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The bee-keepers' instructor. Vol. IV, No. 1 January, 1882

Somerset, Kentucky: Webster Thomas & Sons, January, 1882

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VOL. IV.

JANUARY, 1882.

NO. 1.

THE
BEE-KEEPERS'
INSTRUCTOR.



A MONTHLY JOURNAL

Devoted to the Science of Bee-Keeping in All its Branches.

Webster Thomas, Editor.

WEBSTER THOMAS & SONS,
PUBLISHERS AND PROPRIETORS,
SOMERSET, KENTUCKY.

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Devoted to Practical Bee-Keeping in All Its Branches.

VOL. IV.

SOMERSET, KY., JANUARY, 1887.

NO. I.

Published the mid-
dle of each month.

"EXCELSIOR."

Terms, 50c. per year,
(or 30c. for 6 months.)

Our Contributors.

For the Bee-Keepers' Instructor.

Dark vs. Light Italians.

JAMES HEDDON.

On page 563 of the Dec. INSTRUCTOR, Mr. Demaree criticises me very sharply, and almost entirely from a stand-point of misunderstanding. Mr. D.'s articles are nevertheless always looked forward to with pleasure by myself, and I trust by all who admire and relish vigor of expression. But to some of the remarks of Mr. D. I again state that those who import the genuine Cyprians, and those who have bought them, agree that they are the worst of bees to sting—Jones himself stating this substantially at our late State convention. We are forced now, however, to count out Mr. Demaree. Tally one.

Is it possible that I have ever made a more extraordinary statement than the following? "I have reared and handled bees from a queen of Mr. Jones' first importation from Cyprus, and I find them as manageable as Mr. Heddon's coming bee, viz: The best Italians and blacks, more or less crossed."

"What can we reason but from what we know?"—*Pope*. Does Mr. D. know that he ever had the best blacks or Italians, or even a direct cross between them in his yard? Did he ever have such a bee from me? Does he know anything about the hybrids used by me?

Why, bless your soul, Mr. D., I have never changed my mind a whit in regard to the bacteria hypothesis. All my writings show that. I first threw it out as a hypothesis, and still hold it in view. Hundreds of bee-keepers agree with me exactly as to bacteria being the possible cause, only they use another term—fermentation. Come now, honor bright,

you did not think that bacteria was some dreadful animal with cloven hoofs, sharp teeth and long horns, that tipped over bee hives and swallowed bees, did you?

I wonder where on earth I have ever called the "coming bee" (these crosses) "pure Italians." What do you mean? True, there are "long, leather-colored Italians," and "by parity of reasoning" there are of necessity shorter, lighter-colored Italians, but not "short, leather-colored Italians." Only another of Mr. D.'s errors in reasoning.

The worst mistake Mr. D. makes is to suppose that individual bees, whose abdomens have become stained "jet black" by getting daubed with honey when robbing, or otherwise, indicates that somewhere there is a race of "jets," also a race of yellows without any segment lines whatever. I will put my bacteria hypothesis against this one, and will commence searching with the microscope for the bacteria, and Mr. D. can set sail for Central Africa after the "jets," and if I get the bacteria before he does the "jets," I win; if he gets the "jets" first he wins, and if neither succeeds we both win, and the editor and readers lose.

Thank you, Mr. D., for admitting that you do not object to certain kinds of hybrid bees. All the difference there is between us is that I have become so partial to certain other kinds of hybrids that I not only do not object to them, but really prefer them, and have worked harder to get them somewhat as I wanted them than I would have had to work to have gotten all three-banded bright yellow (called pure) Italians. With the beam of "bright yellow" fast in our eye, these good honey gatherers are, as you say, "not fit to breed from;" but if honey is the object in view, why not breed from "good honey gatherers," either *bright yellow* or *dark yellow*. Don't be prejudiced.

In your critical article which is so much devoted to criticising me, you should not

have cast suspicion upon me by saying the following, unless you meant me. I quote:

"What I object to is the selling of hybrids under the name of dark or leather-colored Italians, for breeding purposes."

I feel sure that you can not be so little read up as to apply that sentence to me, for while a large majority of those who had found out the superiority of these long, leather-colored Italians, supposed (and do yet) them to be pure, because they uniformly possessed three bands of dark yellow, I was among the first, if not the first, to pronounce them mixed with German blood. Almost every old farmer in this section who has kept bees knows that we have here two distinct types or strains of the German or black bees—but no "jets." They all agree as with one voice that comparatively the large brown bees are notable for their good nature, and comb building and *filling* qualities. I know the same.

While I believe that the long, leather-colored Italians are thus dark from the mixture of German blood somewhere in the past, still I know from experience in breeding that they are now a fixed type, strain or variety of Italians, and superior to any other of the fixed strains of bees, too, that I have ever possessed. I do not say that they are superior to the brown Germans in all respects, for they are inferior as regards the color and quantity of comb built under the same conditions, and also in regard to the clogging of the brood combs, and the consequent swarming, at the expense of the sections. I claim, however, that by judicious crossing, as near as I could direct, I now have hybrid stocks that are as amiable as any bees I have ever seen in my apiary, or any one else's, and that these bees are superior to any as honey gatherers, both in quality of combs and quantity of honey. Of course I know not what better bees Mr. D. or some one else may possess, but why I believe them superior is judging from my travels among our apiarists, and visits from them and others, and further, from admissions and statements made to me by some of the most successful producers and breeders our country affords. I have, during the thirteen years I have kept bees, carefully tested the merits of those bright, golden Italians, and also the dark ones, and the crosses I have made, and I speak from my experience, observation, and the interchange of ideas with others.

I am aware that the first crossings that took place between the earlier importations of Italians and such Germans as we

happened to have, where nature made the selections, almost always produced bad-natured bees. These were called hybrids, and the word has come to sound ugly. This being a prejudice, I avoid the use of the word as much as possible, however correct its use may really be.

If the sale of bees was my main business and source of income, instead of the sale of their products, I should have been led, if I had followed self interest, to keep nothing but golden Italians. I begin to think, however, that such a course might have proved unsuccessful, as hints thrown out by our leaders (like A. I. Root, L. L. Langstroth, Newman and others) seem to say that "the truth is coming uppermost with an astonishing rapidity."

