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MOON'S BEE WORLD,

— A GUIDE TO —

BEE-KEEPERS.

VOLUME 3.

MARCH, 1876.

NUMBER 4

For the Bee World.
SKETCHES FROM TENNESSEE.

S. D. MCLEAN.

ONE HUNDRED YEARS AGO.

The long-looked-for centennial year of our National independence has arrived; and might we not take a retrospective view and meditate a little on what has been accomplished in the past one hundred years?

One hundred years ago our country had its birth as a nation, with but thirteen colonies, and perhaps less than two millions of inhabitants. Now it numbers many great States, with over forty millions of people. One hundred years ago there were no steam vessels plowing the great waters of this and other countries, exchanging commerce between States and nations. One hundred years ago there were no railroads with their attendant trains, carrying inland commerce and travel at a speed unthought of before.

One hundred years ago no telegraph panned the various countries, nor ca-

bles crossed the oceans, enabling persons thousands of miles apart to hold converse as face to face. Neither were there those great helps to farmers, such as reapers, threshers, &c., which enables one man to do the work of many.

But let us see if all those great helps to other industries have been brought about without corresponding aids to the apiculturist. One hundred years ago the bee-keepers plodded on in the beaten track of centuries before. Huber had not published to the world that light which dispelled the mystery of the inner hive, and which drove from his throne the king with all his royal powers, and placed in his stead the more natural and matronly queen—the common mother of the whole colony, without any regal powers whatever. Neither had a Langstroth been born to demonstrate and bring before the eyes of the world the movable frame, by which the manipulations with bees have wonderfully been facilitated. Neither was a von Hüschka

permitted to live and die before demonstrating that honey could be thrown from the comb by centrifugal force, enabling the bee-keeper to return the combs to the bees to be filled again, thereby greatly increasing the yield of honey.

Contrasting the hundreds of pounds of to-day, aided by the use of the movable frame and the honey extract or, with the meager amount obtained formerly under the old system, all will no doubt admit that they are the greatest auxiliaries to the success of apiculture that ever has, or perhaps ever may, be brought about. They have completely revolutionized apiculture, and demonstrated too clearly that it cannot be gainsayed that apiculture may be made not only fascinating but profitable also. And right here let me say that the bee-keepers owe to the genius of such men, who have been such benefactors to the cause of apiculture, a lasting debt of gratitude.

WINTER AND BEES

This has been, so far, the most remarkable winter that we have ever experienced; having been almost uniformly warm,—so much so that we have had no freezing weather of any note, and but little ice and frosts. Plum and peach trees are beginning to bloom, and to-day (January 28th) while writing this article, bees are working on both, and have been since the 22d inst. We await to see what the result of such unusual weather may be on our bees. They are now breeding up at a good rate, we fear prematurely too, and young ones are flying from the hives almost every day. Should this state of things continue, bees will be strong in numbers long before there is much honey to gather.

COMING SOUTH.

To our friend Kellogg we say we are in no wise inclined to selfishness, but desire the prosperity of all. We would be glad to see as many wide-awake bee-keepers come South as are willing to cast their lots among us. There is room for all; and more honey goes to waste in the South every year than we all can save. So come along! Bring up "Scraps," also, for they are praiseworthy.

To the BEE WORLD, success. To all of its readers, a prosperous year in their calling.

Culleoka, Tennessee, January 28.

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For the Bee World.

CHINESE MODE OF TAKING HONEY.

Mr. Fortune, the well-known English botanist, thus describes the mode adopted by the Chinese for taking honey from bee-hives. He says: The Chinese hive is a very rude affair, and looks very different from what we are accustomed to see in England; yet I suspect, were the bees consulted in the matter, they would prefer the Chinese one to ours. It consists of a rough box, sometimes square and sometimes cylindrical, with a movable top and bottom. When the bees are put into a hive of this description it is rarely placed on or near the ground, as with us, but is raised eight or ten feet, and generally fixed under the projecting roof of a house or out building. No doubt the Chinese have marked the partiality which the insects have for places of this kind when they choose quarters for themselves, and have taken a lesson from this circumstance. My landlord, who had a number of hives, having determined one day to take some honey from two of them, a half-witted priest, who was

famous for his prowess in such matters, was sent for to perform the operation. This man, in addition to his priestly duties, had charge of the buffaloes which were kept on the farm attached to the temple. He came round in high glee, evidently considering his qualifications of no ordinary kind for the operation he was about to perform. Curious to witness his method of proceeding with the business, I left some work with which I was busy, and followed him and the other priests and servants of the establishment to the place where the hives were fixed. The form of the hives, in this instance, was cylindrical; each was about three feet in height, and rather wider at the bottom than the top. When we reached the spot where the hives were placed, our operator jumped upon a table placed there for the purpose, and gently lifted down one of the hives and placed it on its side on the table. He then took the movable top off, and the honey comb, with which the hive was quite full, was exposed to our view. In the meantime an old priest, having brought a large basin, and everything being ready, our friend commenced to cut out the honey comb with a knife made apparently for the purpose, and having the handle almost at right angles with the blade. Having taken out about one-third of the contents of the hive, the top was put on again, and the hive elevated to its former position. The same operation was repeated with the second hive, and in a manner quite as satisfactory. But, it may be asked, 'Where were the bees at this time?' and that is the most curious part of my story. They had not been killed by the fumes of brimstone, for it is contrary to the Buddhist creed to take

away animal life; nor had they been stupefied with fungus, which is sometimes done at home; but they were flying about over our heads in great numbers, and yet, although we were not protected in the slightest degree, not one of us was stung; and this was the more remarkable as the bodies of the operator and servants were completely naked from the middle upwards. The charm was a simple one; it lay in a few dry stems and leaves of a species of *Artemisia*, (wormwood,) which grows wild on these hills, and which is largely used to drive that pest, the mosquito, out of the dwellings of the people. This plant is cut early in summer, sundried, then twisted into bands, and it is ready for use. At the commencement of the operation which I am describing, one end of the substance was ignited, and kept burning slowly as the work went on. The poor bees did not seem to know what to make of it. They were perfectly good-tempered, and kept hovering about our heads, but apparently quite incapable of doing us the slightest injury. When the hives were properly fixed in their places, the charm was put out, and my host and his servants carried off the honey in triumph."

I asked a question some time since, in BEE WORLD, if the queen would under any and every circumstance duplicate herself, answered by Mr. Dadant that she would not. He claims no impure bees in Italy. Now another question. If she does not duplicate herself in America, what is there in Italy to keep her pure? *

Murfreesboro, Tenn., January, 1876.

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Can you not send us the name of at least one subscriber for the WORLD? Such a favor would be appreciated.

For the Bee World

ALBINO BEES—THINGS BY THEIR
RIGHT NAME—HUMBUGS.

D. STAPLES.

MR. EDITOR:—I dislike the whole matter of misrepresentation—from my very heart I dislike it—and think the man who first invented a humbug should be hung in effigy, with his inventions tied to his feet, that his neck may support him and his works together. My reasons for this sweeping assertion at the whole system is not that I believe it totally useless, but it does more mischief than good, and destroys more fortunes than it creates honesty.

Now, Mr. Editor, you are very well aware that I am not in the habit of using harsh epithets in the *Bee Journals of America*; nor do I wish to step on any one's corns; neither do I take pleasure in wantonly treading on the innocent worm. But when I see a bare-faced humbug, I feel very much like putting him on the ground and placing my stoga square on his neck. I see, going the rounds of the *Bee Journals*, the Albino pure bee, "the best in the world," which savors much of humbug in our ears. Albino—white—albino bees! White bees! What are they? Are they a distinct variety of the bee, a freak of nature, or a cross between the two varieties? I am inclined to the latter opinion. I have been experimenting upon them for the last three years, and as yet I have not been able to get a single queen (and I have reared scores of them), who will duplicate herself, but, on the contrary, produce eggs from which hatch from the finest white queens and bees to the straight gray bee, except perhaps they may have

white fur on their body. Now, why are they the best bees in the world? Although they may be one of nature's beauties, when seen frisking in the May-morning sun, yet, is beauty the only grace that entitles them to the assertion that they are the best bees in the world? Or, perhaps the young man or the young lady who dotes upon the sweets of nature, but instinctively shrinks from the sharp points, when they see that they can open the hive and take out all the combs, and handle the bees as if they were flies, yet, perhaps, not finding much surplus honey, even then they may say O, they are the best bees in the world!

Last, but not least, the queen breeders may conclude they are the best bees in the world, because of the short time they live, for I have not had an albino queen that, if she survived the first season, did not become a drone layer, and finally disappear before the end of the second season, therefore making a market for another.

As Barnum says, humbugs are what please the American people, so perhaps we had better all throw up the hat for the albino bees, "the best in the world."

Columbia, Tenn., February 5.

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For the Bee World.

HOW I MANAGE BEES, No. 4.

REV. M. MAHIN.

The management of bees in the spring is considered more difficult than their management at any other season. And it is certainly very important that they get a good start early in the season, if we expect to get either increase of bees, or a good yield of honey.

As soon as the first warm days of

spring come, and hives can be safely opened, a careful examination of every hive should be made. I make it my business to know at all times the exact condition of every hive in my apiary. In early spring the bottom boards sometimes need to be cleaned by the removal of dead bees and the particles of wax dropped by the bees in uncapping honey. If the swarm is strong in numbers and not many bees have died during the winter, they will clean the board themselves.

Occasionally a swarm will be found queenless. Such swarms need not be broken up. Take from a colony that can spare it a comb containing brood, brushing all the bees off, and put it into the middle of the hive. Give in this way as much brood as the bees can cover and take care of, and no more. It is better to give too little than too much. The bees will raise a queen from the eggs or larvæ given them. There may be no drones so early to fertilize the queen, but by destroying her and putting in more brood another will be raised, and by that time drones will be flying. I had two queenless colonies last spring, and by adopting the above plan, not only saved them, but made good and profitable colonies out of them.

