which should also be very prolific. The queen's prolificness can be ascertained by inspecting the combs to ascertain the amount of eggs produced in a given time; her purity can only be determined by the markings of her offspring. Should her worker progeny show three well defined yellow bands around the abdomen, with uniformity of color, she may be regarded as having purely mated. But should her progeny be of a mottled appearance, or with but one or two bands, she is impurely mated and worthless to breed from. For the information of those who are uninformed, as to the markings of pure Italian bees, it will be necessary to remark that the first

band next to the thorax is very narrow; the second is broad, and separated from the first by a very narrow black ring; the third and last is not so broad as the second, but is well defined. They should all be of uniform color. Bees marked thus may be regarded as absolutely pure.

In addition to a new queen, a full colony is a necessary adjunct, for the building of and caring for queen cells. The colony should be in a prosperous condition, having great numbers of young or nursing bees, with plenty of honey and pollen, especially should there be plenty of pollen in the hive or coming in. From this bees prepare a milky white fluid, said to undergo a partial digestion in their stomachs, which they feed to their young while in the larvæ state. A superabundance called a royal jelly, is fed to the young queen to fully develop her for the duties she is to perform as future mother of the colony. A marked distinction is observable in queens raised from cells as above nourished, and those raised in weak and half starved colonies or nuclei. While the former produce large and well developed queens, the latter produce correspondingly small and weakly ones. In addition to the above, it is necessary to have plenty Italian drones in the apiary that the young queen's chances for purely mating in her bridal trip, may be increased. Preliminaries have been gone through, some practical instruction becomes necessary. Several ways are practiced by different queen raisers to arrive at the same result, and success crowns the efforts, more or less of the different methods practiced. Every queen breeder must have queen cells, raised either in a full colony or nucleus, and this is attained by ren-

dering the bees destitute of a queen. Those raised in a full colony are thought by most queen raisers, to be the best. To secure the benefit of a queenless colony, and yet preserve the queen you breed from against the risk of being introduced to a strange colony of bees, for each batch of queen cells raised, is certainly the best economy. To do this, select another strong colony with plenty of young bees for nurses, remove the queen and shake the bees from the brood combs, being careful not to leave a comb containing any eggs or brood. Then from the colony you have selected to breed from, take as many combs containing eggs and larvae as was removed from the first, and after having shaken the bees from them, give these last named combs to the queenless colony, and place the combs taken from the queenless colony in place of those removed from the colony you bred from. This is simply an exchange of the combs of the two colonies. In like manner, there may be an exchange of combs with the colony containing your fine queen and another of the lapse of eight or ten days, or the black brood placed in your breeding colony in the first exchange will be so far advanced in that time that it would be impossible to raise a queen therefrom. About ten or twelve days after the exchange is made, there will be from three to a dozen, and sometimes many more, cells capped and ready to be disposed of. If removed sooner they are liable to be injured or destroyed, as they are very tender—the least jar often causing death to the embryo queen. The disposition made of these cells for the purpose of raising queens for market or Italianizing black bees vary, as stated above, with different breed-

ers. Simply for the purpose of Italianizing, an easy method is to insert one of these cells in each of your black colonies, the black queen having been removed the day previous. This method, though often practiced, is objectionable, as the colony is too long without a fertile queen, which tells heavily on the colony. Another method practiced is to insert these cells in a frame of nursery cages, a cell in each cage, and suspend the frame in the midst of a strong colony of bees until the young queens are hatched, and then divide the colony into as many nuclei as there are young queens in the cages, and give one of the queens to each of the nuclei. After the queens are fertilized, the nuclei may be built up into strong colonies, or the queens removed and introduced to black bees the usual way. Still another method practiced, is to remove these cells entirely from the bees, and hatch them by means of artificial heat, and so soon as hatched they are given without any precaution whatever, to queenless nuclei or colonies. The reason for introducing such young queens without the necessary precaution, is from the fact that they are destitute of that peculiar scent acquired by contact with other bees, (their only apparent guide in detecting strangers) and consequently they are not regarded as intruders. But the method most generally practiced, and most convenient for the mass of the queen raisers, is to form nuclei of two or three full sized combs, with plenty of bees to protect each nucleus and generate the requisite amount of heat for the full development of the queen, and insert a cell in each. When the young queens hatch and become fertile, they may be removed and introduced to black bees

the usual way. The nuclei are then ready for the insertion of other cells. This may be kept up so long as there are drones in the apiary. To form these nuclei, take from a strong colony a frame of hatching brood together with adhering bees, also another or so with bees, and a sufficient quantity of honey to last a nuclei a few days, until the bees begin to work. Supply the place of those removed from the hive with empty frames, or combs. Care must be taken in removing the combs from the hive that the queen is not removed also. The best time to form nuclei, is late in the evening. By morning the bees are more composed than if allowed to fly out immediately. Many of the old bees will return to the parent hive, but the young ones, having never flown from the hive, will remain not knowing where to go. There are two methods of rearing queens from select eggs of larvæ, one called grafting, the other inoculating, which are gaining some favor with apicultists of late. They each want more evidence of practicability, before recommending to the tyro in apiculture. In the first method a black colony of bees is deprived of its queen, and in five or six days there will be queen cells built with royal jelly and larvæ in each. Remove the larvæ, and select a larvæ just hatched from the egg of a fine Italian queen. With some suitable instrument, as the point of a toothpick, carefully remove the selected larvæ, and insert it in the cell from which the black larvæ was removed. The bees will accept the change and rear a queen therefrom. The other method is to insert the selected larvæ in incipient queen cells of a queenless colony, and the bees will supply the royal jelly, and from the inserted lar-

væ, rear a queen. S. D. McLEAN.

The Secretary said he had learned since coming into the room that Mr. C. C. Vaughan, who had also been appointed to prepare an essay on the same subject, could not be present, as he had gone into the queen business more extensively than any of us—that he had a young one at his home that would weigh from fifteen to twenty pounds.

The society unanimously voted that Mr. Vaughan was excusable for his absence.

The Secretary moved that the further discussion of the subject of "Queen Rearing and Italianizing," be postponed until the meeting in May, and that as nearly every member present had had some desertions in the last few days, we take that subject up. Adopted.

The President called upon the Secretary to open up the question. The Secretary replied that he preferred to hear the experience of others, and jot it down; would state however, that he was in his yard on last Friday; that he observed one stock on the eve of swarming or deserting; that he closed up the entrance to the hive, and that those which had got out, after flying around for awhile, returned and re-entered the hive; that a fugitive swarm entered the yard during the evening, but as he was not present, preferred to have Mr. Staples speak of it.

Mr. Staples said he had plenty of experience in that line this year, and that he could not assign any satisfactory cause for it. Have written to different bee journals and some prominent aparians, but had been unable to get any satisfactory reasons as to the cause or remedies therefor. They had deserted brood in all its stages,

with an abundance of pollen and honey. In the hive referred to by Mr. Andrews, I opened it in the evening and found everything in plenty; on the same day started a nucleus with the combs and brood of our Dadant queen; had caged and placed the queen of the stock of bees of which the nucleus was framed, and laid the cage containing her on top of the hive. Shortly after I discovered something wrong in the yard, and found an intruding swarm entering the nucleus. I caught the queen and caged her also; she died during the night. I fumigated the bees and they took up peaceably with each other. Like Mr. McLean, I like strong colonies for early queen-rearing, and had selected the strongest in your yard, but those refugees entering it made it much more so. By having strong stocks to rear from we get more and better queen cells. Was not able himself to assign any reasons for bees deserting; there was a general rule among bee keepers that bees would not desert brood and eggs, yet it had failed in the last few years. We have had an open winter throughout the United States, and bees have been rearing brood all the while; the mortality has also been great in this locality, all stocks have young bees, and he could not see why young bees should be playing such tricks, unless it be that when the weather is warm, and the bees flying out in great numbers, induce the queen to come out. In the case on yesterday it was not poverty—neither was it natural swarming—but something uncommon.

J. C. MOORE. Did you notice whether the queen was with first swarm?

D. STAPLES. Did not; but found plenty of eggs in the hive, showing

that they were not queenless.

S. D. McLEAN. In reference to queen being with them would say that a queenless colony never swarms out. If queenless and wanting in store they will die in the hive. Yesterday was a warm fine day. We have had a remarkably winter, and our bees were very weak. I think there are several causes for their deserting—one cause there is their being robbed, and another is want of stores.

J. C. MOORE. I made the inquiry of Mr. Staples because I had a swarm to come out which had no queen, yet they deserted the hive by swarming as they do in natural swarms. I found the queen dead on the bottom board.

S. D. McLEAN. Perhaps the dead queen of Mr. Moore may have been the queen of some other colony which had deserted their hive and intruded upon his. In such cases bees form a complete knot over the queen, and hug her as it were to death. It may have been a queenless hive, and another queen attempted to take up quarters in it.