Whether "fertilization in confinement" ever succeeds or not, the judicious use of full sheets of comb foundation, together with a little care and tact, will get control of the males, with far less trouble and expense than the manipulation of any device for fertilization in confinement. Such, at least, is my belief.

Dowagiac, Mich., Dec. 28, 1881.

Full sheets of foundation may do well enough, Friend H., in a neighborhood where the Italian bees greatly out-number the blacks, but how do you think it would work in localities where the black bees are largely in the majority? especially where many of them are kept in box hives, and the production of drones can not therefore be controlled. It would not be much of a safe-guard against the mixing of the races, would it? Therefore we, for one, contend that fertilization in confinement is the only method of solving the questions of pure breeding and the improvement of the race, in many localities, although where Italians are kept almost exclusively, they can be much improved by a judicious selection of the drones in the manner you propose.

For the Bee-Keepers' Instructor.

Reason vs. Instinct.

G. W. DEMAERE.

I have noticed that when certain subjects pertaining to bee culture are discussed, the old question of "instinct," like

"Banquo's ghost," is sure to arise and frighten some of the disputants. In that spicy little paper, *The Bee-Keepers' Guide*, a correspondent of no ordinary ability as to the use of the King's English, while discussing the subject of "upward ventilation," takes to task progressive bee-keepers, and charges them with setting aside the "antiquated plans of the Deity," etc. Now, I think that these pious notions, which seem to prevail to a considerable extent, are based on a misapprehension of the facts in the case. A beneficent Creator has given man dominion over the lower orders of creation, giving him reason and intelligence that he may be capable of filling his exalted position. If reason is not superior to instinct, then reason is not a blessing. But it is vastly superior in every way, and certainly as a means of self-preservation. Every person who has had control of domestic animals knows by experience how unreliable in them is that indefinable something we call instinct. Is the honey bee an exception to the general rule, that it needs not the reason and wisdom of man to guide its way? I know none of God's creation that profits so much by the guiding hand of man as does the honey bee.

I have had swarms to issue from colonies in good healthy condition at a time of year when there was no possible chance for them to get a supply of stores to carry them through the approaching winter. Shall we yield our reason to blind instinct in such cases? Certainly not. If we consider the increase worth the expense, we supply them with combs and stores sufficient to winter them, and if not, we destroy the queen cells, and replace them in the hive from whence they issued. In thus interposing our reason and setting at nought this instinct, we save life, and honor the Deity who has given us "dominion," etc.

It is argued that because the instincts of bees leads them to glue up tightly their hives above the brood nest, that upward ventilation is contrary to nature and therefore wrong. I have a few cases in my memory which show the fallacy of this kind of reasoning. In the very mild winter of 1879-'80 a neighbor of mine had some bees in a newly-invented hive with close tops, while my bees were in Langstroth hives with quilts for covers. Well, after the main winter had passed there came a heavy sleet that closed the entrances of the hives. My neighbor, with his close tops tightly glued with propolis, lost several good colonies, simply smothered to death. My bees came out all right, because they could get a sufficiency

of air through the quilts to sustain life, and at the same time the necessary warmth was economized.

In my study of bee culture as a science I pay particular attention to the instincts of the subjects of my study, and I find that the honey bee does not excel as a creature of instinct. They learn nearly every thing they know.

Christiansburg, Ky., Dec. 31, 1881.

From the *Bee-Keepers' Guide*.

Location in Bee-Keeping.

G. W. NEIHARDT.

Much has been written by eminent bee-keepers on the subject of overstocking any locality with bees, some holding that any place capable of sustaining a few colonies, is also capable of supplying a large number; others claiming that a field is capable of furnishing only a sufficiency for a definite and limited number. I am not able definitely to settle this question to my entire satisfaction, yet I must confess that my inability to secure such unprecedented yields of honey in "poor" seasons as that secured by Doolittle and others, forces me to conclude location has much to do with the profits arising from the keeping of bees. A locality where only one or two honey-producing plants are the sole reliance for surplus would certainly be an unsafe one in which to attempt to raise honey as a money-making business. White clover, which is the main reliance in many sections, is liable to be "winter-killed" or the drouth to cut it short or wet weather to wash the nectar out of it. Fruit bloom is seldom so abundant as to furnish more than an aid to breeding, while the autumn flowers are very uncertain and likely to be cut off by early frosts. Cool weather very frequently prevents the storing of much honey in supers from late pasturage. It is therefore of the highest importance to those desiring to engage in bee culture for profit, to look well to the honey supply in the place they locate. The more diversified and abundant the honey-producing plants, the better the location. Where, however, several of these are to be definitely depended on, the rest may be supplied by cultivating such plants as produce honey in abundance. It should not be a matter of doubt to apiarists whether it pays to cultivate any plant for honey alone. Experiments should be made and that subject settled definitely. If half the time and talent that is now expended in experimenting

with hives, bees, and manipulations of bees, were expended in the production of honey-producing plants, there would be less complaint of dysentery, hard winters, and unprofitable seasons. Let bee-keepers give us the results of such trials, rather than their peculiar methods of dividing bees, rearing and introducing queens, etc. These, however, should not be overlooked. The honey supply should not be made a matter of luck any more than the other matters pertaining to bees, only as far as it should be beyond the bee-keeper's control to furnish it. Any locality, almost, could be made a good one. Whether, however, sufficiently so as to make it repay all the cost, experience alone can tell.

Orland, Indiana.

For the Bee-Keepers' Instructor.

Foul Brood and How it is Produced.

H. L. JEFFREY.

When the December number came to hand I opened it, and as is my wont turned to the "Review" to see who had been thrashed this time. Friend House says he hopes I will take no exceptions to his answering me as he did. No, indeed, Mr. House, *I do not*. Just pitch in and score us right and left, as I am sure it will be good for us all. I read the "Review" first, and then the articles, and I am of the opinion that the "Review" helps us greatly to properly understand the articles. Furthermore, Mr. House, I hope you will pick this foul brood question all into bits, not only the article referred to, but also the one following it. The editor will be justified in publishing them, for there is not a bee-keeper of sound judgement who reads the INSTRUCTOR, but what would be willing to see two or three pages of the next three or four issues devoted to the subject of foul brood, in order to obtain a better knowledge of the disease. I gave, in the two articles in question, the substance of facts as I found them, obtained from observation and experience. I can show the details of observation, bringing to light two other causes of foul brood. These I have presented to several bee-keepers, who claim such causes to be impossible, yet foul brood appeared and showed itself in the way I described to my bee-keeping friends.