After a severe winter some colonies are very weak. These may be strengthened by taking a comb with all the adhering bees from a strong stock, and putting it into the weak one. To do that successfully the bees must be sprayed with sweetened water scented with peppermint, or some other strong odor, AND THE QUEEN MUST BE CAGED. A better way is to cage the queen of the colony to be strengthened, and exchange places between it and a strong colony. If this be done when the

bees are flying, enough will enter the weak colony to give it a good start, and enable it to take care of itself. The caged queen must be placed where the bees will cluster around her, and it will be well to put a lump of sugar in the cage for food. A queen will live three days on dry sugar, with no other food. This I have proved by actual experiment. The queen should remain in the cage 48 hours.

Early in the spring I give my bees unbolted wheat flour. Having used both wheat and rye, I think the former is quite as good as the latter. It stimulates breeding, and keeps the bees at home and out of mischief. While they are carrying in Graham flour they are not trying to steal from their neighbors. Every colony that has not enough to supply all demands for brood rearing ought to be plentifully supplied, either by giving it combs full of honey, or by feeding sugar sirup. Moderate feeding to stimulate the rearing of brood is an advantage, but it may be overdone. If bees are stimulated too early they may have too much brood, and it will perish during the cold snaps that are so common in the early spring. This danger is greater with weak stocks than with strong ones. The entrance to the hive should be contracted so as only to allow free passage to the working force, and all upward ventilation should be closed, that the animal heat may be retained. As the bees increase in numbers, and the weather becomes warmer, the entrance should be enlarged, so that the workers may have free egress and ingress, and lose no time in forcing a passage through a crowded door-way.

It is necessary to keep a sharp lookout for robbers. In the spring, when

forage is scarce, and bees are anxious to be doing something, they are very apt to try to appropriate the stores of other hives. If the entrance to the hive attacked is contracted to an inch or less, the bees can defend themselves. Sometimes it happens that they cannot distinguish the robbers from the bees of their own colony. They seem to be aware that mischief is going on, but are utterly bewildered as to the cause of it. It is possible that in these cases the two colonies are so nearly of the same scent that the bees themselves cannot distinguish the one from the other, and consequently the robbing goes on unopposed. I have sometimes remedied a case of that kind by closing up the attacked hive, giving sufficient ventilation, and either removing it to a cool dark place, or covering it with a dark cloth. In a day or two the robbers turn their enterprise in some other direction.

If bees are to be moved a considerable distance the spring is the time to do it. The combs are lighter then than at any other time, and there is less danger of breaking down; and the hives being less populous, there is less danger of smothering. In moving box hives my plan is to turn the hive bottom upwards and tack a coffee sack over the mouth of it. The best way to do this is to spread the sack over the hive, and nail strips of lath on to hold it in its place. The hive should be carried bottom upwards, and may be transported in a wagon or by railroad. The frames in movable comb hives should be secured in their places by small nails, and there should be abundant ventilation, above and below, wire cloth being tacked over the openings. Thus prepared they may be safely transported over long distances.

New Castle, Indiana, February 8, 1876.

For the Bee World.

SCRAPS FROM ILLINOIS.

WILL M. KELLOGG.

GETTING BEES OUT OF HONEY BOXES.

About the best method of getting bees out of honey boxes, that I have seen or heard of, is one told me by Adam Grimm—that is, where one has enough box honey to take off at one time to do it. Take off your boxes, place them on the bottom of the cellar, or other dark, dry place, with the holes upward, the boxes all tight together. Next, take a hive without bottom board, (a box fitted to hold six or eight frames will do as well), containing three or four frames of brood and bees, with a caged queen. This is a good chance to introduce new queens. Place the hive on the center of the tier of boxes, with one inch strips under the corners so the bees can crawl in from all sides, which they will do, hearing the humming of the bees already within the hive, and starting a note of their own which will call the rest in. Let them set there a day or two in the dark, then remove them to any stand in the yard, give them a few bees and some brood and you have the bees out of your boxes and a new swarm for your trouble.

HONEY ADULTERATIONS AND SUGAR SIRUP.

I think one of the causes of the hue and cry against extracted honey is sugar sirup. You tell the people through the papers how much sugar sirup you have fed and how much honey you have extracted. The people are not fools, generally, and they put this and that together and make out a pretty strong case against us. They say, and with good reason, too, "I don't see how Mr. So-and-so gets so much honey from a few stocks of bees.

My father never got any such big yield as we hear of now days!" Another pipes up, "I can tell you the reason: They feed their bees sugar sirup, and then extract it along with a little honey, and sell it to us for the pure quill. Bah! I don't want any extracted honey in mine. I'll take mine in the good old-fashioned comb honey. Can't fool us on that." Bless their little pictures. They can be fooled on comb honey, for that can be "doctored" as well as anything else.

One year ago we could not supply the demand for our extracted honey,—everybody wanted it. How is it to-day? Our honey is put on the market, a customer steps up, takes up a jar and asks, Is that a genuine article? is told it is; but he eyes it with suspicion. Maybe he buys it, maybe he does not. But they are all afraid of it, grocers are afraid to handle it, and those that buy and eat it are not sure they have not paid a big price for one-half sugar sirup, unless they are experts. I can tell you what caused it here. It was a big thing to extract all the honey from the bees and feed them sugar sirup to winter on—paid well for the trouble. One man in this place has done more to hurt the honey trade than the rest of us can counter-balance in months. He was known to buy largely of sugar to feed his bees, and at the same time he was feeding he was extracting and putting honey on the market. Last spring there were a good many dead stocks; the honey that was left was extracted, sour honey and all, and put on the market. Of course it failed to give satisfaction, and again "sugar sirup" was thrown at us. And that's the way it goes. I am obliged to fight sugar sirup (when I have any honey to sell)

so much that the word has become hateful to me. I fed one stock entirely on sirup this fall, the first I ever did, because my honey was candied—what little I had—and I had not time to melt it. I, for one, go against using or talking about sugar sirup, thinking honey the proper and best food for bees.

THE WINTER.

So far, it has been a complete fizzle as a winter, for we have had very little cold weather, but a great deal of rainy, cloudy weather. The thermometer has been down to zero but two or three times, once 7° below. The bees had a good fly December 24th, and a few flew on the 30th; then they were packed tight and quiet, though it has ranged from 15° to 50° above zero during the time, till January 28th, when the mercury went up to 57° above. We let down the front, took out the front straw, and let the bees out. They flew very strong and bright, the twelve stocks seeming to be in as good condition as they were in Nov. The dead bees taken from each stock could be held in the palm of one hand, and some not over teaspoonful. I saw signs of breeding in several. Will have a good per cent. of stocks to begin with in the spring, unless the clerk of the weather changes his mind and gives us winter when we should have spring. The next day after the bees flew, January 29th, the mercury went down to 2° above zero, with a hard wind. But the bees, packed in their straw, do not feel it. It takes from one to two days, with the mercury at 50° to 60° above, to warm the bees enough to make them restless. A few hours at 60° does not affect them.

Oncida, Ill., January 31, 1876.

CYPRIAN BEES.

I number the bees of this island among those of Asia Minor, because Cyprus belongs geographically to Asia Minor and because these bees are very nearly related to those from the vicinity of Smyrnia, namely : those which possess yellow segments.

I obtained safely the first colony from the Island of Cyprus, in the year 1866, at the time terrible snowstorms had brought the winter upon us. It was a very small swarm, and had arrived, so to say, with the last drop of honey consumed. Alas! in the wintering of this precious colony it was ruined. I accuse myself as the cause of it, but forbid me the shame of writing here how it happened : in bee matters one often makes mistakes which he can only later understand. I paid heavily enough for this blunder, for six long years passed before I again obtained living bees from Cyprus.

Three colonies in their original hives arrived as follows : The first in October 1872, the second in July, 1874, and the third in October, 1874. The bees of all four coloniss were alike in their size, and also in the possession of a hairy covering, in the coloring of their abdominal rings and of the thorax they were exactly alike, except that it appeared to me as though the abdominal rings of the bees in the last colony were of a somewhat darker orange color ; this is explained to me however, by considering that the last colony arrived latest in the autumn, and according to experience with Cyprian bees the color of the rings in the summer during the best breeding-time, appear much lighter than in early spring or late autumn. Among all

these bees there were none that were black. The race of the Island of Cyprus is therefore one quite established and completely pure. This is certainly only in consequence of their centuries of isolation. All contact of the native Cyprian bees with those of Asia Minor was prevented, for the Island is about seventy geographical miles distant from Asia Minor on the north and about the same on the east. This very isolated situation has thus completely protected the Cyprian bees from the influence of all other races—even from the black bees.

Cyprus one of the greatest islands in the eastern end of the Mediterranean Sea, with an area of about 3000 square miles blossomed in the gray ancient time through wonderfully rich culture. The first inhabitants are said to have been Phœnicians, and to them about the year 1100 B. C., Greeks, Egyptians, and finally Romans joined themselves. The Island was then, to the known world, like a point of union for all that was charming and lovely ; they praised the splendid climate, the exuberant vegetation, and the richness in productions of all kinds ; even now this Island distinguishes itself for its wonderful fertility, in spite of the long centuries of negligence of the Turks, in whose possession it has been since the year 1570. Luxurious forests of cedar, cypress, pine, chestnut, oak, and beech cover the mountain sides, olive and mulberry trees the hills, while sown fields and cultivated plantations offer in every place the richest pasture to the bees. The climate is, in general healthy, and on the north side of the Olympos it is exceedingly mild ; on the mountains where the snow remains several months, the winters are

quite severe, while great heat continually prevails on the southern coast. The peculiarities of the climate of this Island, as also its flora, each appear to be normal which was there even as favorable and useful in the natural highest improvement of the bees, as was to the sheep of Spain, the most dry yet, dewy climate, and the pasturage as tender as nourishing, as was to the horse his Arabia, which allowed him a constant pasturage, furnishing as his usual food a very wholesome native barley, and vouchsafed to aid in his improvement the date, which, in its maturity is for animals as well as for man, a heavenly gift of a wonderfully nourishing and strengthening nature,—as was to the black cattle the valleys and Alpine pastures of Switzerland, whose numerous, aromatic grasses furnish them in summer with the most valuable green food and in winter with the best hay of the world.