PRESIDENT RAINEY. That is tact more becoming to a LAWYER than a DOCTOR.

J. C. MOORE. I am satisfied that there was no other queen, and that the dead one was the one belonging to the hive, for I had found her a few days before in a helpless condition, and had offered her some food, in endeavoring to partake of which she had fallen to to the bottom board. I am very positive that she was the one belonging to the hive.

D. STAPLES. Mr. President, in the discussion of this question a new subject has arisen—that is the instinct of bees. He did not think that bees were governed by instinct any more than

any other animals; they were not governed by instinct but by surrounding circumstances.

S. D. McLEAN. Thought they were governed by instinct; they of themselves have made no improvement.

D. STAPLES. Thought if they were governed by instinct they would invariably do the same thing as it was implanted in them by the God of Nature.

S. D. McLEAN. Thought it was instinct that prompted the bees to remain and die with their queen, and if they had lost their queen, with no means left them to rear another, to die in their hive.

D. STAPLES. Thought if you got instinct into the bee that you could also get it into man. The dog and horse had forethought to return to their homes, as well as the lower order of animals; that bees had made improvements; they make cells a certain shape and length; if combs are much apart they will make them longer; had had them two inches deep. If they hadn't room to build another comb, but too much space between them, they would fill it up by making their cells longer. Under circumstances they work as man does.

The President here announced that a Republican meeting had been called to be held in the room, and requested that the proceedings be brought to a close as briefly as possible. So the discussion closed.

The Secretary then exhibited a Quinby smoker, a Root queen cage, metal corners, the different size frames in prominent use, specimens of artificial comb foundation, and some other novelties pertaining to the apiary, which attracted considerable interest.

S. D. McLean was quite sure the reason of man had not equalled the

instinct of the bee in the construction of combs.

D. Staples asked for further time for the executive committee to make a report.

Mr. J. B. Bray of Giles, was unanimously elected a member.

S. D. McLean moved that the Society adjourn to meet on the first Saturday in May, at Columbia. Motion adopted.

WM. J. ANDREWS,
Sec'y and Treas.

For the Bee World.

The Varnish Tree Again.

DR. J. P. H. BROWN.

For the edification of my friend, Ch. Dadant, (and others) I will observe: The Varnish tree to which I referred in an article in the December number of the BEE WORLD, is the *Sterculia Platanifolia* and not the *Ailanthus Glandulosa*. The latter tree is not generally considered of much value for bees; whereas the former is, as stated, a valuable shade tree and yields an abundance of good honey.

The following is the description of what is usually called Japan Varnish in the Southern States, and the Varnish tree of the North, as given by my distinguished friend, P. J. Berckmans. "*Sterculia Platanifolia* (Linnaeus) a native of China, and not hardy north of 35°. Botanically, belongs to the family of Bombacæ. Leaves large, cordate, five lobed. Flowers small, greenish white, produced in large terminal panicles. Seeds round, of the size of small peas, brown and glossy; they remain attached to the edges of the calyx until the following spring. The bark is of a light green, very shiny and smooth, hence its name of Japan Varnish. Height of tree 50 to

60 feet. Branches few in number, straight and with blunt ends. This tree is not hardy in the latitude of Paris: it begins to be met with in the Southern departments, and is only perfectly hardy in the extreme South of France. There is a sub-variety of *Sterculia* known as *S. Japonica*, and quite similar to the type in Botanical character; this is more hardy and will stand the winters in Paris if partly sheltered from the full effects of the cold winds. Whether this is merely a form of the type, modified so far as having become more hardy by long cultivation in Japan, or otherwise distinct, I am unable to state. I would add that the *Sterculia* bloom during May, or fully two or three weeks later than the *Ailanthus*.

* *Ailanthus Glandulosa*, commonly called Varnish tree in the Middle and Northern States, belong to a different botanical family (*Zanthoxylæ*.) Native of Northern China, and hardy so far north as 44° latitude. Leaves compound, having from 15 to 31 leaflets. Latter are quite acuminate or pointed, and with a few glands at their base; hence the name *Glandulosa* as applied to the tree. Flowers greenish white in panicles but diœcious, or male flowers upon some trees and female upon others; bloom in April and emit an unpleasant odor. Seeds small, winged and easily dispersed by winds."

The *Sterculia* can be easily propagated from seeds if sown in shaded places, or in a hot house.

Augusta, Ga., April, 1876.

Now that the spring labors have begun it is more than likely that a great many little cares heretofore bestowed upon the bees will be omitted. This sort of bee-keeping will not insure absolute success.

For the Bee World.

Moses Quinby--A Tribute to His Memory.

P. H. ELWOOD.

(Read before the North-Eastern Bee-Keepers' Association, February 3d, 1876.)

In the history of every profession or occupation we find the names of a few who have outstripped all competitors; men possessed of that rare gift, power of original thought; pioneers who have explored an unknown wilderness and mapped it for future possessors. In the history of bee-culture there are four names that stand out prominently beyond all others: Huber, Dzierzon, Langstroth, and Quinby. Huber, the blind apianian, who, by his great ability and untiring perseverance, discovered more of the interior workings of the bee hive than any other man that ever lived:—Dzierzon, the Quinby of Germany, who confirmed the wonderful discoveries of Huber, and added that equally wonderful one of parthenogenesis;—Langstroth, our own countryman, inventor of the movable comb hive (without which there would be no occasion for gatherings like this) and author of a work on bee-keeping, that for scientific accuracy and beauty of expression is not only unsurpassed, but almost unsurpassable;—And last, but not least, our own Quinby who, adding largely to the knowledge of his predecessors, combined the whole into a system of practical management unequalled in simplicity and feasibility, and finally, as the crowning act of a lifetime spent in the service of others, gave to the world his celebrated discovery that the liquid part of honey could be entirely evaporated within the body of the bee; a discovery that, in its practical bearings, is second to none ever made in the natural history

of this insect. As very many are awaiting further proof for his statements on this subject, I will say that I have obtained from the bee granular masses that, under a microscope of low magnifying power, appear to be identical in composition with similar masses found upon the hive bottom. And notwithstanding the fact that Mr. Quinby is the author of our most practical work on bee-keeping, and, in my opinion, the inventor of the best movable frame hive, bee smoker, and originator of other devices too numerous to mention, I yet venture the assertion that in future years he will be best known as the discoverer of the true nature of the accumulations found beneath the cluster in seasons of repose.

Mr. Quinby's life-work was to elevate bee keeping to the dignity of a pursuit among men, and he has performed his work well. Bee-keeping as a specialty will date from his time, and if Huber has earned the title of "Prince of Apiarists," certainly Mr. Quinby is entitled to that of Father of Practical Bee-Culture. He sowed that we may reap. He labored without reward, often, indeed, without an appreciative public. Now that he is gone, bee-keepers will miss his councils, and think more highly of his work. He had not, it is true, the advantages of a liberal education, but he largely supplied the deficiency by his great observational powers and active common sense.

While he was anxious that the millions of pounds of honey now lost might be gathered, he had no fear of an overstocked market, and often narrated the history of the cheese trade as an illustration, saying that while this industry was in its infancy prices

were lower than at present, and that the market was really in more danger of being overstocked than now, as the facilities for disposing of the products of the dairy have increased faster than the production. The history of this business he thought would be the history of ours. And after watching the honey trade closely for a few years past, visiting the principal markets East, &c., I am compelled to think Mr. Quinby's conclusions correct. There may be temporary gluts in this market, as there are in all others, but these will be not because more is produced than can be consumed, but because the facilities for handling the crop are undeveloped. Our greatest enemy today (outside of those who sell glucose for honey, and paraffine for beeswax) is the old fogy bee-keeper who brings his honey to market in the most unattractive and undesirable packages. I find that a very small quantity of his honey will supply a larger town, and that the prices he establishes often prevents the introduction of better goods. It is to our pecuniary interest to make better bee-keepers of such men. Yet, while Mr. Quinby was doing just this work, very many bee-keepers thought him to be seriously injuring their business and were forever crying out "my occupation is gone!"

High as Mr. Quinby ranked as an apiarian, he stood still higher as a man. We who were accustomed to gather at his fireside can never forget his wholesome hospitality. He was a true gentleman, unfettered by the stifling conventionalities of modern life. He was always the same, always having a hearty welcome for his friends, and a pleasant word for everyone. True to his Quaker education, he was

an intense hater of shams, especially of the human kind.

He was honest, a characteristic that is getting to be as scarce as it is valuable. There is no principle in business better established than that "honesty is the best policy." Mr. Quinby, unlike most men, was honest from principle.

The mental rather than the motive temperament predominated in him; that is, surplus vitality would more naturally develop into extra mental work than into intense muscular activity. He was a thinker, an investigator; an originator, rather than an imitator. He was calm and deliberate, not excitable: did not plan one minute to execute the next and destroy the following. As he viewed a subject from many standpoints he was not quick in forming conclusions. In quickness he could not keep pace with many who were of lighter caliber than himself. Muskets sometimes hang fire, but big cannon are not usually handled with the rapidity of small arms.