I have a few questions I hope Mr. House will be pleased to answer:

1. Do you believe it possible for brood that dies and rots in the cells, to leave

any contaminating virus to cause trouble?

2. Do you think that the dead bees, cappings from combs, and other substances collecting on the bottom boards, if left to get wet and become mouldy and rotten, will have any tendency to produce the disease?

3. Do you think that bees being smothered by the hive being tightly closed (the brood being left in a partly cooked or scalded condition) could possibly have a tendency to cause foul brood?

4. Do you think it is possible for the same results to be attained in another locality, by a different *modus operandi* than what you practice?

I ask the above questions for both personal and general information and benefit. I am selfish enough to feel anxious to find out if others see things differently from what I do.

If I am right, the real foul brood disease is developed when the brood, after capping, dies and rots (and in most cases retains its shape) having a slimy or glutinous appearance when disturbed, being of a yellowish grey, or in some cases of a brown or green color, and giving off a strong odor of decaying animal matter. If I am wrong please correct me, and give your opinion why I am wrong. I will only give you facts and circumstances as I find them, or as I *see them*.

If I have been at work for twelve years trying to study out the habits, instincts and diseases of the honey bee, and am yet in total darkness, please give me light that I may undo any harm I have done in the past. Do this, and you will not only confer an everlasting favor on the writer, but on the cause of apiculture in general.

Woodbury, Conn., Jan. 2, 1882.

For the Bee-Keepers' Instructor.

Moving Bees South, etc.

E. T. FLANAGAN.

I see on page 559 of the November No. of the INSTRUCTOR, an account of moving bees South by Friend Kepler, of Napoleon, Ohio. I will state that on the 15th of last November, in company with a friend I sent 25 colonies of bees South via the Mississippi River Anchor Steamer Line to Paul L. Viallon, of Bayou Goula, La., to be wintered and increased to double the number. I sent with each colony an extra hive filled with empty combs and wired foundation, to put the increase in. I have received word from friend Viallon

that the bees came to hand in good order all but one.

I am much interested in this project, and trust that friend Kepler will give an account through the INSTRUCTOR as to the expense of the venture and the benefit thereof, and I will promise your readers a correct report of my smaller one. My plan is this: To send South a few colonies with extra hives, combs, etc., to the care of some competent person, and have them increased either artificially or by natural swarming, and have them returned double in numbers and strong in bees and brood, by the 15th of April, or by the time our fruit blooms, so as to take advantage of it. Whether it will work or not remains to be seen; if it does I will take South another year a larger number, as I live within 14 miles of the Mississippi river, and have good facilities for sending the bees South and receiving them in the spring by boat, at comparatively small cost.

Your article on sowing for bee pasturage is timely, and should be persistently brought before our bee-keepers. I believe we can have good pasturage for our bees the entire season, if we would avail ourselves of our advantages and fill every roadside, fence corner, pasture and waste place with those plants that have proven good to prolong our honey harvest, especially sweet clover (*Meililot*), golden honey plant, hoarhound, catnip, mother-wort, and other plants that are perennial or will re-seed themselves.

Excuse the imperfect manner in which this is written, but so many duties claim my attention that I am pressed for time to do the subject justice.

I wish you a "Merry Christmas" and a "Happy and Prosperous New Year."

Belleville, Ill., Dec. 19, 1881.

For the Bee-Keepers' Instructor.

How to Transfer Bees From Box Hives.

L. C. MCFATRIDGE, M. D.

Every one having a colony of bees should have one of the following books: "A B C in Bee Culture," by A. I. Root, or "Manual of the Apiary," by A. J. Cook. Taking for granted that all who are interested enough in their bees to have them transferred to a more convenient hive, are well enough informed on the subject to give them proper attention, I will proceed to give my manner of transferring:

I go to the hive from which I wish to transfer, and give the bees a few puffs of smoke, and tap the hive gently with a

hammer to induce them to fill themselves with honey—for when bees are filled with honey they are not so cross. I then convey the hive to the shade, or convenient place, to work, and put a small box where the hive previously stood, to catch all the bees that were out at work. I now invert the hive containing the bees and place a smaller hive, or box, on the mouth of hive No. 1—so that it will almost cover it, continuing to tap the hive gently for about fifteen or twenty minutes, when the bees will all have gone to the upper box. I then carry the upper hive to where the old one stood and leave it there till I have transferred the comb to the new hive, which I do as follows: I take a hand-saw, or a long-bladed knife, and cut the comb loose from the side of the hive, which will give me the best chance of removing the comb without breaking it. I then pry off gently that side from which the comb has been loosened. I usually have a table upon which to work, taking out a single comb at a time and placing it carefully on the table. I then lay the frame, to which I wish to transfer the comb, on top of the comb, and run a sharp knife around the inside of the frame, and in this way cut the comb the exact size of the frame. This I continue to do till all the combs are transferred. I then put them into the new hive, and convey it to where the old hive stood, lifting the box containing the bees gently so as not to jar them out on the ground. Now I spread a cloth at the entrance of the new hive and shake the bees on it and allow them to run in, which they will readily do, and go to work as though they never had been disturbed. To keep the combs from falling out till the bees have fastened them, I make a clasp of wire long enough to reach down on the side of the comb and slip it down over the top bar of the frame. The best time to transfer is in May, but it can be done any time from May 1st to the last of August.

Carroll, Ind., Jan. 2, 1882.

In the above works that you recommend a beginner should select from, you have omitted one of the leading American works on bee culture, Friend M. We refer to "Quinby's New Bee-Keeping," by L. C. Root. Mr. Root is well known as one of America's most successful bee-keepers, and the work, combining as it does the results of his observations and experience, and those of the late Moses Quinby,

whose memory is known and revered by every true student of the history of American apiculture, could not fail to be thoroughly practical, reliable and instructive. Self interest has led many of our "standard authorities" to almost ignore this work, but as we are entirely disinterested in the matter, our only object being to see honor given where honor is justly due, we feel that our judgement should count for something.

For the Bee-Keepers' Instructor.

Normal Condition of a Colony of Bees in Winter.