—[Bee-Keeper's Magazine.]

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For the Bee World
OCCURRING THOUGHTS ON READING
THE BEE WORLD.

WM. J. ANDREWS.

SOCIAL CHATS.

Why cannot all we bee-keepers have a social chat through the BEE WORLD every month—something similar to what we have in our Bee Societies?

In the January number of the BEE WORLD we have Will M. Kellogg, with his "Scraps from Illinois;" Rev. M. Mahin telling us "How I Manage Bees;" some other fellow, too modest to give us his name or even a nom de plume whereby he can be designated, pertaining to "Hatching Bees by Artificial Heat;" then a "Letter from Vermont," by Mr. Jasper Hazen; then

the old importer, Ch. Dadant, tells us of the "First Cares after Winter;" Mr. E. Knight writes on "Bee-keeping by the Masses;" while Mr. Argo gives "Scraps from Kentucky." J. W. Howell treats of the "Drone Bee;" and W. L. Gordon of "Improving Bees;" while D. Staples tells of "Feeding, its Purpose, Manner and Effect;" and as no novel or household is complete without its heroine or mistress in steps Miss Anna Saunders with her "Sundries from Sunnyside;" then comes "The Winter" blast from Jewell Davis, followed by a (J. F.) Love "Letter from Cornersville, Tenn.," closing with "Notes from Shelbyville, Ill.," by J. W. Johnson.

Now, Mr. Editor, as we have run through and noted the subjects and authors of your New Years number, we propose to take each up in their regular order and have a social New Years chat with them, penning such thoughts as occur to us as we peruse their respective communications. So, Mr. Will Kellogg, your attention first. As to bee dysentery I know nothing of it, as we bee-keepers in this part of the world are never troubled with it. As to bee stings, our experience is very similar to yours. I have been handling bees since 1858. When I purchased my first hives, which were of a neighbor, it was with a clear understanding that he was to do all the hiving and robbing; for at that time a being with a more horrible dread of being bee-stung than your humble servant was nowhere to be found. When my first swarm came off I sent for my neighbor, who hived them for me. I ventured nearer and nearer until I got into the midst of them, and escaped without a sting. From this I became emboldened, and have

hived all my swarms since.

When robbing time came—I then used the old box hive—my neighbor was again sent for, who did the job for me with my assistance. I got off without stings again, the result of which has been that ever after I did my own robbing also; but bless your soul! a many a sting have I had popped into me since that time, but by degrees I got to be a “bold sojer boy.” Until last season stings invariably swelled my flesh, but during the last season, while I received, doubtless, hundreds of them, they caused no unpleasantness only for the time being.

Like yourself I have been unable to discover that the stings of the Italians are any worse than those of blacks. I began to flatter myself that I had become innoculated, until Sunday, January 23d, I was passing through a row of hives, when one took me “zip!” over the right eye which, in a very short space of time, closed up my eyelids. This I think the most severe sting I ever received, the pain and swelling of which lasted two days. I don’t attribute it, however, to the Italians, but to the particular spot the stinger was landed.

I see you have been trying the German Bee Sting Cure. You had better luck than I had in getting it. Did you get it of Gen. Adair of Haws-ville, Ky.? I guess not. I sent that man—I cannot say gentleman—a dollar for a bottle of it, and all that I have heard of the “general” since is the mention of his name in the American Bee Journal and Gleanings in any other than an enviable style.*

We too have tried salt for bees, but have never seen them touch it. We

also have had a remarkably fine season, the mildest known for many years. We made an examination of our hives January 21st, and found the greater portion of our queens laying, and all with plenty of stores; our Dadant queen having sealed brood. The Japanese quince, of which I have several hedges in my yard, is in full bloom and alive with bees upon it.

As you give our friend McLean a hint that you may possibly come this way the coming season, we hope, if you do, you will not slight us, but will give us a call also, as it will not be any out of your way, we living on the same line of railway and within a few miles of each other.

Well, friend Mahin, we read you with interest. We would have been overjoyed to have read it several years ago, but we have had our experience in transferring, and in the main pursue about the same course you do.

“Hatching Bees by Artificial Heat” we have never tried. As we like to experiment in all directions, we think we shall give it a trial,—merely for curiosity, however.

To friend Hazen we would say that his “Letter from Vermont” smacks to us like that of a patent right vendor. If he has a good thing we hope he will follow the example of King of N. Y., and others, by making it free to all.

“First Cares after Winter,” by friend Dadant, does not apply directly to our latitude, as bees remain upon their stands during the winter, and are never prevented from having a flight for any great length of time. During pleasant days of winter we keep meal out for our bees to gather from, doing as you do, putting a few drops of honey about it to attract

*Like Mrs. Tupper, Mr. Adair may be deranged. (?)

them to it. We asked the query in a Journal, not long since, "Do bees gather honey and pollen at the same time?" and answered it affirmatively. Do we understand you as holding the same views, in saying, "The bees, in sucking the honey, rub themselves in the flour, and finding that this dust is good, they rub their legs with it?"

Friend Knight, your "Bee Keeping by the Masses" is pithy and to the point. It should be read by every new beginner.

Friend Argo, while we have not had the privilege of tasting, or seeing as many different kinds of honey as you have, we have had an experience that we cannot account for, viz: We never had a particle of our honey to granulate or candy. My partner, Mr. Staples, whose apiary is some four miles from our joint apiary, extracted in August; I also extracted about the same time. His honey has all candied, while mine has not. Why is it? I know mine to be pure and free from any chemicals, as it was raised for my own consumption, never having sold a pound of honey. None of mine was extracted until it was capped over,—it may perhaps be due to that.

Friend Howell, we had something of the experience of your neighbor, having lost a hive by the moth on the 18th of November.

In an article which we recently wrote for our town paper, the Herald and Mail, we expressed similar views to yours about the drone bee. As we said to another friend, we like to experiment in all directions, and take nothing for granted that we can ascertain for ourselves, so we should experiment with the queen in every way that suggests itself to us the coming season, and will be able to express

ourselves from our own knowledge, and not from that of others.

Friend Gordon, we had it on the tip of our tongue to say—or the point of our pencil to write—that your bees were improved by the Italian bees of your neighbors; but, in reading your article a little further, we found you had anticipated us. Long before we had any Italians of our own, or any knowledge of our neighbors having any, we had a black queen which produced hybrids, some of her bees being well-marked Italians. Is it not possible that your queens met a stray drone somewhere?

Well, Mr. Staples, as you happen to be my partner, modesty says I must give you the go-by, unless I say to you, as the practical man of the concern, to give friend Parker the instructions he desires as to what is required to make good hives and surplus boxes.

Miss Anna, you are always a welcome visitor, and it is with a peculiar pleasure that we read all your articles, in the different Bee Journals. If we were only a single man, (but we are not, having seven little responsibilities), and in need of a help-mate, having it is said "bee" on the brain, we might be prompted to seek a more intimate acquaintance. I have a better half that will in an emergency—but it must be an emergency—hive a swarm of bees. She came very near, however, on one occasion, causing herself to be clothed in the mourning garments of a widow. I was driving a hive of bees at night, (that was early in my bee experience), she was assisting by holding a lamp; the hive was setting in the house; a vail was tied around my neck. When I was nearly through, and had lifted up the driven hive to place it in a new locality, a bee flew

near her and she threw down the lamp, extinguishing it and leaving me in total darkness. The bees crawled up and got around my neck where the vail was tied. They soon commenced stinging me, and I think I received a hundred or more stings. I tried to get the vail off but did not succeed, and for a long time could not get any assistance. I finally got the vail off, and then my better half occupied her time for several hours in rubbing my neck with salt water and hartshorn to prevent my becoming choked up from the swelling.

Friend Davis, we thank you for your hit at some of the Bee Journals for withholding the name and post-office address of their correspondents. "Hoop" them up again; and we unite with you in tendering to the BEE WORLD thanks for furnishing them.

Friend Love, we, too, would like to know the best means to keep the worms from spoiling the looks of the comb before it gets cold enough weather to ship to market; and hope some of our many friends may enlighten us.

You are correct, friend Johnson, "let all bee-keepers be strictly honest; let them always tell the plain truth, and they will get good, fair prices for their honey"—and everything else which they may wish to put on the market or dispose of.

But, friend Moon, we fear we have had such a long chat that you will cry out BORE, and refuse us your hospitalities for another chat in the future. Should you, however, think differently and regard us as in the least entertaining, we will renew it in the next number, but try, however, not to detain you as long as we have in this number.

Columbia, Tenn., January 27.

For the Bee World.

BEE NOTES FROM CENTRAL ILLINOIS.

J. G. THOMPSON.

FRIEND MOON:—I see that bee men are reporting the result of their season's operations through the BEE WORLD, which is the right and proper thing to do, whether those operations have proved successful or otherwise.

This is a very pleasant and agreeable thing to do when we have sold tons of honey and lots of bees, queens, &c., and, on the whole, made our business a grand success; but it is a very different thing to do when we are obliged to report loss of bees, failure of the honey crop, and everything looks BLUE.

The season commenced here under rather unfavorable circumstances. In the first place most of the bees in this section came through the winter in rather weak condition. Considerable loss was sustained in wintering, but I think far more died in sgringing than in wintering.

One neighbor bee keeper, who went into the winter with 130, came through till spring with little or no loss; but when the honey season came he had only 60 with which to begin the season.

Owing to the extremely cold weather of last winter, nearly all our fruit buds were killed, thereby cutting off our main source for honey. The season was also very wet, it rained almost every day through May and June, and the bees barely managed to gather honey enough between showers to sustain themselves.