While not easily disturbed in temper, he was not tame in spirit when he had just cause for indignation. He had a very modest opinion of himself, and therefore in measuring others did not set himself up as the standard of perfection, as is the manner of some.

His last years were his best. His best and most enduring work was done after he was sixty years old. His famous assertion then made, and so ably defended, that cold usually kills the bees has never been successfully contradicted. He never wrote so well as in the latter years of his life. He continued to improve in both subject matter and manner of expression. His bodily powers were gradually failing

him but his reasoning faculties were never so keen as in the last five years of his life.

With more of the elements of the politician about him he would have ranked higher during life, but his reputation would not have been so enduring. Now his merits are just beginning to be appreciated.

How fitting that a life so calm and pure should have so peaceful an ending! On the 27th of May last he retired at his usual hour in seeming good health and spirits. Before the hour of midnight, without awaking from his slumbers, he quietly passed from time into eternity. Thus, at the age of sixty five ended the life work of our counsellor, friend, and public benefactor. He was more fortunate than the most of men for he was able to take with him his most valued possession, the hard earned accumulations of a lifetime—a noble character.

"So live, that when thy summons comes to join
The innumerable caravan that moves
To the pale realms of shade, where each shall take
His chamber in the silent halls of death,
Thou go not, like the quarry-slave at night,
Scourged to his dungeon, but, sustained and
soothed

By an unfaltering trust, approach thy grave
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams."
—Bryant.

Starkeville, N. Y.

For the Bee World.

Queens---Drones---J. W. Howell.

SHERENDON.

MR. EDITOR:—Received yesterday the March and April Nos. BEE WORLD. It seems Mr. Howell will not be righted on the queen and drone question, and it appears to me he has got the controversy in a muddle.

I will take his article, answering the points at issue, as I read; but before citing authorities I would ask,

Did Dr. Hamlin instruct him to clip the wings of the two virgin queens he speaks of losing? Fertilization seldom, if ever, takes place before the 5th day after the queen's emerging from the cells. He lost his queens in their attempts to meet the drone in the open air.

In my first communication I tried to use as few words as possible to convey my ideas, and it seems Mr. Howell, quotes from my article in support of his theory.

If he has made out a case we are too obtuse to see it.

Mr. Andrews, in his article, *BEE WORLD*, page 138, understands Mr. H.'s position the same as I do, viz: "without sexual intercourse there can be no offspring."

Now if there was any thing in my article that supported that theory, we did not intend it.

Let me ask Mr. H., in quoting "The Apiary" page 7, how and where it bolsters up his theory—"It very often happens that impregnation is retarded, or fails to take place, and the result has been the queen proves to be a drone layer." He has certainly forgotten what he started out with, and shifting from his original supposition and position.

Farther—"Dzierzon says, 'all impregnated eggs produce drones.'"

Dzierzon, says just the reverse. He has an imperfect translation of his work, if he finds he says that. He never wrote that, unless he has done so very lately, and if lately, he has become like some other bee people, with us, crooked.

Mr. Bonner, whom he quotes, and who wrote in 1795, is no better witness in support of his theory, than Moon's 40 Years Experience Amongst the Bees.

Hear him, page 61: "I can positively affirm, that the queen bee is capable of becoming a mother, without so much as seeing a drone: and that the doctrines of almost all former writers on this subject, (Schirach and one or two more excepted,) who affirm that the queen cannot breed without the agency of the drones, or males, as they call them, is founded on a mistake."

Lastly he quotes from Dr. Hamlin's little work, when the Dr. says in the preface, "the contents, he does not claim as entirely original," and says he has selected from Langstroth, Quinby, King and Mitchell.

Dr. Hamlin, says: "eggs are sometimes laid by the young queen before her impregnation, but they invariably (not always) produce drones." And Dr. might have said farther, that when they commenced to deposit drone eggs 99 out of 100 never deposited any other kind of egg.

But, I ask how does that help him in the position he has taken. As Dr. Hamlin's work is made up from the works of those mentioned and others, let us see what they say about production without copulation.

"It has already been stated, that the workers are proved by dissection to be females which under ordinary circumstances or barren. Occasionally, some of them appear to be sufficiently developed to be capable of laying eggs; but these eggs, like those of queens whose impregnation has been retarded, always produce drones."—Langstroth, 3d Ed., P., 36.

"I have frequently, since obtaining the Italian reared queens intentionally late in the season, that I may have drone-laying queens for the purpose of raising early drones. Such failed to meet the drones, and were drone layers in con-

sequence."—Quinby, New Ed., 1867, P. 37.

"Eggs are sometimes laid by the young queen before her impregnation but they invariably produce drones."—King, 12th Ed., P. 14.

I do not care, nor is it profitable Mr. Editor to pursue this subject farther. A pow-wow amounting to nothing.

"The true student of science stands ready to abandon any and all theories one after another, when they are contradicted by newly found facts. Theory is only fancy, excusable but not commendable save as an incentive to observation and record of facts. He makes a clear and constant distinction between laws and theories."

Your correspondent, J. W. Howell, it seems to me has taken in April No. of BEE WORLD both sides of the question, and argues on one side and supposes on the other, then shifts to the other and winds up with a getting out place and a sticking to. "I object to the whole story of drone production without sexual intercourse unless you make the queen bee an exception."

In the lower order of animal creation we find less of sexual intercourse than with those of a higher order.

Some insects run several generations without fertilization or copulation—the bee once fertilized lasts one generation running through several years.

April 17th, 1870.

—o—

For the Bee World.

Your Bees -- On what did You Feed, and how did you succeed?

B. W. STONE, M. D.

MR. EDITOR:—Through the columns of your excellent Journal we wish the caption to this article answered du-

ring the summer, by each bee-keeper that had to resort to feeding during last winter. The query is of more import now that the "honey slinger" is coming into general use. Some advocating the use of the "slinger" until the honey season is over, and then feeding sirup made from coffee sugar, to supply the bees with food for winter, in the assumption that sugar is cheaper than honey. Successful bee-culture requires that the query be settled on a firm basis, backed by the proof.

M. Huber thought he had demonstrated that bees, fed on pure sugar, would produce enough wax to show that the sugar could supply all that was necessary to the formation of the fatty matter of the wax. (See Natural History of Bees, Edinburg, 1821, page 330.) Dumas and Milne-Edwards, however, in repeating Huber's experiments found that this was not the case. Bees, fed on pure sugar, soon cease to work, and sometimes perish in considerable numbers; but if fed with honey, which contains some waxy and other matters beside the sugar, they thrive upon it; and produce, in a given time, a much larger quantity of fat than was contained in the whole supply of food. (See Annals de Chimet de Phys., 3d Series, Vol. 14, page 400.)

In view of the importance of the "query," and the conflicting evidences of the learned authors cited, we hope to hear from many of our brother bee-keepers, through the BEE WORLD.

Last season was the worst with us that we have ever experienced; and had it not been for buckwheat, we feel confident we would have lost all, or nearly all, our bees last winter. We therefore urge the importance of culti-

vating buckwheat, and if we did not feel that we would be acting the part of a bore we would write and publish more upon the subject, but when we remember that we have filled column after column of your paper, heretofore, we desist.

We feel that we should say a few words to our brethren concerning the BEE WORLD. It is always a welcome visitor in our family circle, and we could not think of doing without it. Many valuable lessons and ideas have we learned from it; and the older it grows the better it gets. Success, always, to you, Bro. Moon.

Fountain Run, Ky.

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 For the Bee World.
Dr. Larch's \$100 Premium.

R. M. ARGO.

MR. EDITOR:—The April No. is just to hand; and the March No. only came to hand a few days ago. I have not seen the February No. yet. Being a very busy man I do not take time to think of the subject to write on for the WORLD until I receive the next No. and look over it for a subject; and as I did not receive but one No. after I wrote the (full of bronze turkey) last article and as I received a few letters from South, one from Miss A. Saunders, asking me if the BEE WORLD was discontinued, I concluded that it was suspended and so wrote no more. Nor did I know better until last Friday, on receipt of March No. Thus you have an explanation of my long absence from the WORLD. I rejoice that the WORLD still moves.

You guess right when you say you believe if I had received the March No. I would have answered Dr. Larch's offer. Friend J. S. Devitte of Ga.,

seems to think I have not got risen from the effects of the bronze turkey yet. But I would assure him that from that day I enjoyed fine health until the great March snow. I, nor no one about here, got through that snow in health; and I write under the effects of it now, as I wrote last under the effects of bronze turkey.