G. M. DOOLITTLE.

As fall approaches, if we examine a colony of bees we will find that the activity manifested during spring and summer in the interior of the hive becomes less and less, so that by the middle of October in this latitude all brood-rearing has ceased and the bees have become partially dormant; still, so far they have not packed themselves away in a snug cluster or compact shape for winter. Every opportunity given by a warm day is improved to void the feces so the bees may be prepared for a long, cold spell when such a one occurs. As the weather grows colder the bees contract their cluster, many packing themselves away in the cells till the smallest possible space is occupied by them, and thus the requisite warmth is secured to keep them alive when the mercury sinks below zero. In this contraction of the bees (at certain times) many bees are left singly or in little clusters of from 5 to 10, which do not recede with the main cluster, and thus are chilled where they are, and if the weather becomes cold enough may be frozen, thus losing to the colony that number of bees. The reason for this formerly given was that owing to the movable frame no cross sticks were used as was the case with box hives, and hence the bees left no holes in the center of the combs as they did around the cross stick, thus compelling the bees to pass over and around combs of cold honey to keep pace with the receding cluster, instead of passing through the center of the combs to the next range, which was more nearly filled with bees. In thus passing around many became stiffened and caught by the cold, which

might have been saved if holes were provided in the center of the comb for them to pass through. To this end the Langstroth frame and others were provided with a shaving bent to form a circle an inch in diameter, which was suspended from the top bar by means of a little strip of tin, supposing that this would effectually secure a passage way for the bees. However, but a short time elapsed before it became apparent that during a good yield of honey this shaving would be filled with comb and honey, and hence the passage way was cut off. Next the practice of cutting holes through the combs each fall by various means was resorted to only to be filled up the following summer, when as winter approached the process had to be repeated again. After trying all these plans it became apparent to me that the reason assigned as the cause of the death of the bees was not the real trouble, for bees would stay and die within $\frac{1}{2}$ inch of these holes when it would appear they could have passed through these passages just as well as not. I also discovered that when we had it cool, cloudy and rainy for several weeks before it came severe cold that this loss was apparently much greater than when a clear, warm day occurred immediately before a severe cold spell. By the numbers of bees that were found on boards and such places dull and stupid after such a fine day, I concluded that these were the same bees that would have died by not following the cluster had not a warm day occurred for them to leave the hive to die, hence I say the loss was apparently greater when no such day occurred, for many more bees were seen outside of the cluster dead, as they had no chance to get out of the hive to die. From several years' experience in this matter I see no reason for changing the conclusions thus formed. After the bees once get thoroughly clustered I do not see this loss occurring after a warm spell as some claim they do, nor but little after a mild fall like the past has been. After being fully settled for winter and this loss of old bees has passed away, a colony will lose but few bees for six weeks or two months, and will remain quiet. If at this time a warm day occurs so they can fly freely they again cluster back quietly and remain so for about the same length of time, when they again desire to fly, and if such a chance occurs all will go well, and our bees winter well.

Thus we have a colony in a normal condition, and all the cold ever obtained in any portion of the world where bees can be kept with profit (occurring during

this period between their flights) will not freeze or materially injure them if they have plenty of honey within easy access. On the contrary, if no chance occurs for them to fly for nearly 5 months, as was the case last winter, their abdomens become distended, a desire seizes them to get out, the cluster becomes broken up, and brood rearing is started quite extensively in the vain hope to thus keep their numbers good by replacing those which are daily dying. If a chance now occurs for them to fly the trouble is partially averted, but weakened colonies in the spring is the result. If, however, the cold continues, the bees are worn out by this constant restlessness, while those hatching can not battle with the cold, and thus all perish together. After dying and becoming frozen it is said they froze to death, while the freezing was only a consequence upon their dying, the cause of which was their long confinement, which resulted in a disordered colony.

Now, gentlemen, these are my candid views of the subject, based upon what practical experience I have had in wintering bees. I do not claim to be infallible, and wish to accord to every man the privilege of enjoying the right of his own opinion. When I write I give things as I find them and as I believe them to be, and I hope if you do not believe them to be the same as I do, that you will use charity, realizing that no two conduct experiments alike, nor see alike. Besides, locality makes a great difference with the results attained.

Borodino, N. Y., Dec. 20, 1881.

For the Bee-Keepers' Instructor.

Foul Brood Transmitted in Comb Foundation.

S. S. BUTLER, M. D.

I see by the November INSTRUCTOR that Friend Dadant wishes the conclusive proof of foul brood being transmitted in foundation. Here it is:

Last spring Mr. John S. King, of San Jose, found a large per cent. of his 60 colonies badly affected with foul brood, and fearing that it was in all of them he concluded, after looking over everything he could find on the subject, to take all combs and honey away from them, make the wax up into foundation, and as the honey flow was plentiful, they would get along without feeding. He took time, and was very careful not to let his bees get any of the honey; boiled his hives and frames, and after he got through scraped and

scalded the floor of his honey-house and every thing connected with it. Having got plaster casts to work well (says he would not take the best mill in the country as a gift, for his use) he rendered his combs into wax and made the foundation himself. He gave it to the bees and they went to raising brood, and every hive became more or less affected as soon as the brood was large enough. He was very much discouraged, but thought he would try salicylic acid. The first he got was not good, but after trying that a few days he got some at another place, and trying found it would kill it, and used it all through his apiary (60 colonies reduced to 34, I think he said). He took special pains to shut up the bees in empty boxes till they had used up all the honey they carried with them. He has succeeded in destroying the foul brood with the acid, but says they must yet be sprayed three or four times. Wax as usually rendered does not get heated more than 150° or 160°. If it could be heated to 212° of course the spores would be killed. I render all my wax under glass in the sun.

If you publish this I think Mr. King will give you further particulars. The acid recipe was Mr. Muth's.

Los Gatos, Cal., Dec. 24, 1881.

Read before the Michigan Convention.

Rearing and Selling Queens.

W. Z. HUTCHINSON.

Some apiarists have asserted that the so-called "dollar queens" could not be reared at a profit. I have been engaged in the business during the past four years, and have never made less than \$15 per colony, the average profit for the four years being about \$18 per colony. As I have been so successful, perhaps the members of the convention would like to know how I have conducted the business.

I have learned that nothing is to be gained by commencing operations too early in the season. Colonies are weakened, brood is chilled, queens are two or three weeks old before they begin to lay, in fact, there are nothing but unpleasant features connected with commencing before the warm weather has really come to stay.