I fed my bees during the spring, and got them quite strong at the usual swarming season in June, when they began to make preparations to swarm but the rainy weather stopped

them. During lynn bloom they made every day count. The weather was fine, and they filled the body of the hives, but stored but little in boxes.

About the 10th of August the buck wheat began to bloom, and now they began to store in boxes. In a few days after they began to swarm and kept it up till about the middle of September; and, not wishing to increase my stock, I removed the queen cells and returned the swarms. I could easily have doubled my stock during buckwheat bloom if I had desired to do so, but I had been keeping bees for some years with not very favorable results, and I wanted honey; and of course no one can expect a large crop of bees and honey, both, the same season.

I notice that many bee-keepers recommend the removal of the queen from the swarm when it is desired to return it to the parent hive. Now, I would like to know if that is the best plan. I look upon a laying queen as of too much value to be destroyed and run the risk of raising another from the cells in the hive.

I never remove the queen, but, as soon as the bees are out, and while they are clustering, I open the hive and destroy the cells and return the swarm, queen and all. Common sense would teach me that this is the better way, although I have tried the other way.

Bees went into winter with plenty of stores, and apparently in good condition. The weather has been very mild, and bees have been out a good deal, and will, therefore, consume a large amount of honey; and some who may have robbed their bees too close in the fall may have to do some feeding before the honey season opens.

On looking over the season's work and its results, I do not know that I can boast very much, when I compare it with that of some who have reported through the *WORLD*; for the fact is, I have never yet SEEN any of these big yields of honey; neither have I ever seen anybody who HAS seen them. But then there are lots of things I have not yet seen.

My 40 hives yielded me about 1000 lbs. of comb honey, all stored in August and September, and had the frost held off as late as it sometimes does I would have got much more. Our first killing frost came on September 21.

Urbana, Ill., February 8.

—O—
For the Bee World.
THE DRONE BEE.

—
SHERIDON.
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MR. EDITOR:—We see from the January number another light appears in bee-dom; hailing this time from Tennessee, and upon the question of the production of drones.

You are aware, Mr. Editor, if your correspondent is not, that he is not the first, if the fortieth, who has advanced, from analogy, his opinion upon the vexed question connected with the physiology of the honey bee.

We do not know what works Mr. Howell has examined, but think he must be mistaken in stating that any reliable work on bee-culture says: "that the queen, previous to her bridal trip, or impregnation, will lay eggs that will hatch drones."

Impregnation scarcely, if ever, follows the depositing of drone eggs. At a certain period, if the queen fails to meet the drone, she commences to lay drone eggs, and continues ever after

what is termed a drone-laying queen. There are but few bee keepers or queen-breeders but that are aware the queen scarcely, if ever, as before stated, deposits eggs before impregnation, if impregnation takes place within 15 or 20 days after birth.

It is not every author upon bees who understands the subject of which he treats, for

"Some books are lies frae end to end;" and many of them are bee-books, full of ignorance, superstition and error, and the subjects treated of not receiving that attention and investigation a thorough naturalist gives before making them public as facts.

True, parthegonesis has, in the Journals, been fully, ably and scientifically investigated and disposed of years ago, and little is left but to learn it over again.

The tenth proposition of the Dzierzon theory as laid down by the Baron of Berlepsch reads, "If a queen remains unfecundated, she ordinarily does not lay eggs. Still, exceptional cases do sometimes occur and the eggs then laid produce drones only."

This fact was not generally received, "nor was the opposition silenced till, by the introduction of the Italian bee, the means of conclusively determining the chief point at issue were furnished. The evidence thus supplied was so clear and decisive, that all serious opposition ceased, and the truth of the position was conceded by all intelligent apiarians. Naturalist and physiologist, however, continued to reject and discredit some portions of the theory, because they contravened so directly their long cherished views and opinions. But even they were ultimately constrained to yield to the evidence, when the facts as ascertained

by Professors Leuckhart and Von Siebold no longer left room for cavil or doubt."

We have reared queens (two) whose eggs would not or did not hatch anything, but that has no bearing upon the question: and without "picking up old and hackneyed sayings," we wish to "start Mr. Howell in the right direction," and tell him how he can himself prove that the queen bee will and can produce eggs that will hatch drones without impregnation. On the day your virgin queen emerges from her cell, (clip her wings for greater accuracy and security), cage her (wire cage) in the hive she was reared in for 25 days, when she may be released, and you will astonish the bee world if her eggs produce aught else but drones. The coming April or May will be a good time to test the matter.

When the great blind naturalist, Huber, made public his investigations on the honey bee, not only the unlearned and ignorant disbelieved, ridiculed, and criticized his teachings, but we find those in high places answering his researches by personal ridicule.

Robert Huish wrote a work of over 400 pages, entitled "BEES, THEIR NATURAL HISTORY AND GENERAL MANAGEMENT," in which he devotes many pages in ridicule of Huber's discoveries, when nearly every bee-keeper, and particularly queen rearer, both in the old and new world, can vouch for their truth and correctness.

This man Huish was a very learned and ready writer—a man of position; for we find distinguished and honorary titles accompanying his name, as F. Z. A., Honorary member of the National Institute of France, The Academy of Arts and Sciences of Gottingen,

and Agricultural Society of Bavaria, &c., &c., but that did not make him a correct naturalist, and his book, on account of the many errors it contains, is worth but little.

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For the Bee World.

WHAT TO REMEMBER.

JEWELL DAVIS.

MR. EDITOR:—We may assume that there is an average consumption of honey by each colony of bees for every month in the year; and this may vary in reference to the size of the colony, temperature, and brood raising.

In this we have some important items that every bee-keeper must notice. If the bees are stinted in this average supply of honey during the breeding months, as from March to September in the North, or February to October in the South, brood raising will be checked, or entirely suspended, and the prosperity of the colony seriously interfered with if not properly cared for by feeding, which will be essential to restore them to prosperity and prevent starvation.

In the next place if the average supply of honey is very short it may be the cause of many colonies swarming out and leaving their hives in the fall and spring, and even in winter if the days are warm enough for them to take a general fly. To prevent them from thus deserting their hives feed them sufficiently to supply all their wants, and that, too, before they become impressed with the certainty that they must leave or perish.

Instinct leads them to gather a bountiful supply, if they can find it in the flowers. It also leads them to cease rearing brood when the supply is short; and hence colonies that are

so situated may become lessened in numbers and ultimately leave the hive and perish.

Where an increase of pasturage will not furnish the amount of honey required to keep them in good condition, the only alternative is to feed sugar sirup or honey from other colonies. But provision should be made for all this, in the cultivation of a greater amount of honey yielding plants and trees, and more of the deep rooting plants, which yield honey in the dryest seasons of the year. There is a difference in this respect, as well as in the atmospheric changes above them. When breeding is discontinued the stock becomes depopulated as fast as the bees die or are lost while out hunting for honey, and therefore will perish in winter from an insufficient number to generate the required heat, or lack of food, or both combined. Only colonies with a full supply of bees and honey are safe in these northern regions, but they may not require either of these so nicely balanced in the South.

In the cold regions there should never be less than four quarts of bees for wintering safely, and a large proportion of these should not be very old, for, if too old, this too may be the source of an unexpected loss of many stands of bees. If there is one gallon of bees a good cluster will be made and the required amount of heat generated, provided they have sufficient honey always within their reach, even in very cold weather, and are protected above by some warm, protecting absorbants, such as quilts or other articles that takes up the moisture, keeping the combs clear of dampness and mold. Never let a current of air pass through the hive during the cool season of the year.

Charleston, Ill., February, 1876.

For the Bee World.
FOR THE MASSES.
HIVES AND BOXES FOR SURPLUS HONEY

REV. E. KNIGHT.

Those who can give but little attention to the culture of bees will not use the extractor, nor will they wish to be at much expense in procuring hives. I advise that class of bee keepers to commence with plain box hives, and boxes for saving surplus honey. It is hoped that experience will suggest to many of this class the necessity of movable frames and other conveniences of modern bee culture.

There is much choice in the construction, even, of plain box hives. To secure the best results hives and boxes must be adapted to the habits and instincts of bees. Some will say that bees, in their primeval state, occupied the hollows of trees and other cavities of very different shape, and that they often stored large quantities of honey, under widely differing circumstances. Admit all this, and it does not follow that a different arrangement would not have secured more surplus; and that, in such a form that it could have been taken without injuring the future prosperity of the colony.

I remark:—1. Hives should have a suitable capacity.

Though one queen may be much more prolific than another, yet uniformity of size and shape is desirable, for we cannot know beforehand whether the queen will, or will not, be unusually prolific. And, even, if we could, we know that the same queen will not probably remain in the colony for more than one season. If the hive be too small there will not be as many laborers to store surplus honey; and,

if it be too large more of the surplus will be stored in the hive and less in the boxes. Most apiarians are of opinion that two thousand cubic inches is about right. This is not far out of the way. Perhaps a little less is desirable for northern latitudes.

2. There should be uniformity of size and shape in both hives and boxes in the same apiary; so that any box will fit any vacancy that may occur. Boxes of uniform shape and size may be securely packed in larger boxes for transportation.

3. Hives and boxes should be so constructed as to have a very thin partition between them; and the passages between them should be numerous; so that the box will be, as it were, a part of the hive. Every bee keeper is aware that bees usually store honey in the upper part of their brood combs. My theory and practice is to have the boxes over, and very near the hive, with ample passage ways between them. The bees will then place their stores in the boxes, and their brood will be placed within two or three cells of the upper part of the combs in the hives.

4. Boxes should be so constructed and arranged as to retain warmth in the hive for hatching brood, and also in the boxes for the construction of comb. Bees labor under a great disadvantage when the boxes, cool at night. If the scales of wax cannot be siezed and converted into comb as soon as secreted they will be dropped and lost.

It will also be observed that space in the box is better economized in warm than in cool weather. The cells are also more perfectly filled and capped. A box filled in warm weather will often contain twenty per cent.

more honey than one of the same capacity, filled in cool.