I will now turn to friend Larch's offer. Now friend Larch if you will read my article in the January No. again, and read it carefully you will see I wrote it in good faith, and made no such a comparison as you say. I said the specimens sent me might have been as good as mine had they been white clover, as mine was. I had no linn nor fall flower honey of my own to compare with them. Nor had I ever seen linn honey before; neither sourwood nor smartweed. My whole dependance is white clover. In 1862 I saw some Missouri honey that was brought here; it was a deep yellow, almost red, and I was told by the man who brought it that it was prairie flower honey, and was the only sort they get there. This sample I received was very much like it. So I wrote all I know—the whole truth. What then does friend Larch mean by calling on me to tell the WHOLE TRUTH?

I have, since writing that article, received other samples, among which is one from Paul Viallon, Bayou Goula, La. This, he says, is fall honey from smartweed. When I received it it was a very bright liquid. I set it away intending to try it next day, as I had a pack of letters to tend to that night. It remained there entirely forgotten until a postal, dated March 15th, reminded me of it. It was then crystallized as white as snow, but on trying it I could discover but little

difference, if any, between it and my best white clover. Had I kept it in a warm place it would have not candied. This will answer friend Andrews, on page 107.

The only objection I have to accepting friend Larch's proposition is that it looks like gambling and I have all my life been very scrupulous in that respect. But as I still believe what I then said, that it would be a good idea for us to send specimens of honey to State fairs, I will, with friend Nesbit, accept the proposition on the terms made by the latter. But would suggest that all the specimens be in the same sort and size of glass cans. It would look very unsightly and odd for the specimens to be exhibited in different shaped and sized cans. I agree with Nesbit that Charles Muth be one of the judges—that he is a judge of honey. The honey could be sent to the committee in anything convenient, and the committee could put it in the exhibition cans, numbered for exhibition.

It is likely friend Larch has never eaten Kentucky honey or he would not have dared to make that proposition, unless he does not care where the \$100 goes. If I were to send him a specimen of my honey he would see that the \$100 would come to Kentucky if the thing is all done right and fairly. The only fears I have is that friend Nesbit's honey may take the \$100. We are only 90 miles apart and I have eaten his honey on his table, and knew at the time I could not beat it.

Now, friend Larch, what use have I to brag on my honey in print, when I have such a good market for it at home that I tried to buy by the barrel from others, to sell at home again,

after all of mine was sold at 20cts? But, Sir, I will never do that again; for my customers, by their very taste know Argo honey, and know that what they got of me since January 1st was not Argo honey. *One customer I had forgot to tell what honey it was, and he returned it, saying it was brown sugar honey.

All spring blooms are killed here except the daisies, so I am left nothing but white clover, and three or four weeks to wait for that,—feeding in the meantime.

Lowell, Ky., April, 1876.

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For the Bee World.

Sundries from Sunny Side, Southern Miss.

ANNA SAUNDERS.

MR. EDITOR:—No March No. of BEE WORLD yet to hand, and I dare say the April No. is out also ere this. It is too bad for you to forget me so when you know that no one takes more interest in your Journal, or more trouble to oblige you, than I do. I discovered that the March No. came out earlier than usual by receiving letters referring to my article in it some time since. I will answer some of them here, as requested:

I use the Dixie hive. My hives are badly made—very—and as rough as well can be—get splinters in my fingers often—but I would not exchange them for the best made hives of any other style.

Will try to be brief.—Too much honey in July (buckwheat) left no room for eggs; then a sudden cessation of the flow of honey in the flowers, and this dearth long continued, prevented the deposit of eggs when there was room. Before this was over and one of the principal causes of it was a long

spell of wet weather—heavy and constant rains. On the 27th of October a little harvest commenced which lasted seven days, and supplied my bees with sufficient honey for the winter. Then pouring rains again, with very little intermission, till the last of January; and, indeed, a great deal too much up to the present time.

The moving of my bees was a great injury to them. They were not prepared for it at all.—In an ox wagon with an unbroken team, over a very rough road, full of stumps, roots, &c., the only wonder is that they survived it at all.

Where the frames fitted closely, and were well fastened with propolis, they were not injured; but some of them lost heavily. I did not lose a single colony, outright, or a single queen. I lost three colonies during the winter—was from home. I requested my nephew to feed them but he fed the wrong stocks, and the poor ones starved. I have given away about a dozen stocks and sold two—never a single queen.

The first colony I sold starved during the long wet spell in the spring of 1874. I volunteered to replace it if the hive was returned to me. It came last summer, and when I opened it a perfect cloud of moths flew out. From them came some of my present trouble; but the bees and I between us have almost cleared them out. I never saw any before that I remember in combs occupied by the bees, and am struck with admiration at the thorough and beautiful manner in which they clean the combs. It almost repays me for the suffering the moths caused me.

The poplar is in bloom—commenced on the 12th. It has been wet and cold since. My bees have been gath-

ering clover honey for two weeks. I had almost despaired of ever getting any from that source. The blackberry has yielded some honey recently, also, for the first time, I think, in four years.

I will try to answer the question as to how I came to engage in bee-keeping, and the other questions, in the next No. After that I shall, perhaps, not write any for the BEE WORLD for some time. If I have repeated some things that were in the March No. you must excuse me—those letters must be blamed.

Woodville, Miss., April 16th, 1876.

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For the Bee World.

A few Nuts for D. A. Pike to Crack.

BEGINNER.

As many readers of the BEE WORLD have a very earnest desire to improve their stock of bees by the introduction of new breeds, and as Mr. Daniel A. Pike has struck a "bonanza" in the "bee line," and offers for sale a variety that is the "BEST IN THE WORLD," it is to be hoped that he will cheerfully consent to allow the good qualities of his "Albinos" to shine forth to illuminate the "world" by giving plain, concise, and direct answers to the following questions:

1. What are the distinguishing markings of your albino bees from the pure Italians?

2. Do your albino queens produce progeny that are all uniform in their markings, or will the same queen produce progeny of different markings, some with white bands, some with pure Italian markings, and some with only the marks of hybrids.

3. What are the markings of your albino drones?

4. Have you EVER reared an albino queen that produced uniform progeny? If so, pray, HOW LONG HAS IT BEEN SINCE YOU SUCCEEDED?

5. Please state what advantages the albinos have over the pure Italians. Are they better honey gatherers? Will they commend themselves to that class of bee-keepers who desire bees of uniform markings, and dislike to have in their apiary bees of every conceivable shade, from dirty white piebalds to hybrid, of no variety or caste?

For the Bee World.
Destroying Bumble Bees.

W. P. HENDERSON.

I do not remember to have seen the following, for capturing bumble bees, in print, nor do I know who invented it; but it works like a charm, and a neighbor tells me he came very near running out of seed of this particular and unprofitable (for honey) species, the children being so fond of the sport of capturing them.

Their nests are usually found in hollow fence posts—between the crevices of chinked and daubed log cabins—between the weather boarding and studding of framed buildings—in hollow and decayed trees. &c., &c.

Procure a gallon or two gallon stone jug, fill half full of soap suds, (being preferable to clear water) and place it near their nests, the mouth of the jug within a few inches of the entrance. Then with a stick or stone rap upon the post, log or boarding containing their nest, when out they will rush, and into the jug pitch as though they were poured into it. Sometimes half a dozen or more will be flying about before the entrance or

mouth of the jug is discovered, but no sooner does one go in than all follow in quick succession, and then as fast as they come out of the nest enter the jug and are drowned.

Murfreesboro, Tenn., April, 1876.

For the Bee World.
Weather Notes for March, 1876, taken at 7 and 8 O'clock, A. M, by

WM. J. ANDREWS.

Day of month	Thermometer	Weather
1	16°	Rain; East wind.
2	35°	Cloudy; N-W wind.
3	28°	Clear; N-E wind; frost.
4	32°	Clear; N-W wind.
5	0	Cloudy; wind.
6	54°	Clear; S-E wind.
7	54°	Rain; S-W wind.
8	32°	Clear; N-W wind.
9	43°	Clear; South wind.
10	48°	Cloudy; South wind.
11	60°	Cloudy; South wind.
12	54°	Cloudy; South wind; freezing at sun
13	28°	Clear; N-W wind. [down.
14	35°	Clear; S-E wind.
15	52°	Cloudy; S-E wind.
16	54°	Clear; S-S-E wind; rain at night.
17	38°	Clear; S-S-W wind.
18	20°	Clear; N-N-W wind. [killed.
19	26°	Cloudy; East wind; early blossoms
20	32°	Cloudy; North wind; 4 in. snow and
21	18°	Cloudy; N-W wind; 7 in. snow. [sno'g
22	16°	Clear; West wind.
23	34°	Clear; S-E wind.
24	46°	Rain; South wind.
25	42°	Cloudy; West wind.
26	38°	Clear; North wind.*
27	42°	Raining; S-E wind.
28	48°	Clear; S-W wind; snow in evening.
29	33°	Clear; West wind.
30	38°	Clear; N-W wind.
31	42°	Clear; North wind.