I think a small frame best for queen rearing. If it were not that I might sometime wish to give up the queen business and go to raising extracted honey, I should adopt a frame not more than 10 inches square. I use the American frame.

For nucleus hives I use full-sized hives, putting in a division board and having a nucleus in each end of a hive. Usually about the 10th or 15th of May I put a nice, clean, light-colored worker comb in the center of the colony having the queen I wish to breed from. In three or four days I generally find this comb filled with eggs, and the first-laid eggs beginning to hatch into larva. I now remove the queen and all of the brood from some strong colony, shaking the bees from the brood combs back into the hive, giving the brood to the weakest colonies. The queen is either sold, or given to a nucleus prepared expressly for that purpose. The comb of eggs and larva from the choice queen is now placed in the center of the queenless and "broodless" colony. I usually cut a few small holes in the comb, just where the eggs are beginning to hatch, as it gives the bees better opportunities for building queen cells. After removing the comb of eggs from the colony having the choice queen, its place is filled with another nice comb, or else a sheet of foundation. In 3 or 4 days this comb will be filled with eggs, and can be removed and given to another queenless colony, and its place again filled with a sheet of foundation. By the time that the sheet of foundation, last inserted, is drawn out and filled with eggs, the first lot of queen cells will be ready for the lamp nursery. I seldom allow a colony to build more than two lots of cells without giving it young bees. Two or three days before I expect the first lot of queens to hatch, I start as many nuclei as there are cells. Early in the season I seldom start more than one nucleus from each colony, and I do this by taking three combs with the adhering bees, and putting them in a nucleus hive. At least one comb should contain brood. As the weather becomes warmer, the strongest of these three-frame nuclei are divided.

I consider it important to always have on hand a large stock of queen cells, even if I occasionally have to destroy young queens. A breeder can not rear "dollar" queens at a profit, if he allows some of his nuclei to stand queenless several days for lack of queen cells. When honey is coming in plentifully, I prefer to put a young queen upon the combs of a nucleus at the same time that I remove the laying queen, but when there is a scarcity of honey this plan does not seem to work so well, as many of the young queens are killed by the bees.

One other point I also consider important, and that is that no nucleus should remain a single day without unsealed

brood. Attention to this saves a world of trouble, and largely increases the profits.

But rearing queens is one thing, and selling them another. A man may rear the best of queens, but unless he can sell them his labor is lost. Remember that it is only by the strictest attention to business, that the rearing and selling of queens, at the present prices, can be made profitable, and, in my opinion, the selling is of as much importance as the rearing.

The breeder of untested queens ought always to have orders on hand, so that queens can be shipped the very day that they are ready, as, after a queen has filled the combs of a nucleus with eggs, she is kept only at a loss. "But," says one, "how can this state of affairs be brought about? we can not compel people to send in orders whenever we need them." Very true; but did you never notice that there seems to be a peculiar something about some breeders, and the manner in which they advertise, that captivates the public heart at once? The orders come pouring in, and the trouble is not in finding customers, but in rearing queens fast enough to supply the demand. But, you say, all of us have not such a "taking way," or business tact. Certainly not; and for this reason, I would advise all those who think of entering the ranks as queen breeders, to not go into the business very heavily at first. It is better to spend \$40 or \$50 in discovering that rearing and selling queens is not your forte, than it is to spend five times that amount in acquiring the same knowledge. It is better to have more orders than queens, because the money can be more easily returned than purchasers can be found for surplus queens. And, by the way, if you wish for plenty of orders, then when a customer says, "Send my queen by return mail, or else return the money," do just exactly as he says; do not wait a week or two, thinking that you may be able to "squeeze out" a queen for him in a few days, and that it will be all right in the end. Were I that customer, it would be the last queen that you could sell me. Don't advertise until you have some queens on hand. Let your advertisement be plain and straightforward. If you can not fill an order at once, tell your customer at *once* why you can not, and when you think you can fill it. If he does not wish to wait so long, he can order the money returned. Answer every inquiry promptly, kindly and plainly. After doing your very best, there may arise some trouble or misunderstanding. At such times, try and look at the matter from

your customer's standpoint, as well as from your own, and practice the golden rule.

Rogersville, Mich.

For the Bee-Keepers' Instructor.

My First Experience With Cyprians.

SAMUEL STEVENSON.

Last summer I procured a Cyprian queen—one rated as extra—and placed her and the few bees accompanying her in a strong nucleus of black bees. She soon commenced laying, and the stock prospered finely. I added a few cards of hatching brood from other hives, and in a short time my Cyprians were "booming." I watched them closely, and with an intense interest, for they were the first I had ever seen. I noted their coming and going from the hive for a number of days, until the Cyprians and blacks were about equal in numbers.

One fine afternoon when the bees were flying freely, I opened the hive to see how they were managing affairs. The first thing I knew a squad of bees dashed into my face, and literally covered my hands, the result of which was that I was severely stung. This was something new to me. To say that I was surprised hardly expresses it. I closed the hive and got away from it as soon as possible, and sat down to meditate.

I recollected that I had read two or three statements that Cyprians were cross, but I never thought of that, though I proceeded with my usual caution in opening the hive.

A few days after this I put on my bee hat, charged my Bingham smoker, and proceeded to inspect them a second time, and opened the hive as carefully as I could. As soon as the lid was removed, out they came as before. But I was prepared for them. I applied smoke to them freely, but they seemed almost indifferent to it. This was new to me. My Italians, hybrids and blacks yielded quite readily, but these fellows paid but little attention to smoke. Another peculiarity about them was that when fairly aroused they were ready to attack anything in their neighborhood, and required a long time to quiet down. This is quite different from the other varieties.

Notwithstanding their pugnacity I looked them over occasionally, and think I have observed the following points of difference between them and other bees:

1. The queen does not deport herself with as much quiet dignity as an Italian

queen does, but is more filgety and apparently uneasy when moving about over the combs.

2. The workers cling closely to the surface of the combs when lifted from the body of the hive. They show no disposition to bunch up and drop off at the corners of the frames, which the blacks almost invariably do. This disposition to adhere to the combs is more marked than with Italians.

3. They are great eaters. I found while feeding them last fall that they would dispose of double the amount of liquid honey of other stocks of the same size.