5. Boxes should not be very tall. I think they ought not to exceed four inches inside measure. Bees will commence work sooner in them than in tall ones. The queen is also less likely to deposit brood in the boxes.

I shall give a brief description of the hive I am using, not because I suppose it is perfect, but simply as an illustration of some points that I consider important in a hive designed for popular use. The hive can be easily varied in form and size.

My hives are made 18x12 inches inside measure, and 10 inches high outside measure. Eight movable frames $1\frac{1}{8}$ inches wide are so adjusted as to leave nine equal spaces $\frac{1}{3}$ of an inch wide. Bars of the same width may be used. It will be observed that these are placed lengthwise of the hive and that a space is left on each side of the hive.

Three boxes $13 \times 6\frac{1}{2}$ inches and $4\frac{1}{2}$ inches high, outside measure, will cover the hive. This allows the boxes to lap one-half inch upon the walls of the hive on every side. The bottom of each box has twenty-seven holes bored with a $\frac{3}{4}$ inch bit in such a manner as to have three holes over each of the nine equal spaces. The position of these holes are marked by a pattern.

A cap is closely fitted to the hive, and cleats $\frac{3}{8}$ of an inch thick are nailed upon the inside so as to let the cap sink $\frac{3}{4}$ of an inch below the level of the hive. The lower edge of these cleats is lined with listing or with two or three thicknesses of woolen cloth.

This excludes the air and retains the heat generated by the bees in the hive and boxes.

The cap should exclude all air. If

the joints are open they should be filled with some cheap cement. Blue clay will answer the purpose.

In my opinion success depends in a great measure upon the intimate connection between the hive and boxes.

I have sometimes covered the top of the hive with six small boxes instead of three larger ones. Last season I took sixteen small boxes from one hive averaging four and one half pounds each.

Having briefly described a hive and boxes, I will make a few remarks upon their management. I cover the top of the hive with several thicknesses of old newspapers. These are kept in place by tacking three pieces of board, cut the size of the bottom of a box, and tacked to the top of the hive with small nails. The hive is now ready to receive the bees. After they have been hived a few days I raise one of the boards and slide a box into its place as I roll back the paper. When this is half or two-thirds full put on another box, and also the third in due time. As soon as the first box is well filled and capped I remove it, and put another in its place, and so on as soon as they are filled.

For wintering the hive is covered as at first except that the papers are held in place by strips of board screwed to the top of the hive. The paper absorbs moisture, but does not give an upward ventilation. In this hive my bees winter better than in any other that I have ever tried.

I have never tried out-of-door wintering. I use a dry cellar.

I do not know but my efforts to be brief have, in some instances, obscured my meaning. If these principles are of any benefit to the inexperienced, I have secured my object.

Maple Grove, Maine, February 14, 1876.

P. S. Bees, thus far, have wintered

well. No disease among them. My bees were put into the cellar in October. Since the middle of November we have had uninterrupted sleighing. Our bees will not probably have a "fly" until after the first of April.

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For the Bee World.
MISSOURI HONEY, vs. KENTUCKY.

E. C. L. LARCH, M. D.

MR. A. F. MOON, DEAR SIR:—In the January number of BEE WORLD there is an effort on the part of R. M. Argo to grind his ax at the expense of western bee-keepers, by a comparison of his clover honey with our fall honey. Now, had we obtained some of the fall honey from his section, which he admits was very poor, ostensibly for our own table, which he did, and then compared it with such honey as we obtained in '73 and '74 he would not have been quite so jubilant, even tho' he had a bronze turkey in him.—Moral: beware of bronze turkeys.

When he obtained that sample of our fall honey he very well knew that white clover and basswood, from which we usually obtain most of our honey, was a total failure in central Missouri, and therefore none but fall honey could be obtained. As I represent central Missouri, where he claims to have gathered the worst sample, it may be mine of which he complains; but that is not probable if he truthfully represents it, as that was choice buckwheat honey. It must have been Spanish needle or smartweed, as that was the chief supply last fall. Mine has all been sold at 12½ to 15 cts per pound, mostly at the latter figure; and always sold by sample, unless the purchaser knew the kind of honey he was getting; and it has given better satisfaction

than basswood honey to all our customers, except Mr. Argo. Come, now, Mr. Argo, please tell us the whole truth.

As I own the largest apiary in central Missouri, yet reported, and get the most honey of any man in Missouri, I must know something of the quality of our honey; and experience has shown that our fall honey, even the last gathered, is equal to the very best for wintering our bees. We lost none last winter or the winter previously, and expect to lose none this winter; and we have 120 colonies in perfect health.

I will add a few words on getting extracted honey. It is of the utmost importance to keep all the different kinds of honey separate and apart, and sell each upon its own merits; and if any is not worth more than choice sirup, feed it to the bees in times of scarcity. A few pounds of inferior honey will often spoil a barrel of choice, and the whole will have to be sold at a low price as mixed honey.

We usually make three grades of our honey. First, clover; second, basswood; third, fall honey, rejecting such as not fit for the third grade and using it for feeding. Our honey is always well ripened before being extracted, and therefore equal to the very best of the same kind of comb honey. Extracted honey will always give satisfaction if allowed time to well ripen.

Mr. Argo well knows that the chief difference in honey, if properly managed is due to the kind of blossoms from which it is obtained, and not the locality.

In conclusion I will ask Mr. Argo to compete for a \$100 premium at our next State fair, premium to be made

up by the exhibitors. If the proposition is accepted it must be done by 15th of April. All exhibitors must give me notice by the 1st of May of their intention to exhibit.

Premium to be for the best 10 lbs. extracted honey.

Ashland, Boone County, Mo., February, '76.

—o—
For the Bee World.
CONGRATULATIONS.

J. W. JOHNSON.

DEAR BEE WORLD:—I was made glad on the 6th inst. by receiving the number for the current month. Allow me to offer you my compliments and congratulations. And then it is "chock full" of choice beeology.

Mr. Mahin's bee feeder is very like Harrison's, but neither are equal to dry honey comb. Geo. Stray's remarks before the Michigan Bee-Keepers' Association on securing straight worker combs is interesting on account of the constantly recurring labor of opening the hive and replacing a full by an empty frame. I think that we can secure straight combs by his method. But it will require labor and attention; and there is no excellence without labor.

Honey at \$1.25 per gallon is certainly very cheap, if pure. I have never had honey to become candied, and therefore cannot help Mr. Love out of his trouble.

Mr. Dadant's article on the Varnish Tree is timely. The honey secured from it is not good, but in large quantities is poisonous.

One of your correspondents has shown us what Negligence will do for an apiary. The truth is, if a man does not intend to give his bees a good share of attention he ought not to

engage in the business. We, away up North, expect no profits without labor—constant and arduous.

While one correspondent thinks he would not live up North, let me tell him, We have energy, enterprise, and go-ahead-iveness up here, which compensates for the mild climate of the Sunny South. Our money will purchase any of the products of the warmer climate. We have had but little cold this winter. To-day the thermometer stood in the shade at 70° above zero. Thunder, lightning and rain. Between showers my bees were out in full force. They are all in fine condition, carrying flour, clearing away the debris, and making ready for spring. I verily believe they think spring has come.

I feed my bees wheat flour. Heretofore have been to the trouble to get rye flour, but I now think wheaten flour just as good. What think you?

Again let me congratulate you on the appearance and contents of No. 3, Vol. 3.

Shelbyville, Ill., February 9th, 1876.

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For the Bee World.
TIMELY HINTS FOR MARCH.

D. STAPLES.

The stormy March is come at last,
With winds and clouds and changing skies;
I hear the rushing of the blast
That through the snowy valley flies.

Ah, passing few are they who speak,
Wild stormy month, in praise of thee;
Yet, though thy winds are loud and bleak,
Thou art a welcome month to me.

For thou to Northern lands again
The glad and glorious sun does bring.
And thou hast joined the gentle train,
And wear'st the gentle name of Spring.

The lark is up to meet the sun,
The bee is on the wing;
The ant her labor has begun;—

and, Mr. Editor, if we wish to reap a bountiful harvest, it is time we were up and doing.

We have been stimulating our bees for some time, and now have plenty of brood and drones in the hive; in fact we had drones flying in our yard on the 12th of February. Although there has been some flowers in bloom here nearly all winter, yet one robin does not make a summer, and it will be necessary to keep on feeding until all danger of a scarcity of honey is past, for it takes quite an amount to nourish a hive full of brood and young bees. But we can well afford to board them for a little time, when they will work for us all the balance of the season and board themselves. It is a good time during the stormy days in this month to see that the hives, honey boxes and barrels are all ready; for, if our bees have been well cared for, they will keep us busy taking honey when the harvest comes.

There is a variety of opinions about hives. We now have in our yard two different styles of frames. We find when we use shallow frames and boxes on top the queen frequently gets into the boxes. If we use very deep frames we can hardly get the bees to work in boxes, for they have plenty room below. Therefore I prefer the medium—neither too deep nor too shallow—if I wish nice box honey.

We are using a hive with the boxes at the side of the brood nest, but I have used it only four years and have not yet given it a fair trial. All we need in a hive is the greatest amount of convenience; only be sure to not interfere with the nature of the bee.

As I am using so many different kinds of hive, some one may like to know which I like best. To those I

would say. There are many good hives, but as noble nature does not confer all good on one, I use a combination of several, all in one, for my standard hive, and it answers my purpose very well; yet it is not an expensive one. I believe in keeping them well painted for economy. As everybody likes to have their own way, I don't wish to dictate to anyone; but those new beginners who are willing to receive useful hints without buying them—to those I would just hint. Get the hive and frame that you can ascertain is the best then let all in your yard be of one exact pattern; for no one can tell the trouble and vexation attending the use of inaccurate hives until they have tried them.

Columbia, Tenn., March 1st, 1876.

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For the Bee World.

THE DRONE BEE.

MR. EDITOR:—In your January No. I notice that a brother bee-keeper, J. W. Howell, has broken out in a new (old) place—has tacked on a piece to his coat-tail and invites it trod upon—
anxious for a squabble.