*Found queen that was hatched February 27th, fertilized and with sealed brood.

Columbia, Tenn., being situated about centrally between the Northern and Southern States, will afford the reader about an average temperature between the two.

Columbia, Tenn., April, 1876.

For the Bee World.

Scrap from Illinois---Social Chats.

WILL M. KELLOGG.

Friend Andrews, your experience tallies so nicely with mine, in so many respects, that it seems like reading my own words. I well remember my first swarm of bees. They were in a seven-year old box hive about one foot square, and were all packed and corked up tight for removal, when I persuaded the man to sell them to me for \$7.00 on time. We brought them home and let them out, and I took the precaution to eye them from a goodly distance.

A few days after we bought another stock, in a hive about one foot square and two and a half high, made with a hatchet and ten-penny nails for tools. We had to cram the holes full of rags, besides the cloth over the bottom.

Once in a while a bee would pop out and I would "leg it" to a safe distance while father staid by and plugged up the holes.

I have got over being afraid of bees long ago, but this idea of telling new beginners that there is no use of a veil or gloves in handling bees after you get used to it, is, to say the least, a little too much overdrawn. I pretend to know how to handle a stock of bees with the proper care, and yet, while at work with the swarm all subdued and quiet as kittens,—slow motions being made,—no jar of the hive, or breath blown on them—out will pop a single bee and inflict a terrible sting—one that makes us howl, and weep, and feel homesick; and yet the rest of the bees are perfectly quiet. Have been stung so bad sometimes as to make me wish there "wasn't a blasted bee in all America."

There are times of the year when

nothing will quiet them so as to handle them without a net. Got 31 stings in one day this spring. Wish I could have had "Novice" and a few others there; I would like to have seen them work without a net that day. I used to think the "innoculation" theory was all right, but am beginning to change my mind, for it swells on me as bad as ever. April 9th (Sunday), got one on my right eyelid. In a short time it was shut tight; and for nearly a week it was "Ah! been fooling with the bees, eh!"

Yes, I tried a bottle of the German Bee Sting Cure, but got it so late in the fall I could not test fairly, and not yet this season. I did not get it of Gen. Adair, but of the American Bee Journal.

As I got my March and April Nos. of the WORLD on the same day, you can see why I have not answered you sooner.

A QUEER DISCOVERY.

Friend Churchwell, I can beat yours all to pieces, though not quite so early. On April 6th, in looking through my hives I found one stock, strong in bees and brood and with plenty of honey, and with two queens. The hive was well stocked with bees and brood in all stages. Both queens were in sight at the same time, on two frames but side by side. One looked like the old laying queen of last year, and the other was evidently a virgin queen. Yours was a queen cell, mine was two queens in one hive. You in Tennessee and I in Illinois makes the season about the same.

BUT ONE BEE JOURNAL.

I, too, noticed in the American Bee Journal for April that "there is but one Bee Journal on the American continent—the American;" and with great

surprise, for I couldn't see how the staunch old American could make such a statement. Let us hope it is either a misprint or there is something left out that will alter the sense very much. I would like to know what they would call the BEE WORLD, Gleanings, and Bee Keepers' Magazine if not Bee Journals.

PROSPECTS.

Bees have been working hard on Indian meal and wheat flour (mixed) when the weather would permit,—for we have had very few nice bee days this spring. They have also worked a little on maple blows, a few early ones. Have my 12 good stocks yet, and no loss as yet. I think I am safe to sail my old hat this time for the season of '76.

Oncida, Ill., April 20th, 1876.

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For the Bee World.

• Sundry Notes.

DR. JEWELL DAVIS.

MR. EDITOR:—If the queen cells are started on drone comb, the larvæ generally dies about the time to change into the pupæ state.

Bees are more mild and peaceable while gathering stores rapidly, but possess the same habits, mainly, and if offended or made angry, may be quieted by the use of smoke and sweets.

If combs are found filled with brood in regular order, it indicates the presence of a fertile queen. J. S. Harbison says the time for young queens to become impregnated is usually from the seventh to the tenth day after they emerge from the cells.

The best location for bees is a nice, dry one, in the vicinity of abundant good pasturage during all the summer

months. Three conditions are requisite to obtain large amounts of surplus honey:

1st. The brood chamber well filled with bees at the commencement of the honey harvest.

2d. Abundant pasturage.

3d. Favorable weather.

With all of these we have the assurance of full boxes of honey; but to lack either we cannot have the assurance of much honey.

To have full control of our "blooded stock" we must adopt plans to have our queens fertilized away from the cross with black drones, or where we can never be annoyed with such crosses.

It is contended that forced queens are less prolific than natural ones. Possibly this, sometimes, may be true; and it is equally true that all natural queens are not equally prolific. And as all queens are not endowed with the same prolific powers, it is manifest that some stocks of bees will increase in numbers much faster than others, showing clearly that our success mainly depends upon our being able to supply such stocks with the most prolific queens at the proper season.

As stated in a former article, I left my bees out on their summer stands all the winter long; and they are now enjoying their golden harvest from the first bloom. I lost none that had stores enough to carry them through the winter and spring.

Thank you, friend Devitte, for your kind remarks. I wish you, also, to be on hand with your articles to stir up the "memory." Well, I hope the "shot" will wake them them up to more diligence, and cause them to pour out more freely and early the effusions of their pens, begetting in

us the abiding interest which apiculture demands at your hands.

Please read his review in the April No. of the BEE WORLD.

Charleston, Ill., April 1876.

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For the Bee World.
Italians and Red Clover.

—
W. P. HENDERSON.
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Last summer, after the white clover had dried, and but little else was in bloom near me except red and sapling clover, I became more convinced than ever of the amount of honey the Italian bee procured from the first crop of red clover. I think it was about the last of June my neighbors and myself mowed our red clover. Drones were, up to this time, permitted to remain in weak colonies, and strong ones were rearing drones. Two days after our harvest a general massacre in all the hives took place, and it was not confined to those who had attained their majority—the young drones, capped and uncapped, were ruthlessly dragged out.

The only honey resource of any consequence was the red and sapling clover fields near me, and that gone, there was but little brood rearing until the last of July or first of August, some 30 days after.

Murfreesboro, Tenn., April, 1876.

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BEEES ON VISITING TERMS.

Dr. Bevan, in his book called the Honey Bee, mentions a curious instance of bees being on friendly terms with those of another hive (p. 339). Two of my hives are now, I believe, acting in a similar manner. What they do when they enter one another's hives I have been unable to find out; but if robbing, it is mutual. Thinking that perhaps it may be of interest to

your readers, I give you a short account of it.

In the latter end of February two of my hives (which I will call Nos. 1 and 8) began what I thought was robbing; but after watching them carefully I could not make out which was the aggressor, so narrowed both entrances, so that only one bee could go in at a time; and that having no effect I stopped up No. 1 in the evening. The next morning bees from No. 8 kept flying to No. 1, but finding it stopped, returned to their own hive. In the evening when No. 8 was quiet, I stopped them up and released No. 1, when to my surprise the bees from No. 1 flew to No. 8, trying to obtain an entrance.

I gave them a week of this treatment, that is, stopping them up on alternate evenings, hoping to keep them to their own hives; but on both hives being left open they recommenced the visiting within a couple of days as freely as ever. I then gave them another ten days of the same treatment with no better result; and, finally, I gave No. 8 a good dose of mint, and shut them up for a day; but it was of no use, so now they must go their own wicked way. No. 8 is light, but has brood, and seemingly doing well. No. 1 I have not turned up lately on account of the weather, but I know that it had a queen last November, and it was the first to set to work this spring. Both hives take in plenty of pollen. They are in straw skeps and are being fed through a hole cut in the top, and they stand about twenty-four feet apart, with six other hives between them. I have watched them carefully I may say, every day, but at no time have I seen anything like fighting. [British Bee Journal.]

For the Bee World.

How I Manage Bees, No. 6---Swarming.

REV. M. MAHIN.

Swarming time will be upon the beekeepers of the North by the time the May No. of the WORLD reaches its readers. In the South, I suppose it is now in full progress. Much of success or failure depends upon the ability of the bee keeper to control the swarming impulse. If increase of stocks is desired, by far the better plan, in my judgment, is to make artificial swarms. This may be done in several ways. If empty combs can be had, a very good plan is to take about four combs containing brood, and adhering bees, and put them in a hive on a new stand, giving them a queen, or a queen cell, and filling the hive with empty combs. Such a colony will build up very rapidly. The bees may be all taken from one hive, or from three or four, as circumstances may dictate. Another way, and a very good one, is to take one comb of brood and bees from each of several hives, and thus fill the new hive. The bees that will hatch out will make the new stock very populous in a short time. Put empty frames, or frames containing combs, in the hives from which bees are taken. In this way a very large increase may be obtained, and the stocks all kept strong. Care should be taken not to allow queenless stocks to build comb, as they will usually build only drone comb.