4. I do not think they are any better honey gatherers than my Italians, and some of my choice hybrids.

5. They are first-class at defending their stores from robbers. They are strong and active on the wing, and when aroused fight with the energy of desperation.

Morenci, Mich., Jan. 9, 1882.

For the Bee-Keepers' Instructor.

Bee-Keeping in Russia in the 17th Century.

CHAS. H. LAKB.

In looking up an important "article of information" respecting the earliest dates of "bars," movable frames, and other appliances connected with bee culture, I have access, probably, to as good authority on these subjects as any bee-keeper in the country, viz.: The libraries of the Peabody and Mechanical Institutes, and the Mercantile Library, to say nothing of the large and valuable private libraries of Baltimoreans. It may perhaps be interesting to many, if not all of your readers, to follow up the statements of bee-keeping of the present day with some accounts of their management a hundred years ago in foreign lands, and in this article will confine myself chiefly to Mr. Look's views of the Russian Empire, published in 1800.

Bee management in Russia at that early date was not so inconsiderable and subordinate a branch of industry as in most other countries. It was an *important* business and conducted on a *large scale*, and afforded the principal means of subsistence to some of the nations or tribes which inhabit the vast Russian Territory. The products also formed an important article in the commerce of the Empire, and some idea may be formed of its importance, from the fact that after deducting the home consumption not less than 450 to 500 tons of beeswax was annually

exported from the Baltic alone, early in this century. Honey, too, forms a most important article of home consumption, and the Southern provinces not only supply the North of European Russia, but also all of Asiatic Russia (for there are no bees east of the Ural mountains). The best honey is that called the "white linden honey," which is principally obtained from the hives of domestic bees in those parts where the linden forests most abound.

The breeding and management of bees in Russia are not only pursued more in the gross than anywhere else, but the process generally pursued is quite peculiar to that country. Bees are kept in most of the provinces, but honey is obtained in by far the largest quantities from the wild bees. The Bashkirs and some other tribes inhabiting the country west of Southern Ural, are those who devote themselves the most exclusively to this branch of industry, which seems to be carried on with the greatest vigor in the governments of Kazan and Oufa. There are individuals among the Bashkirs who, besides their bee gardens, possess hundreds and in many instances thousands of wild bee hives in the forests.

It is only necessary to describe the process in use among the Bashkirs, as it is the same which is followed by most of the other tribes that apply themselves to this useful pursuit:

It is most usual to prepare in the forests for the bees a very peculiar description of hives, which the bees spontaneously enter and then deposit their honey.

When it is the intention of the Bashkirs to prepare receptacles for the bees, they repair to the forest and select the straightest and strongest trees which they can find, always preferring the hardest kinds of timber. On these, at the height of twenty to thirty feet above the ground, they construct the bee house, by hollowing out a large, smooth cavity in the trunk of the tree with a tool resembling a chisel. When the work is completed, the aperture is closed by a board, in which are several holes large enough for free ingress and egress for the bees.

The manner in which the Bashkirs execute this rather difficult work, and the agility with which they ascend the loftiest and smoothest tree, affords a fine display of dexterity and skill. "A rope and a sharp hatchet is all that they require to assist their ascent. The workman places himself against the trunk of the tree, around which and his own body he fastens a rope. He then with his hatchet cuts a notch in the trunk at a certain

height, and setting his feet against the tree springs to that height by the help of the rope. He supports himself by the rope, resting his feet in the notch till he cuts another, to which he ascends in the same manner, and this is continued till he reaches the desired point. As he is to make some stay there he notches out a more convenient stand for his feet than was before necessary, resting his feet in this and supported by the rope. He then commences his work, the tools required for which he has taken up in his girdle. It is always considered necessary to cut away the branches below the hive in order to render the access more difficult to the bears, which still exist in considerable numbers in the Ural, and which are by far the most dangerous enemies known to the bee-keeper. Some of the measures adopted to secure the hives from the depredations of these animals are very curious. The most common contrivance is to insert a number of knives or iron spikes, bent upward, into the trunk of the tree. The bear, by the exercise of great caution and sagacity, is generally able to clamber up a tree thus defended without much difficulty, but in sliding down again he seldom escapes with his life, or from being desperately wounded, being caught by the hooks and cut with the knives in the descent. Old and experienced bears who have learned what to expect from these instruments, have been known to loosen or break them off with their paws as they went up. Another method, which is considered more certain in its effects, is to suspend a heavy block of wood before the aperture to the hive. This block the bear flings from him repeatedly with increasing fury, but as often as he does so the block, of course, returns, and hits him violent blows about the head. Irritated to the utmost the animal increases the violence of his efforts, and at last, exhausted by his rage and exertions and partly stunned by the blows, falls upon the spikes planted on the ground to receive him. Another and more ingenious contrivance than either of the above is to take the bear in a trap of very simple construction. It is not unlike a large scale, such as we see in wholesale houses, consisting of a board with ropes at each corner tied at the top. It is fastened to a branch above the hive in such a manner that if left suspended perpendicularly the board would be at some distance from the trunk, but when the rope is properly fastened to the branch the board is drawn from the perpendicular and slightly attached to the trunk on a level with the door to the

hive in such a manner that the fastening remains the only obstacle to prevent the bear from obtaining access to the hive. The bear ascends, and finds a seat which seems so admirably adapted to his convenience that he gets upon it and soon commences tugging away to remove the only obstacle between him and his desired prey. But as this obstacle is the fastening of the board to the trunk of the tree, the animal no sooner succeeds in his object than his seat swings off with him to its perpendicular. He thus remains suspended in mid air in a sufficiently mortifying situation until some one arrives to shoot him. But sometimes he throws himself off, and is then impaled upon pointed stakes which are planted around the tree."

Baltimore, Md., Jan. 7, 1882.

Question Box.

Should division boards extend to bottom of hives, and fit close? or half an inch space be left at the bottom, and why? J. H. Alliance, Ohio.

All division boards should be made to fit the hive so perfectly that not a bee can pass behind them. This we insist upon in our own apiary, for the reason that they are often used to divide two nuclei, and we have found out by costly experience that two queens will not be tolerated if there is ever so small an opening by which the bees can pass from one department to the other. If found advisable to allow them to pass behind the division board, it can be done by laying a small stick or strip of wood between the quilt and frames, letting it project over the division board, or by raising the board a little. You can let them behind a close-fitting board much easier than you can prevent them getting behind one not perfectly bee tight.