Mr. Joshua Billings says: Bumble bees are very pretty birds to look at, but make a poor article of honey, and none for market; and that is saying more than most people say of the drone bee, so far as I know.

Everybody says drones eat a heap of honey and make none. They say they eat a heap, I s'pose, just because they are big; and they don't gather honey, just because nobody ever saw them on flowers. Now, "I have come to the conclusion that the various writers on bee-culture must be mistaken" in regard to this matter, "and the whole subject, it seems to me, ought to be re-hashed and gotten up

on more scientific principles."

Everybody knows that when the drones leave the hive they fly away up yonder out of sight. When there are big honey dews, then is the time the large quantities of honey are making, and plenty of drones flying out and up, and my opinion is that the drones go away up there where the honey dew is, before it falls, and fetch it to the hive, and when they get all of it, the naughty bees with stings, and short wings that can't fly up there where the honey dew is, takes and kills them, and don't make any more drones until there is more honey dew to gather.

"Now, I expect nothing else but that some of your numerous correspondents will pounce" upon me for finding this out first, but let 'em come. I'm ready.

There are some other questions, not exactly in the bee line, that has bothered me more than this one about drones, which, Mr. Editor, if you cannot answer, brother Howell, as he speaks of the "animal kingdom" and the "vegetable world," could throw some light upon; and that is if the orang outang and opossum lay eggs and hatch like lizzards, or how are they produced; and when you see an old dead pear or apple tree full of green gourds, what kind of fertilizers are used to make this strange and unnatural growth upon dead timber?

TENNESSEE.

P. S. I would not a wrote this for any other paper but Harper's Magazine or the Edinburg Review, if cousin R. M. Argo had not asked all the old writers to return to the BEE WORLD.

TENN.

P. S. the 2d. Since writing the above another idea has struck me in

support of my theory. You know there are no drones in the winter, and the reason is the honey dew is all froze up or the clouds don't make honey dew then. Pretty good reasoning, that. T.

For the Bee World.
OVERSTOCKING.

JASPER HAZEN.

FRIEND MOON:—I notice in your issue for January, in report of Mich. Bee-Keepers' Association, some things stated on which I may be allowed to make a few suggestions and inquiries.

Mr. Heddon, page 48, says; "In the winter of '71 and '72 two of my neighbors had sixty-five and eighty-five stocks respectively. In the following spring they had but one apiece left. All the other bees kept in the vicinity died. These bees had increased from small beginnings, and had been wintered with no loss in previous years, under the same treatment."

We understand that bees will double their numbers annually in swarmer hives, and sometimes triple instead of doubling their numbers.

Every field is limited in the amount of its production of vegetation and fruits and flowers. Whenever more stock is placed in a field than can be supported by it, they must be supplied with food from other sources or perish.

Bees know nothing about danger of this kind or from this cause, but gather the honey in their early season and swarm. If we suppose them to have reached the point of fully stocking the field, and then double their numbers, we must expect most of them to perish.

The result when more are in the field than can be sustained, a number of the strongest colonies may give some surplus and secure a winter's store; another part of them nearly enough, and some very weak ones are almost reduced to death before winter approaches. But, in the struggle of famine, pestilence in its varied forms and horrors, approach the perishing colony; and varied forms of disease prey upon them. I have not a doubt that three fourths of the devastations witnessed in the apiary result from this evil, overstocking the field.

The difference in the product of different fields, and the difference in the seasons places it out of our power to estimate accurately what force to place in the field; but we should not be satisfied short of one half of the product in surplus.

When we have hives in which we can effectually control the swarming we may, by experiment, reach a point where every farmer may secure half the honey product of his field in surplus in boxes, of suitable size and shape for market; and have his bees average twenty-five years per colony of useful labor in the field.

I may not live to see it, but the time will come.

Woodstock, Vt. February 2, 1876.

—o—

For the Bee World.

SUNDRIES FROM SUNNYSIDE, SOUTHERN MISSISSIPPI.

—
ANNA SAUNDERS.

It is spring,—full fledged spring. Flowers everywhere. The oak has been in bloom for two weeks, bees working on it splendidly. But alas! though the fields are white, the laborers are few—in my apiary I mean.

Most of my bees came near starving in the fall, and of course were much reduced. Then for weeks we had a perfect deluge of rain. One bright day came, and I removed the outside covers to dry the hives. That night I was called from home and could not return for over a month. I begged everyone to replace the covers, but no one remembered it; so, all that time, or nearly all of it, it was pouring down rain upon my poor bees in their ill made hives. It was several weeks even after I got home before I could go near them, except one day, the 8th of January, when a friend came to see me and my bees, who had been promising to come for several years. So I had to open some of them, though I was every minute expecting a wedding party to arrive at the house, and I had to be mistress of ceremonies. When I have not looked at them for some time I always open the weakest first. I found most of the unoccupied combs filled with water—some had over a pint to the comb. I emptied it by inclining it slightly toward the horizontal and striking it, and then repeating the process on the other side. When most of the water is out you can incline it quite horizontally to shake it out. After that day I do not think I opened any more until about two weeks ago. Of course the combs are badly mouldied, but I do not think any entirely destroyed.

Besides all this, some of my stocks are full of moths, or were, rather. Last summer a friend sent me a hive full of moths. When I opened it a perfect cloud of them flew out. I was greatly distressed, but seeing no ill results for some time, and never having seen moths in my occupied combs I hoped I would not suffer from it. It

would have been a matter of slight consequence, comparatively, if I could have attended to my bees at all; but I only just yesterday succeeded in cleaning off the last of my bottom boards. I did not look into the upper stories. Have moved them, too, a mile, and had to do it just as I could; and, trusting to the propolis, I did nothing but stuff wool in the cracks, fasten the entrance, and tack the upper and lower stories together. This did very well with some hives, but whole handfuls were mashed in others. I have lost three outright.—One a full-sized hive, the others nuclei. I asked my nephew to feed those I thought might be in danger of starving during my absence, but he could not remember which they were, and neglected the unfortunate three. One was only a two-frame nucleus hive, but the queen was a particular pet. If it had been at home there would have been no danger.

I had never seen moth worms in the combs occupied by the bees, and, until now, never in the combs in occupied hive, except once or twice in extremely weak stocks. I found three with the webs matted in several combs, several others, perhaps six or eight, with many on the bottom boards and some in the combs. I shake each suspected comb over a newspaper, and often shake out many of them.

Is it not enough to give one the heartache to see all this and think if I could have done just this, that, or the other, the poor little beauties would now be as prosperous and happy as they ought to be?

But through all the clouds there is a ray of sunshine. Some of you may remember that my banner stock last last year gave me from three to four

gallons of honey every other day for four weeks, besides what came before and after that time. Well, my friends, it would do any lover of bees good to see that stock now. It is full to overflowing;—bees, brood and honey top and bottom, and of course no mould, moths, roaches or anything that should not be in a bee hive. If the rest were as well off I should be extracting now. Just think of extracting in Feb. ye ice fettered brethren of the North! In justice to that stock I ought to keep a strict account of every bit of honey and brood I take from them, and I will try.

Thanks to the kind friends who sent me the missing journal. I trust those who notice the errors will be lenient. In the February number the printer makes me say "at what time honey occupies the smallest space," instead of "at what temperature," and "one foot in 60," instead of "one part."

Woodville, Miss., February 26th, 1876.

—O—

For the Bee World.

THE WINTER—HONEY DEW, &c.

T. B. PARKER.

FRIEND MOON:—We have had the warmest winter, so far, that I have ever seen. Alder, maple, peach, plum, huckleberry, and many other things have been in bloom since the 1st of January. Bees gathered honey and pollen from the 20th of December till the 1st of February almost without interruption. We had a cold snap about the 1st inst. that "hived" them for a few days; however, they are again on the wing, but there is no honey and but very little pollen to be had, consequently they are trying to rob each other of the little they had gathered.

In examining them the last of Janu-

ary I found plenty of brood, in all stages; and in one or two hives I found eight frames (Langstroth) with brood. The recent cold chilled some of the brood, but the weather moderated in a few days, so I do not think much of it was injured. My queens have laid no drone eggs yet, and as I want some choice early drones, I will begin feeding to stimulate the queens to greater activity in that department.

I see a great deal said in the Bee Journals about honey dew; some contending that it is caused by insects, others that it exists in the air in a gaseous form, and is attracted to certain trees and plants, from or by some unknown cause. It is something that I know nothing about, having never seen any to know it; but I was speaking to a couple of gentlemen about it, and the different opinions in regard to it. They both said they had seen it fall like a mist, in the daytime—perfect honey dew. They saw bees at work on it, and, to convince themselves, they tasted it. It was fair weather and the sun shining. One saw it near this place some years since; the other in Bedford county, Va., some 30 years ago. They are both intelligent men, and whose veracity I have never known questioned. They could not explain it. I cannot, and would like for some of the “honey dew” men to.

I see that Miss Anna Saunders had some red honey last year. I, too, had honey of a beautiful red-purple color, and of fine taste. I thought perhaps the bees gathered it from blackberry, but upon inquiry was told that they got it from the grape bloom. I also had honey of a bluish cast, that was also of fine flavor. I was told that the chinquepin bloom produced it. I

cannot say from my own observation what produced either. I had granulated honey within six weeks after it was extracted last fall. It was from iron weed and golden rod. I had some extracted last spring that did not granulate at all. The difference was, I suppose, in the honey, instead of time of extracting.

I would give a report of last year's proceedings, but we had a very poor honey season, consequently it would be quite “thin;” so I will keep quiet on that point.

Godsboro, N. C., February 8th, 1876.

—o—
For the Bee World.
THE DRONE BEE.