If we want to get the largest yield of surplus honey, we do not want our bees to swarm at all. We want to keep the stocks strong in numbers, so that they may avail themselves of the honey harvest. And there is no question of more importance than this:

How can the swarming impulse be restrained? In this, as in many other things, prevention is better than cure. Two things are necessary to prevent bees from swarming. The first is to give them room for breeding and the storing of honey. If they become crowded, and forage is plenty, they will be almost sure to swarm. The second thing necessary to prevent swarming is the proper shading and ventilation of the hive. The hive should be ventilated at the top, inside of the outer cap or covering. In hot weather two or three inch holes, covered with wire cloth will be sufficient. Bees will rarely want to swarm if they have sufficient room, and the hive is not too hot. When the swarming impulse once takes possession of a stock, it is not very easy to control it.

Perhaps the best cure consists in the two points above named, and the removal of the old queen and of all queen cells but one.

It is said that bees will be satisfied if allowed to swarm, and they are put in a new place and their combs given to them, all queen cells being first removed. I have never tried it, and can not, therefore, do more than to recommend it as an experiment worth trying. I have been successful, by destroying queen cells, and giving abundant ventilation.

I clip the wings of all queens, to prevent their going to the woods. When the bees swarm, as they do sometimes, I take care of the queen until they begin to return, and then if I want to hive them I remove the old hive, and put an empty one on its place; and as the bees begin to enter, I put the queen with them, and let them hive themselves.

To hive a swarm when in an acces-

sible place, is a very simple and easy operation, when one knows how to do it. Set the hive conveniently near, and with a dipper, or any other convenient vessel, dip the bees up, and pour them down at the entrance of the hive. This must be done very quietly and gently. One should never be in a hurry when handling bees. You will be likely to get the queen among the first bees removed from the cluster, as she is usually in the lower part of the swarm as they hang on the tree, or on whatever they have settled. If you get the queen into the hive, the bees will be sure to follow. As soon as the bees are all in, or even on, the hive, it should be removed to where it is to remain, before any of the bees have marked the location and gone away to the fields. To prevent the swarm leaving the hive, give them plenty of shade and ventilation. In all my experience I have had but one swarm to abandon its home after being hived, and it had been left standing in full sunshine on a very hot day. I was away from home, or it would not have happened.

New Castle, Ind., April 25th, 1876.

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For the Bee World.
Random Notes.

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KINCHEN RAMBO.
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MR. EDITOR:—My bees have all come safely through the winter, on their summer stands. Plum trees began to bloom here about Christmas, and peach trees about the middle of February. But we had a cold snap, commencing the 19th of March, which was rather severe on them. And about the last of March I noticed the only weak swarm I had, began to swarm out. I knew there was something

wrong with them, so I looked and found their queen on the ground near the mouth of the hive. I put her back and soon the bees all went back too. I then overhauled the hive and found they were entirely destitute of supplies, and having a small patch of brood two or three inches square. I immediately commenced feeding them with sugar sirup in a shallow vessel, stirring in meal bran to keep them from drowning, and they concluded to stay at home. And after a while I offered them a good article of sorghum which they very readily accepted, and now seem to be doing very well. I now have 14 stands, all in good healthy condition; and I once wrote an article in your paper stating that I never expected to keep more than ten or a dozen stands and recommending farmers generally to do the same. But last summer I broke down at farm work, and had to give it up entirely and now I expect to give my time and attention mostly to bee raising, and desire to increase my apiary to 25 or 30 stands as soon as possible. Consequently I have no axe to grind—no bees to sell. And under the impression that the range is not sufficient to sustain that number of stands, I am preparing pasturage of white clover and buckwheat for spring and summer; and through the noble generosity of my friend, S. T. Nix of Lebanon, Tenn., (to whom I shall ever feel grateful,) I am having a very pretty start of "tanglefoot" for fall pasturage.

But with all this kindness, and all these facilities, I don't think I could get along without the BEE WORLD. In fact it is through that channel and the great personal kindness of its editor, that this knowledge and these facilities have come to me. And I do hope

that your correspondents will be punctual and write often, and let us keep up the paper, for it has done, and is doing, a great deal of good, in this section of country particularly. And I would like to hear from others also, who have never yet written anything for publication. I love to read correspondence and would write oftener myself, if I could think that it afforded others half the pleasure that it does me to read theirs.

Floyd Co., Ga., May 1st, 1876.

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For the Bee World.
Sketches from Tennessee.

S. D. MCLEAN.

THEORIES.

There seems to be, of late, a disposition on the part of some contributors to the journals to call in question the theories of past writings.

That some of those theories are not easily digested and reconcilable with known natural laws, we are fully apprised. But can the matter be bettered by opposition, without facts to disprove their correctness? The leading theory of the present day connected with apiculture, is that of Dzierzon. With his theory most reading bee men are familiar. Many arguments have been adduced to prove its correctness. Also many to disprove it.

That we should seek light, not only as respects these theories, but also on all questions pertaining to our calling, is right. That we should impart that light to others, when we have it, is not only right but our duty. But theories will remain theories until, supported by facts they are established as truth, or met by facts they are proved to be false. Time, the great arbiter, will reveal the truth as it has done before.

When Huber advanced such theories as these: that the queen meets the drone but once during life, and that in the air; that she deposits eggs at all seasons of the year; that the mother queens leaves with the swarm; that a queen can be reared from a worker egg when the queen is lost &c., they were lightly received, and met by opposing theories, such as the following: That the queen is not fecundated by any act of coition with the drone, but the drones fecundate the eggs as they are laid in the cells, that the queen oviposits only in spring and summer; that the young queen departs with the swarm; that a colony having lost its queen cannot rear another without there is a royal egg (Knight) in the hive &c.

So we see that about a century ago bee keepers advanced theories which were in opposition to each other as they do now. But those questions which agitated bee men at that day have long since been settled by facts which established the true and rejected the false. So it will be of theories of the present day.

FANCY BEES

Friend Andrews says "if fancy is the acme of perfection in the bee line" we can boast of it. But friend A., is fancy all the good quality of our bees? Are they not workers also, as evinced by the amount of surplus honey stored the past season—the worst here for many past? You say you have abandoned the fancy and now go in for workers. True, friend A., workers are what we want. But if we can have fancy and workers too, or beauty with utility, then may we not boast of having reached the "acme of perfection in the bee line."

Friend A., anticipates us, but we

don't intend to be choused out of our intentions in any such way. We not only visited his apiary but remained long enough to share the hospitalities of himself and good lady. The Maj. is one of those affable and social men that makes all about him agreeable. Although connected with a large hardware establishment, yet he finds pastime in whiling away the toils of business, in his apiary. Being in the true sense, a bee keeper, he has accumulated many of the necessaries to its prosecution to success. Friend A. takes great delight in showing his bees and although he claims to have abandoned the fanciful yet he has many in his apiary. We were not a little surprised at the appearance of Miss Dadant, as he calls her, and her progeny. They were unlike any of the Italian stock we had seen before. As to prolificness they were up to the best.

Yes friend A., and how many more will say yes to giving Rev. L. L. Langstroth the benefactor to bee keepers, a colony of bees this fall. We owe it as a debt of gratitude. Let us discharge that debt. We have pledges from others to do the same.

TENNESSEE LEADS.

Our friend J. M. Harris of Georgia complains to his Southern bee keepers and justly too, that the BEE WORLD, published in their midst, is not so well sustained by Southern contributors as it is by its friends more northward. His article has caused a little investigation to determine the source of its principle support. We find since the beginning of the 2nd vol. (if no mistakes have been made) that Tennessee leads off with fifty-two communications; Illinois next, with forty-seven; Mississippi and Georgia,

with twenty-one each; next is Indiana with sixteen. South of Tennessee we find sixty-one contributors, while Tennessee alone furnishes fifty-two. And further. From two hundred and thirty-one contributors, Tennessee and Illinois furnishes ninety-nine. So friend H, it is not difficult to determine where the BEE WORLD, published in your midst, receives its principal support. Wake them up friend H.,! Wake them up!

Culleoka, Tenn., April 25th, 1876.

For the Bee World.

A Day among some Tennessee Apiarians.

WM. J. ANDREWS.

Wednesday, April 26th, in company with Mr. C. C. Vaughan, we visited the apiary of Mr. J. Clayton Moore, situated about eight miles south of this place, in the edge of Bigbyville. Mr. Moore has 33 colonies, 24 in Langstroth, one Thomas, four in Dodson and Bray, and four in box hives. He has, as yet, but two Italian queens, intends, however, to Italianize all his stocks this year. His colonies were all strong and in fine condition. He lost only one during the winter.