Please let me know if you will have any Albino queens for sale in the early part of May. J. A. Damen, Pa.

We have no Albinos. Three years ago we purchased a tested Albino queen, but queens reared from her brought bees that no one could tell from light Italians, and as we had bees that were far more industrious we did not breed but few, and finally replaced them with Italians.

Is the end piece of the L. hive morticed out? If not, your figures do not agree, or I can't make them do so. Please explain and oblige. CHAS. SWINDLES. Rockford, Ill.

We think the figures we gave were cor-

rect. The L. hive we believe to be 18½ inches long, 14½ wide and 9½ deep inside measure. We usually get out the end piece 15 inches long, and rabbet into each side piece ¾ of an inch. It makes a stronger hive and looks better.

NOTE:—Will F. J., of Salem, O., please ask his questions again? Letter has been mislaid, and we can not remember the questions.

Editor's Corner.

PAST, PRESENT AND FUTURE.

With the December issue the INSTRUCTOR closed its third year's existence, and with this number it enters upon the duties of its fourth year. It is now just one year and three months since we took charge of the INSTRUCTOR, with the determination of making it worthy of the support of American bee-keepers, and how well we have kept our determination we leave for our past efforts to show. That it has not been as good as it might have been we are painfully aware. No one is more keenly alive than ourselves to its past imperfections, and to the fact that in many respects it has not been equal to what it might have been. Yet we think no one can but admit that the volume just closed has been a vast improvement on the preceding ones, and it is our earnest purpose to make the volume for the succeeding year still better than the one just ended.

When first we assumed control of the INSTRUCTOR, each issue contained from eleven to twelve pages of reading matter ("leaded" type) each issue. Now we are giving sixteen pages of reading matter ("solid" type) in nearly every issue, this being equal to twenty pages of leaded matter. Thus it will be seen that we have nearly doubled the amount of reading matter, WITHOUT ANY INCREASE IN PRICE. In addition to this, instead of making the INSTRUCTOR up almost wholly of clippings as formerly, nearly every number is now composed principally of original matter, written expressly for its col-

umns by apiarists widely and favorably known as authority on all matters pertaining to the apiary. That our friends have appreciated our efforts we well know. Numerous have been the expressions of encouragement and praise we have received from them, for all of which we return our sincere thanks. We shall strive in the future as in the past to publish a journal that shall be free and disinterested in all things, taking for our cardinal doctrine the fact that a free and thorough discussion of every mooted question is the surest and best way of arriving at the truth. And to this end we invite the help of bee-keepers everywhere, reminding them that UPON THE SUPPORT THE INSTRUCTOR RECEIVES DEPENDS MUCH OF ITS SUCCESS AND ABILITY TO ACCOMPLISH GOOD.

MICHIGAN BEE-KEEPERS' ASSOCIATION.

The last annual meeting of the above Association was held at Battle Creek, Mich., on the 8th and 9th of last month, and was a complete success in every respect. In addition to the large number of Michigan bee-keepers attending the meeting, quite a number of the prominent apiarists of other States were present, and added to the interest of the occasion. Bee-keeping in Michigan is quite advanced to what it is in many other States, one reason for which we think is its excellent State organization, and its numerous local organizations. Many things of interest and profit to bee-keepers were read and said at this meeting, but the small limits of our journal will not admit of our giving anything like a complete report of the proceedings. We give Mr. W. Z. Hutchinson's essay in this number, and perhaps we may publish some of the rest in the near future.

Our readers will notice some changes in the appearance of the INSTRUCTOR this month. Although not affecting its appearance materially, we think the changes made will add to its attractiveness, and be appreciated by its numerous friends.

DYSENTERY IN BEES.

Most writers of the present day in speaking of dysentery in bees, refer to the disease as of recent origin, and write of the good old days of yore, of twenty or twenty-five years ago, as a time when the disease was unknown. This is quite common, even with some of our leading apiarists, if they have a pet theory on which they wish to account for the mortality, of late years, among bees. We were never satisfied with the assumption that this disease was of recent origin, for we have believed and still believe that the same causes, under like circumstances, will produce the same effect now as fifty years ago, or the same fifty years ago as now. One reason why this false idea in relation to dysentery so greatly prevails, is owing to the comparatively recent introduction of movable frame hives. In the old box hive, bees frequently died from dysentery, but no investigation being made it was simply attributed to "bad luck." In some cases, however, men were not satisfied without a thorough investigation, and in such cases where losses were great, the cause of the mortality was often traced to dysentery, just as it is in many cases at the present day.

Jerome Wiltse, of Falls City, Nebraska, in an article in the *Exchange*, gives the following circumstance, which is no doubt only one of hundreds of similar cases, that might be given if a proper record had been kept. He says:

"Some forty years ago a German named Boffmaire kept 100 or more colonies of bees in straw hives. My father had 35. Boffmaire's all died, but 7, of dysentery, and father's all died but three. From these facts and what I learn from others, I deduce the following conclusions: That protracted confinement and moisture in the hive, generate dysentery. That in hives of small dimensions, it assumes the most virulent type. That it is an infectious disease, communicated in a degree conformable to the susceptibilities of such as are exposed; thus, if bees are confined in a small hive without upward ventilation, they die more rapidly than if ven-

tilated, or in large hives. I know that in the winter of 1878-9, my bees in one apiary were entirely exempt from disease, when nearly all others were diseased; this exemption I attribute to the large size of the hive, and isolation from diseased bees."

Here we have a mortality recorded, from this disease, that occurred forty years ago, equal to any of recent date that can be cited, and which we think when taken into connection with reason ought to satisfy any one that like causes under similar circumstances will always produce like effects. There is no doubt but what the honey bee has always, under certain conditions, been subject to dysentery. The disease has very likely of late years been aggravated by an attempt on the part of bee-keepers to keep their bees warm by shutting them up too closely. Nothing will produce dampness and disease quicker than improper ventilation. Good ventilation, protection against sudden changes, and plenty of good food have always been and always will be essentials in the prevention of dysentery, and consequently to successful wintering.

With this issue a great many subscriptions expire. We hope all will renew at once, and save us the trouble of removing their names from our list and replacing them in a short time. Should anyone find it inconvenient to send us the subscription just at present, and desire us to continue the INSTRUCTOR on credit a short time until they can pay us, we will willingly do so. Otherwise all subscriptions will be discontinued as fast as they expire, unless we receive the cash in advance.