—
J. C. CHURCHWELL.
—

MR. EDITOR:—In January number of BEE WORLD, page 44, Mr. J. W. Howell in speaking of the drone argues that the queen's eggs will not hatch without sexual intercourse. I will state what I know to be true: I made up an artificial swarm last summer, giving it a queen cell which hatched in due course of time. About the time for bees to be hatching I opened the hive and found nothing but drones in worker comb, and eggs laid scattering from one to three in a cell. I captured the queen and found that one of her wings was so crumpled up that she could not fly and would not make an effort. She must have been well aware of this fact or she would have come out and tried to fly, in which case she would have been lost on the ground.

Now, Mr. Howell, and all practical bee-keepers know that this queen never met the drone, yet her eggs hatched, though it was only drones. If friend Howell will only take the trouble and

clip the wing of a virgin queen, and she does not get lost in trying to make her bridal trip, he will certainly be convinced.

I made a queer discovery a short time since. About the 15th of January I opened a hive that I thought had a prolific queen. I found a queen cell capped over, and upon examination saw that it would have hatched in five or six days. Did any person ever know bees to try to supersede a queen at that time of the year?

Adamsville, Mc Nairy Co., Tenn., Feb. 1876

[In warm weather bees frequently supersede their queens; and we have know instances where the queen was superseded in very cold weather also.]

— o —

For the Bee World.

SCRAPS FROM NORTH MISSISSIPPI.

MARY BAKER.

MR. EDITOR:—Some time has elapsed since I have written for your valuable Journal, for which I wish to be excused. I am thinking to-day how pleasant this earth should seem to us, blessed, as we are, with a mild, genial climate, fertile soil, and everything in nature to make us happy. True, the past has been full of troubles with many of us, but we must be patient and persevere. But a great many changes must take place yet. We must be more progressive.

Now I will tell you how our bees are doing. I never saw them doing better at this time of year. They were bringing in pollen on the 5th of January, and have been busy every day that was favorable since. They are now gathering honey and pollen from the red elm, sugar maple, plum, peach, &c. My husband intends to extract about 10 gallons to-morrow. I

I have not examined mine since the 22d, when they were doing well, all being full of honey, with the exception of one. The most of our hives have two sets of frames, but one story or the box is all made together so you can take out the top frames and insert more. This is the handiest hive I ever saw for comb honey. You can take from 20 to 25 lbs. from one hive at a time. The top frames are small, about one third the size of the bottom frames. We sell honey in them, frame and all, for 25 cts. per pound. We have boxes made to set the frames in as soon as taken from the hive, arranged so that the frames will not touch each other. The boxes have lids to them so they can be locked. We have shipped honey in these boxes several times and never heard of a comb being broken.

Hernando, Miss., February 11th.

— o —

For the Bee World.

LETTER FROM CORNERSVILLE, TENN.

J. F. LOVE.

EDITOR BEE WORLD:—In the last number of the WORLD you request your correspondents to give a title or heading to their articles, but I will have to finish this before I put any head to it, as I can then tell better how to name the bantling.

Our bees are carrying pollen from the elm, and some rye meal. They appear to be in good condition, and tolerably strong for this soon in the season. The winter was so warm they commenced breeding in December and January. We have had two cold spells that have checked them some, though I do not think any of the brood was chilled enough to injure it, as I have opened some hives to-day and they appear to be all right.

Let all persons and new beginners in bee culture be sure to have their hives all painted white, as they are not so liable to have their combs melted down in warm weather. I have never had combs melt in a hive, if painted white, where when painted some darker color or shade I have, especially when where the sun could shine on them in the heat of the day.

Jno. K. McAllister & Co. ask me to correct the impression or idea conveyed in my letter as published in February number of BEE WORLD, as he seems to think it will injure him, or do him injustice, and that I misunderstood the tenor of his letter. I did not send him any honey at all, as the price did not suit; and I sold some elsewhere. I aimed to convey the idea that it was odd for them to order from a sample that they had before them that was granulated, and then at the tail end of the letter say that the honey must not be impure nor granulated. I enclose you both of the letters so that you may see that I have not misrepresented them in any way.

Cornersville, Tenn., February 21.

[From the tenor of the letters enclosed we should say that they intended to take the honey. Still, they also say they do not want any granulated honey, and so they cannot blame you for a mistake of their own making. We, (and no doubt friend Love also) are quite sure that Messrs. McAllister are fair dealing men.]

—o—

For the Bee World.

HOW BEES HAVE WINTERED IN
TOMPKINS COUNTY, N.Y.

—
D. W. FLETCHER.
—

FRIEND MOON:—It has been a long time since I have written anything for your valuable paper. In most locali-

ties throughout this county bees have wintered very well thus far. We have had a very mild winter and the bees have had frequent opportunities to fly and cleanse themselves. There is one thing I am afraid of, and that is that they will start brood and then the weather will turn cold like it did in April, 1875. Then our hopes will most certainly be blasted. I hope that such may not be the case, however. There has something come under my observation that I would be pleased to have some of your readers explain. A few since while my bees were flying I thought I would walk among the hives and look at their condition; when, to my astonishment, I saw in front of a number of hives hundreds of bees crawling on the ground, seemingly active and all right, yet not able to fly. Their bodies seemed to be slender, and, as far as I could see, were all sound with the above exception. I thought at first that dysentery was the cause, but upon examination found the combs as bright and free from anything of this kind as they were in November. The bees would hover around each other in little clusters on the ground and there perish. I gathered up a few and placed on the alighting board in front of their hives, and they marched in like an army of soldiers, vibrating their wings and setting up a joyous hum similar to that made on hiving a new swarm. A great many perished on the ground as I could not pick them up; and I have heard it remarked that diseased bees were better out of their hives than in. But what I am trying to get at is, if this be a disease what should cause it? Sometimes bees get chilled and act similar to these, but that day was nearly as warm as mid-summer,

and nearly every stock flew finely.

January 1st, 1876, was the warmest day I ever saw for that time of year in this locality. In some localities bees robbed quite extensively,—something I never heard of before in this country at that time of year.

I have been trying Mr. Dadant's method of wintering and find it first-rate, with one exception, and that is, to close the entrances to hives on cold days altogether. I tried it on three stocks. We had for six days heavy north west winds and a little snow. At the end of the six days I thought I would look at these hives, and, to my surprise, I found about a pint dead bees to each hive. They had tried to get out and found themselves imprisoned, and worried themselves to death. The entrances were packed full. At first I thought they were all dead, but some were as lively as crickets. In my other hives I had the entrances contracted to about one fourth of an inch, and in these hives I found but few dead bees.

We are having fine, summer like weather at present, and not a particle of snow on the ground. I hope we may have an early spring and a good bee year.

Lansingville, N. Y., February 15, 1876.

—O—

For the Bee World.

THE WEATHER RECORD FOR JANUARY 1876.

J. W. JOHNSON.

MR. EDITOR:—As a matter of amusement, if not of interest, to your Southern readers, I send you a record of the weather for the month of January. It was taken at 7 o'clock each morning, and does not give the greatest warmth, as, frequently, during the afternoon the mercury would run up 30 or 40° above that indicated in the morning:

January 1st, 65° above zero. 2d, 45°. 3d, 25°. 4th, 32°. 5th, 50°. 6th, 20°. 7th, 35°. 8th, 50°. 9th, 60°. 10th, 12°. 11th, 12°. 12th, 16°. 13th, 5°. 14th, 20°. 15th, 40°. 16th, 35°. 17th, 45°. 18th, 55°. 19th, 27°. 20th, 28°. 21st, 30°. 22d, 45°. (thunder storm at 3 o'clock.) 23d, 35°. 24th, 22°. 25th, 25°. 26th, 25°. 27th, 50°. 28th, 54°. 29th, 14°. 30th, 15°. 31st, 25°. So, you see, thus far we have had but very little cold weather. On no day did the thermometer indicate zero. Many days my bees were on the wing, though on several of the warmest it rained, and therefore prevented the bees from flying. To all appearances they are in excellent condition, though I think they are consuming more honey than they would were the winter colder.

The patent hive men are not all dead. One of them called on me a short time ago with a hive, the frames of which are enclosed with straw. I did not enquire what parts were covered by letters patent, but presume, however, that it was the straw part, as the movable frame has been acknowledged common property.

I do not think bee-keepers should make such wholesale denunciations of patent hives and other fixtures, as some of them do. Some of the best things we have are patents. Because some men are able and willing to give their time and the fruits of their inventive genius to the public, free of charge, is no reason that another man, who is not able to do so, shall be considered dishonest.

Shelbyville, Ill., February 3d, 1876.

—O—

Stimulate your Italian colonies that they may rear drones in advance of the blacks, thus ensuring purity.

MOON'S BEE WORLD.

A. F. MOON & CO.,

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

MARCH, 1876.

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THE NATIONAL BEE-KEEPERS' SOCIETY.

The president of the National Bee-Keepers' Society, Mr. Zimmerman, has written to the editor of the American Bee Journal that, after the meeting at Philadelphia, the Society had better adjourn, sine die. No doubt exists in our mind but that this is the wisest course to pursue, and we only regret that such advice was not acted upon years ago. Two causes have brought this about. They are (1) the fact that a certain few tried to run it at its commencement. They could not all get an office, hence dissatisfaction. And (2) the great distance to be travelled renders it impossible to have a very flattering attendance, which, of course,

tends to discourage those who do go. In the conventions in Europe great interest is taken. This can be explained from the fact they are less expensive, and partly from the fact that honey is more of a staple there than here, and as a consequence they feel that it is important that they should attend.

America leads the world in enterprise, but our bee-keepers will not support a National society yet.

HUMBUGS.

On page 100 of this number friend Staples gives us his opinion as to humbugs, as applied to the albino bee. He wants to know if they are a distinct race, a freak of nature, or a cross between the two varieties. He thinks they are a cross between the two, and gives his experience with them, which could not very well have been different in that length of time if they were the offspring of hybrids. But Mr. Pike claims that the albino is an offspring of the Italian—pure Italian. If so they are a pure bee, and as such are able to reproduce themselves.