We then went to the apiary of Dr. A. T. Boyd, about a mile distant from the residence of Mr. Moore. The doctor is at present our Representative in the Senatorial branch of the Legislature. He is an old bachelor, and makes bees his pets. He has 80 colonies, all Italians, very strong and in the finest condition, and all in Langstroth hives. The doctor opened hive after hive for us, exhibiting the queens; and without the use of any smoke, and not a sting. We can unhesitatingly say that he has as fine a strain of bees as anybody in the United

States. In one of his hives he has fifteen Langstroth frames, the strongest colony we ever saw. This contained his favorite queen, and she was so fine, and her workers so beautifully marked, we asked the doctor for a piece of brood to rear queens from. He kindly tendered us a full frame; we thanked him, and cut out a piece about six inches long by three wide. He then remarked to us that if we did not succeed in getting a good queen, he would rear and present us with one. The doctor has done a good work in Italianizing many of the stocks of his neighbors, to all of whom he gives brood to rear queens from, and in many instances presenting them with tested queens — without money or price. He has a warm place in his heart for all his fellow men, but for bee men especially. His stocks were all well supplied with brood, honey &c. In reply to my question, How many stocks have you lost this spring? he said, only one. He relies on natural swarms altogether, and returns all after-swarms. He clips one wing of all his queens. He does not use the extractor in his lower story. The doctor is not engaged in the apiarian business for any profit there may be in it, never having sold any queens or bees, and but very little honey; but solely for pastime, and the pleasure and recreation there is in it to him.

From the doctor's we next visited Mr. T. J. Perry's apiary, about another mile distant. We found Mr. Perry in his yard at work with his bees. To this gentleman we are indebted for much of our knowledge in bee-keeping. He has 30 colonies, but not in so good condition as we somewhat expected to find them. He also uses the Langstroth hives, and has Italianized the

most of his stocks. We remained with him until he examined every one of his stocks. Among the number we found two drone laying queens, the original queens having been superseded. Mr. Perry informed us that he had lost a large number of his queens during the winter, and that his losses in stocks had been about twenty per cent. Had never used the extractor, — would get one this summer. He has increased his stocks heretofore by artificial swarming, but never intends to make another. Shall rely on natural swarms for all future increase. He, too, clips one wing of all his queens.

We expect to visit, during the summer, all the apiaries of any note in our county, and, if acceptable, will furnish you with notes in each as above.

Columbia, Tenn., April 26th, 1876.

— O —

For the Bee World.

Sugar Sirup.

F. LUDWIG.

MR. EDITOR:—I notice on page 140 of BEE WORLD, April No., where Mr. T. B. Parker of Goldsboro, N. C., lost some of his bees by spring feeding with sirup made of C sugar; but does not seem to know the cause, nor why the bees died from eating the sirup.

Now, Sir, thin sirup made of loaf or A coffee sugar will only keep about 24 hours, in this latitude. After that it begins to ferment; and sirup made of B or C sugar will begin to ferment in from six to eight hours, and is really not fit for bees; and as a natural consequence, when bees eat such sirup it will ferment and cause their abdomen to swell, and kill them, as there is a certain amount of gas generated by fermentation. I fed two of my colonies during March with candy, made

of the best of A coffee sugar, and they are now, and have been doing better since then than the balance of my other colonies; and I am of the opinion that it was the candy that stimulated them to more activity, and earlier breeding. Where sirup is used, it ought to be made of best A coffee sugar, and at least nine pounds of sugar should be used to a gallon of water, boiled for 15 or 20 minutes in a clean copper or preserving kettle, and well scummed. When fed to bees thin it down with cold water as much as is needed at one time.

Decatur, Ala., April 26th, 1876.

Remarks on Wintering.

[Translated for the BEE WORLD, from L'Apiculteur for February, 1876, by W. W. Croom.]

Our modern apiculture, dating from Dzierzon, is, as is well known, of German origin. We have learned much directly from the Germans, and those who, in Poland, have written upon the bees, have drawn largely, perhaps too largely, from their books.

The result has been that from a mass of facts new and useful, we have adopted many of their false speculations. It is principally in the theory and practice of wintering that the Germans, among all the questions concerning bee-culture, have committed the greatest aberrations; and their ideas on this point, erroneous, false and injurious, have spread among us their views and their books, and have changed more and more the simple, but safe and sure notions of the old Polish practice.

I cannot, therefore, in view of these considerations, limit my remarks on the wintering of bees by indicating simply what is necessary to be done

and how it is necessary to proceed; but I must, above all and in the first place, examine and combat those German theories, which have already occasioned much loss, and loss very considerable to more than one of our bee-culturists. I undertake this as a duty; so much the more is this my duty, since two years ago there appeared at Warsaw a treatise upon apiculture, in three volumes, with a fourth of remarks and commentaries, in which the author, a certain M. Pierre Cuny, has servilely adopted these German fictions, with their most luxuriant lucubrations drawn from the books of Baron Berlepsch. The theory of the Baron upon the wintering of bees, and the principles which he deduces from it, are, at bottom, only a display of artful sophisms, so much the more injurious and dangerous, as they appear, at first view, very convincing and irrefragable, and whose falsity nothing but the experience of sad losses and mature reflection can demonstrate.

M. Cuny avows that for thirty years he has not occupied himself with practical apiculture, and seems, to some extent, vain of it. It is natural, therefore, that he has not had the opportunity of convincing himself of the fallacy of the ideas disseminated by Berlepsch throughout Germany, which, unfortunately, have also found lodgement with us.

Having implicit faith in his German apostle, as in the Gospel; prejudiced as to others to the highest degree, I know not why against all our Polish apiculturists he has taken pains, in his book, not only to extol his erroneous German theories in representing them as the Alpha and Omega of apicultural science, but still more he has particularly applied himself to refute, condemn

and defame the principles and practice of the time-honored Polish method, set forth and preserved in the works of Lubieniski, Zuamirowski, and Ramoeynski.

(To be continued.)

-----O-----

For the Bee World.

Occuring thoughts in reading the April No. of the Bee World.

WM. J. ANDREWS.

QUEEN REARING.

Friend Mahin tells us how he raises queens. We will briefly describe our method. We first select a colony that we wish to rear queen cells, then catch the queen and cage her, then take all the frames but two, brush off all the bees, then go to the hives containing the queen from whose eggs we wish to rear queens, catch and cage her, take all the frames from it, brushing off all the bees, and insert the frames taken from the first hive and release the queens, then return to the first hive and insert the frames taken from the second and remove the two remaining frames, brushing off all the bees, which are then taken and placed in the second hive. The first hive being left queenless commence the construction of queen cells, which are sure to be of the eggs of the queen selected as by the exchange it contains no other brood. At the end of ten days all queen cells are cut off, and as many colonies as we have queen cells are made queenless and cells inserted in them. We then take two frames from the first hive and exchange them for two of the second, as all were exchanged in the first place and repeat the process. To the colony in which the cells were reared we give a frame of hatching brood on the same day we

remove the cells which will prevent the bees from swarming when the queen goes out on her bridal tour. After hatching she is permitted to remain in the hive until she becomes fertile and commences to lay, when she is ready to be introduced as the mother of some other colony.

LOSSES.

Friend Mahin says he has lost none during the winter. Neither did we, but we hope our luck will not follow friend Mahin through the spring, for that gave us fits—our loss being about twenty per cent.—notwithstanding we fed them constantly. All our beekeepers have complained of losses, some having lost as high as seventy per cent. It has been the worst spring on our bees that we ever knew; and it made us feel like we were having something of the experience of our Northern friends. They have not only died out, but have played some very singular freaks by deserting, often leaving behind them ample stores, both in pollen and honey, and brood in all stages, from the egg to the sealed. We have watched this point closely with a view to ascertaining its cause, and providing, if possible, a remedy therefor. Our conclusions are that the months of January and February being unusually warm, the queens became active in laying, and many of the old bees being lost in the flight the colonies became depopulated and weak; this was also attended with a heavy mortality occasioned by the cold days of March; thus there was not a sufficiency of bees to nurse the young brood the queen became restless and discontented and in her grief for the her young in madness rushed from the hive. If any one has arrived at any other conclusion we hope to hear

from them.

FRAMES.

Friend Taylor's advice "that all the frames should be precisely of the same length and depth," cannot be too strongly urged, especially in new beginners. As to the adoption of a uniform standard frame, that seems to be impossible. In our readings we find in the northern States a frame of 11 by 12 inches depth seems to be the favorite, while in the Middle States 10 inches seems to be preferred and in the extreme South 8 and 9 inches. We had made these notes on the side of friend Taylor's article, but in passing on until we came to the editorial, we found that you had partially anticipated us in your article entitled "Standard Frames."

Friend Kellogg you are "korrekt." We cannot crow over you much this winter, even were we ever so much disposed to do so—a fellow feeling makes one wondrous kind—and we never knew how to sympathize with you in your springing; and while you are crowing now we hope you may continue to do so in your springing, though we rather predict a hard time for you. (See notes preceding on losses.)