We do not wish to be understood as defending the albinos for Mr. Pike—that is his business—but call Mr. Staples' attention to the fact as above.

BEEES VACATING THEIR HIVES.

Our friends are complaining that their bees show a greater propensity to leave their hives this winter than usual. They generally take up their quarters in an adjoining or neighboring hive. In the majority of cases the vacating bees are in a destitute condition. They may have been robbed too late, and thus left for honey. But sometimes they leave their home when they have plenty of honey, brood, pol-

len, &c., and it is in such cases they seek to be enlightened. It is difficult to give the reasons without first investigating the hive. This winter has been so peculiar that it, no doubt, has caused bees to do things out of their usual line. We have known bees to leave their hives in the midst of plenty, their honey being capped so securely that they could not get to it. The capping was hard and waxy. The remedy would be, uncapping with a knife, in which case they generally stay, especially if they have brood. We would be pleased to have our contributors give us their theories on this subject.

—O—

ALL necessary preparations for the apiary should be made at once. We believe bees will swarm early, as they are now very populous, have plenty of drones, and show every indication of unusual strength for this time of year. In Louisiana our friends are already extracting, bees having been at work for some time. In this and adjoining States they are now briskly at work on fruit blossoms, and the maple, elm, &c. If the promises now held out are fulfilled this centennial year will be one of great returns for the bee-keeper.

THAT our readers may know that something is being done in aid of bee culture at the coming centennial, we publish the following circular, adding that the present opportunity is the greatest we may have for a display of our goods:

U. S. CENTENNIAL COMMISSION,
Philadelphia, February 18th, 1876.

J. H. NELLIS, ESQ.—

Secretary North Eastern Bee-Keepers' Assoc'n.

SIR:—Your letter of inquiry of February 12, has been received, and I now proceed to reply to the questions in their serial order.

During the entire six months of the Interna-

tional Exhibition, Working Bees and Apiarian Apparatus in all its ramifications will be on exhibition, and honey and wax as well.

But to afford additional opportunity to Bee-Keepers, it has been decided to have two special displays of honey and wax, viz., June 7th to 15th, and October 25th to November 1st.

The continuous exhibition will be made in the large Agricultural Building; the special exhibition will be made in an adjoining structure to be known as the Agricultural Building for Special Displays. The apiarian exhibition commencing June 7th, will be held in connection with the display of strawberries, and that commencing October 25th, in connection with the display of nuts.

Though apiarian apparatus will be exhibited through the entire season, still it may be considered appropriate to allow the entry of such implements and fixtures as will be necessary to make clearly manifest the methods of procedure to accomplish the results represented. In neither of three seasons of exhibition will there be a charge for space, nor an entry fee. Each worthy exhibitor will have, during the season of his display, free entry to the exhibition, and will be required to assume all charge of his articles.

The Centennial Commission levy a tax of 15 per cent. on the gross receipts of all articles sold within the exhibition grounds, and from this rule no exception can be made.

Though premiums, consisting of medals and diplomas, will be issued by the Centennial Commission to the exhibitors of the most meritorious articles in all classes, still it is considered highly desirable that Apiarian societies, journals and individuals should offer special prizes, and in this they have already the precedent of special prizes to the value of over five thousand dollars now offered for other displays of agricultural character. May I not look for a special prize from your society?

In relation to the exhibition of working bees, I have pleasure in informing you that two parties have applied for space and furnished drawings and specifications for House Apiaries, each to contain from ten to twenty hives.

Yours respectfully,

BURNET LANDRETH,
Chief of Bureau of Agriculture.

True, the above is the first intimation we have had, in a direct way, of the proceedings to be carried on for the advancement of bee culture, yet we deem it best to invite as much interest in the exhibition of apiarian apparatus as the condition of things will justify. We hope ere long to give further particulars, and something of definite nature in regard to displays, &c.

"TRUTH STRANGER THAN FICTION."

THE BEST BORDER BOOK YET OUT.

The publishing house of J.C. McCurdy & Co. have lately brought out "OUR WESTERN BORDER, ONE HUNDRED YEARS AGO," by Charles McKnight, author of "Simon Girty" and "Old Fort Duquesne." It is a large, elegant, well-printed, superbly bound and beautifully illustrated octavo, of nearly 800 pages, filled with the stirring deeds and thrilling adventures of the dread-naught old Borderers—such dauntless worthies as Boone, Kenton, Brady, Logan, Harrod, McColloch, McClellan, the Poes, the Zanes, and the Wetzels. It contains the very cream of all the rare old Border Chronicles, together with a vast amount of fresh and original matter, the whole work embracing strange and thrilling narratives of daring deeds, desperate conflicts, exciting adventures, touching captivities, and is claimed to be the best, fullest, most complete, and most reliable portrayal of Border life, struggle and adventure ever yet published.

"Our Western Border" has the unmistakable flavor of the soil and the free air of the wilderness about it. It is a square, honest and exhaustive word, without any of the usual "padding." Although sold for \$3, it is equal in extent of contents to the ordinary book of \$5, and is meeting with remarkable popular favor. It is most warmly endorsed by leading Divines and Historians; Gen. Bierce of Ohio says, that "a minister may as well be without a Bible, as a historian without 'Our Western Border.'" Judge Vech, Historian, says, "Its possessor will be saved the purchase of books, most of which are out of print, many of them as precious Sybilline leaves." Judge White asserts, "The work ought to be in every household." The Philadelphia Press says, "Chas McKnight is doing for the west, what Cooper did for New York, but the pictures of the former have undoubtedly less of the glamour of romance, and more of the truth of historic painting." *Sold only by Agents.* Address J.C. McCurdy & CO., Philadelphia, Pa. Cincinnati, O., Chicago, Ill., or St. Louis, Mo.

The Chicken Cholera Preventative and Extirminator is the title of a work by A. J. Hill, of Burbank, O. The causes of that scourge to the poultry yard, Cholera, are very concisely given in this work, Mr. Hill having made it a study for years. It is worthy of a place in every poultry raiser's library. Price 50 cts.

Evergreens and Forest Tree Seedlings Free.

The editor of the *Evergreen*, Sturgeon Bay, Wis., informs us that he has growing upon his premises, of spontaneous seedlings large amounts of seedlings of the above of different sizes and some ten or a dozen different varieties, which he will give away in any quantity to any person for his own planting only, by his removing them, at his own expense. He will furnish full information regarding size, varieties, cost, &c., to any person addressing him as above, with stamp to pay return postage.

Publisher's Department.

ADVERTISING RATES.

SPACE	1 Month	2 Months	3 Months	6 Months	1 Year
1" age	16 00	30 00	40 00	70 00	125 00
3-4" age	12 00	20 00	31 00	55 00	80 00
1 Column	10 00	18 00	25 00	45 00	75 00
3-4 Column	8 00	15 00	20 00	35 00	70 00
1-2 Column	7 00	12 00	18 00	25 00	50 00
1-3 Column	6 00	10 00	15 00	20 00	30 00
1-4 Column	5 00	8 00	12 00	16 00	20 00
1 Inch	2 50	4 00	6 00	9 00	15 00
1-2 Inch	2 00	3 00	5 00	7 00	12 00

Fourth page of cover, double rates. Third page of cover, 50 per cent added to rates. World included in all advertisements of eight dollars and over. No advertisements continued longer than ordered. Bills of regular advertisers payable quarterly; transient in advance. Address all communications to
BEE WORLD.

BEE-KEEPERS

DIRECTORY

Cards inserted in this Directory, and a copy of the World, one year for twelve dollars—cards to be on lines or less. For each additional line one dollar will be charged. A line will average eight words.

WM. W. CAREY.

Colerain, Franklin County, Mass., Sixteen years experience in propagating Queens, direct from imported mothers from the best district in Italy. Persons purchasing queens or swarms from me will get what they bargain for. Send for circulars.

\$5 to \$20 per day at home. Samples worth one dollar free. STINSON & Co., Portland, Maine

Pure Italian Queens for 1876

I have on hand a choice lot of queens, propagated in populous colonies last season, which I offer for \$5.00 each. As I expect to rear queens the coming spring, I offer two queens after 15th June for \$5.00. I will send out none until their brood is tested, and will pay express charges on same. Satisfaction guaranteed.

4ffc W. P. Henderson, Murfreesboro, Tenn.

SEND 25c. to G. P. ROWELL & CO., New York for Pamphlet of 100 p. ges containing lists of over 3000 newspapers and estimates showing cost of advertising

ITALIAN BEES
FOR 1876.

Full colonies (ten frames) in shipping box, \$10 00
" " " in painted hive, 12 50
Four frame nucleus, tested queen & drones 6 00
Tested queen to June 30th, 3 50
Tested queen after June 30th, 3 00
Warranted queen to June 30th, 2 50
Warranted queen after June 30th, 2 00

Orders solicited and filled in rotation. Purity and safe arrival guaranteed.

4ffc] S. D. McLean, Culieoka, Maury co, Tenn.

"COLUMBIA APIARY."**Queens From Imported Mothers for 1876.**

We will sell Queens the coming season as follows:

Tested Queen from Imported Mother,	\$ 3 00
Untested Queens " " "	1 00
Nucleus with tested queen " " "	6 00
Colonies " " " "	10 00

Safe arrival of all queens guaranteed. Send for circular.

Staples & Andrews, Columbia, Tenn

12 a day at home. Agents wanted. Outfit and terms free. TRUE & CO. Augusta Maine

Langstroth & American Bee Hives, Honey Boxes**AND FRAMES MADE TO ORDER.****Honey Jars and Tumblers with Tin Caps****LABELS PRINTED TO ORDER.**Orders solicited and filled on short notice
THOS. A. GUNN, Tallahoma Coffee Co., Tenn**"VINEYARD APIARY"****AGAIN WINTERED SUCCESSFULLY.**

Tested queens or full colonies furnished again this season. In my non patent hives. No useless traps or fixtures about them. Send for prices.

Address Joseph M. Brooks.
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We grow or keep always for sale seeds of the following. All are strictly

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