"Where ignorance is bliss

'Tis folly to be wise."

And we are rather of the opinion, from reading W. B. E.'s article, that he did not find much "bliss" in his ignorance of the nature of his aunt's Yankee bees.

SPRING FEEDING.

We have done a considerable amount of spring feeding this season, and, like friend Parker, we have, at times, especially after a cold snap, found an unusual quantity of dead bees in front of the hives fed, and were it not a fact

that our neighbors, who, we know, fed none at all, sustained heavier losses than we did, we should have attributed a considerable share of our loss to that cause. But when we take into consideration the fact that the losses of those who fed not at all averaged fifty per cent., while, with our feeding, our loss was only twenty per cent., we can arrive only at the conclusion that we saved many of ours by feeding. We will agree with him, however, in the following advice: Feed only when your bees are in need, unless you feed just one colony for early drones, and risk the dwindling.

FEEDERS.

Just here I will describe a feeder which I got up last year, as I do not think I have given a description of it before. I have given it a thorough trial and it works admirably, and not only so but is extremely handy; and moreover very cheap and useful in other respects when not used as a feeder.

They are made of Mason's glass patent porcelain lined, screw top fruit jars, I have both the quart and half gallon size, the former, however, is preferable. Remove the top and break out the porcelain lining, then cut through the top a half inch hole, in this insert and solder a half inch tube with a piece of fine perforated tin soldered on to the end of it. To use, fill the jar with sirup, screw on the top, insert and place on top of the hive, between the frames if an open top, into a mortice if close fitting mortice bar top, or into a half inch hole bored for the purpose if honey board is used. If it is to be used for stimulating feeding, the tube can be stuffed with sponge, allowing the use of very thin sirup or diluted honey. When not

used as feedings, with extra tops they can be used for fronts, or with the feeding tops, they can be filled with honey pickles and many other articles of the house. If any one would like to give them a trial and are unable to have them made from the description we have given, if they will send us twenty-five cents we will send them by mail one of the tops. When they can take it to any tin smith and have as many made as they wish.

HONEY DEW.

We see that friend Mabin, like ourselves, has grave doubts about honey dew "falling like a mist—in the day time—perfect honey dew." Since we wrote our March article we have read several articles on the same subject in the Bee Keepers' Magazine. One writer, in endeavoring to reconcile the different views expressed in regard to it says: Clark Simpson, a bee-keeper of thirty years experience, who resides in Genessee county, says: "After the aphid reaches a certain stage in its existence, it leaves the bough which once was its home, and flies into the air, discharging its excrement as it flies; this excrement is honey dew. This explains how Mr. Barber came to see honey dew falling in drops late in the afternoon."

Again. B. F. Todd, of Franklin county, Kansas, says: "Had our Kansas friend been here, I could have shown him plenty of honey dew, just as pure honey, too, as he ever tasted; it seemed to fall in profuse showers, and it fairly dripped from the leaves—no aphides present at all." Perhaps they were not immediately present, but, according to Mr. Simpson, they were flying far above his head, sending down their profuse showers to drip from the leaves, or to be gathered by

the busy bee. The foregoing may afford some further light to the gentleman who "saw it falling like a mist in the day time, perfect honey dew."

EXTRACTING.

Friend Leach we think is correct about not extracting oftener than once in a week. It is true the yield of honey with us will not be as large as with those who extract oftener, but being riper will it not be better in quality? We think so.

QUEENLESS COLONIES.

Friend Howell in defending his position on the "drone bee" asks, and very pertinently too, we think, "does M. Churchwell know that the queen he speaks of laid the eggs that produced those drones?" In starting up a nucleus this spring, we had scarcely gotten through with it until a deserting stock of bees commenced entering it, the queen of which we caught as she was on the eve of entering the hive, which we caged and she perished in her prison. On the tenth day we went to the same hive to remove queen cells, imagine our surprise on finding none and on examination found a beautiful, and prolific yellow queen, which we also removed. The frames of this hive were taken away and others placed in it again for rearing queen cells. In another hive thereafter a deserting swarm made an attempt to enter, but was prevented by closing up the entrance. We however, caught the deserters and supplied them with combs and brood and have them now doing duty in rearing queen cells. Now friend Howell cannot we ask friend Churchwell how does he know but what he may have caught a stray or deserting queen in his artificial swarm?

(To be continued.)



MOON'S BEE WORLD.

A. F. MOON & CO.,

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

MAY, 1876.

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PARTNER WANTED—On account of a proposed change in the proprietorship of the BEE WORLD, an opportunity is offered to a responsible person to purchase a half interest in the establishment. Mr. Moon will retain his interest; but on account of other business it will be impossible for him to conduct the affairs of the concern alone. Particulars given by mail if desired.

MAY.

Bees are now swarming, especially those that received proper care during the winter and early spring. See that your hive is clean, and when the bees

are hived give them plenty of fresh air. Shade them from the sun, as, no doubt, in the majority of cases, bees that leave the hive just after being hived do so because the heat is so intense they are obliged to seek more comfortable quarters.

STRAIGHT COMBS.—It is very important to secure straight combs, and this can be done easily if the bee-keeper will attend to it in time. As soon as the swarm is hived, (your frames extend from front to rear, of course,) raise the back part of the hive four or five inches. The bees will run their combs along the frames, and will keep them straight, appearing to know that the slightest deviation will cause them to sag, and, when heavy, perhaps break.

CLEAN THE BOTTOM BOARDS.—The filth that has accumulated on the bottom boards, if not removed by the bees, should receive attention at once. When warm weather comes this mass becomes very offensive to the bees, and possibly may engender disease. Generally the bees free the hive of this nuisance, but in cases where they have become weak, they, of course, need assistance. And the strong hives also will be benefitted if this task is done for them, as they can employ their time to better advantage in other occupations. Dead bees are sometimes found in the combs, (where they have gone to die, probably,) which should be removed at once, if the bees are not able to do it, as they occupy valuable room which would otherwise be utilized by the queen or workers.

LOOK FOR QUEENLESS HIVES.—Queenless hives may be detected this month by the inactivity of the workers. It is also indication of a weak one. Such should be immediately united with another weak colony that has a queen.

This will make a strong working colony, and is good pay for a little trouble; as, if left to themselves, they are very apt to dwindle away and die. The combs of the now empty hive should be carefully preserved, as they are convenient for inserting into empty hives that have too much honey, thus preventing queen laying, which is remedied by this transfer of a full comb for an empty one; and the comb thus secured can be placed in a weak hive, thus giving both what they most needed, and insuring their prosperity for the season perhaps.

PREPARE YOUR HIVES.—We presume that a large proportion our readers have their extra hives in readiness for new swarms. Such as have neglected these preparations should do so at once. It is evidence of bad management to see the bee-keeper at loss for hives for his new swarms, or for stands, &c. When one waits until the swarming season before his preparations are made, he is apt to find some hive without its boxes; some with a frame or two missing; the combs may be moldy, or filled with worms nests; the mice may have taken up their quarters in one; in fact, a great many seemingly trifling omissions on the part of the bee-keeper cause far more trouble in the busy season than where attended to at the proper time. In time of peace prepare for war, is good advice in this case. A large number of extra frames of the exact size used will be found convenient. A few boxes of the same width and depth as the body of your hive, and made to hold as many (or as few) frames as you may see fit to put in them are a very handy adjunct to an apiary; as, in extracting or for temporary occupancy of swarms which come unexpectedly.

PAINT.—Hives should be painted at once. A well-painted hive will last longer, and, if painted white, will afford the bees better protection under a bright sun than where unpainted.

—o—
On the 9th of February, just as the sun was setting, we discovered that a colony of bees was being robbed in our apiary. They had been conquered, and a large number of bees were busy carrying off the honey. We closed the hive, giving it plenty of ventilation, and set the stand aside, where we left it for five days. On placing it back, we opened it and discovered that their queen had been killed and that they had nine queen cells nearly capped over. On the thirteenth day they began to hatch. They were evidently started from the larvæ. Having a swarm that had plenty of drones (having been fed for that purpose,) we gave them one, and on the 18th day from the death of the old queen she began to lay. She has proven to be very fertile.

—o—
We have been compelled to omit several articles in this number, and also continue our translation, and the review from Mr. Andrews' pen. The article will not lose its interest, however, although we do not intend to make a practice of continuing articles.

—o—
MR. J. S. COE of Montclair, N. J., offers to take charge of honey sent to the Exposition, and dispose of it to the best advantage after the close of the exhibition. He will exhibit his House Apiary.

—o—
As about 300 copies of the **WORLD** for March was lost in the mails, we shall not be able to supply back Nos. for that month.

Publisher's Department.

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SPACE	1 Year				
	1 Month	2 Months	3 Months	6 Months	1 Year
1 Page	16 00	30 00	40 00	70 00	125 00
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1-3 Column	6 00	10 00	15 00	20 00	30 00
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