When sending stamps for subscription to the INSTRUCTOR, always send them of the denomination of 1, 2 and 3 cents. 5 and 10 cent stamps, and those of larger denomination, we only occasionally have any use for, and any one sending them will run the risk of having them returned. We have spoken of this before, and hope our friends will recollect it.

OUR COTEMPORARIES.

Mr. J. H. Nellis has sold his supply business and the *Exchange* to Messrs. Houck & Peet, of Canajoharie, who will continue both branches of the business as heretofore. With the December No. the *Exchange* appeared in an enlarged form, having thirty-two pages instead of twenty, as heretofore. Both the present and former proprietors have our best wishes for their future success.

With the first number of the new year the *American Bee Journal* appeared in its new form, the number of pages being increased from eight to sixteen and reduced in size one-third or more. This makes it much handier for binding and preservation. It is very neat and "natty."

At the commencement of this year the *Kansas Bee-Keeper* was to have been changed to a twenty-page magazine, and the price increased to 60c. per year. We have not yet received a copy of it; hope it will make its appearance soon.

Like Friend Newman, of the *A. B. J.*, we have not received a copy of the *American Bee-Keeper* for lo! these many months. Has it "absquatulated?" Some one please inform us.

We have received a copy of the initial No. of the *Pennsylvania Farmer*, published at Mercer, Pa., and "devoted to the interests of the Farmer and his family." If the number received is any criterion of those to follow, it will certainly fulfil its mission worthily.

Friend Doolittle, on a postal card dated the 4th, says: "Cold. Mercury 6° below zero." At the same time here in Ky., the thermometer only marked a few degrees below the freezing point, and at this writing (Jan. 14) it is rainy and warm, with the bees flying at intervals.

Breeders, send in your orders to be inserted in the "Queen Breeders' Directory" for the ensuing year. One line, during the year, 75c. Two lines, \$1.40. Three lines, \$2.00. Each additional line over three, 50c.

Explain, Friend L.—In a recent issue of *Sunday Morning*, a Baltimore paper, we notice quite an extended and favorable account of the apiary and business of C. H. Lake, whose name is probably familiar to most of our readers. Two or three portions of the article especially strike our attention. They are as follows:

"Negotiations have already been made to bring the giant "Urusu" from its native haunts and domesticate it on one of our little Chesapeake islands. This bee is wonderful in size, being larger than a bumble bee, and is said to build combs 18 feet in length in its native lands. The stingless bees of Brazil will also be among the new features of this establishment, and will be carefully bred at remote places accessible to Baltimore, until their good or bad traits can be fully developed before being disseminated."

Is the above all so, Friend Lake? or did that newspaper man draw upon his imagination considerably? Do you really think of investing in "stingless bees" and the giant "Urusu?" And where, by the way, do we have any account of the "Urusu," and in what region are its "native haunts?" Let's have a little light on the subject.

Errata.—In last month's journal "Review No. 6" should have read "Review No. 7." The head is kept standing from month to month, and the compositor in setting the article forgot to change the figure of the previous month, the mistake not being noticed until the journal had all been printed. Also, in place of "G. W. Demaere," at the head of the second article in this issue, read "G. W. Demaree."

Our exchanges who have not done so yet will oblige us by changing our address from Adelphi, O., to Somerset, Ky. We thought the fact of our removal had been made sufficiently plain for any one to understand, but it would appear not, as some of our exchanges still go to Adelphi.

On all advertisements received before our next issue we will allow a discount of 10 per cent. from our regular rates.

THE NORTH-EASTERN CONVENTION.

We have received from the Secretary a copy of the programme for the coming meeting of this Society. It is very neatly gotten up, and reflects much credit on the Association. The topics to be discussed and the essays that will be read cover a wide range of subjects, all of much importance to bee-keepers, and every one who can afford it should be present. We would like very much to accept the invitation of some of the members to attend the Convention, but business will prevent it. Following is the programme in full:

WEDNESDAY, JAN. 25.

1 P. M.—Convention called to order.
Calling the roll.
Reading minutes of last meeting.
Reports of Secretary, Treasurer and Standing Committees.
Reports of the past season's operations by the Convention.
Marketing.—T. G. Newman, Chicago, Ill.

EVENING SESSION.

Receiving new members.
Reading of Correspondence.
Dysentery; its Causes, Effects and Prevention.—Chas. Dadant, Hamilton, Ill.
To be followed by discussion.
Topic for discussion: Experiences with comb foundation.

THURSDAY, JAN. 26.

MORNING SESSION.

9 to 12.—Reading the minutes.
Receiving new members.
Appointment of Committees on Implementations and Question Drawer.
Improvement of the American-Italians.—James Heddon, Dowagiac, Mich. To be followed by discussion.
The best Method of Rearing Queens.—W. J. Davis, Youngville, Pa. To be followed by discussion.

AFTERNOON SESSION.

1 to 5.—Receiving members.
Election and Installation of Officers.
Ballotting for place of next meeting.
President's Annual Address.
Wintering Bees.—N. N. Betsinger, Marcellus, N. Y. To be followed by discussion.
The most Successful Method for the Prevention of Swarming.—L. C. Root. To be followed by discussion.
Miscellaneous discussion.

EVENING SESSION.

7 to 10.—Topic for discussion: What is the best management of the apiary for comb honey; also extracted honey. The remainder of the evening will be devoted to examining articles on exhibition, and a social interchange of views on any topic desired.

FRIDAY, JAN. 27.

MORNING SESSION.

9 to 12.—Reading the minutes. Shall we Connect Business with our Association?—G. W. House, Fayetteville, N. Y. To be followed by discussion. Topic for discussion: The disposal of our products. Miscellaneous business.

AFTERNOON SESSION.

1 to 5.—Receiving new members. What per cent. of Increase is the most Profitable.—W. L. Tenent, Schoharie, N. Y. To be followed by discussion. Report of Committee on Implements, etc. Report of Committee on Question Drawer. To be followed by discussion. Miscellaneous business. Adjournment.

A Good Point.—In reply to a question of T. G. Newman's at the Michigan Convention, Dr. Southwick stated that "there was no difference between glucose and grape sugar, except that the liquid was called glucose and the solid, grape sugar, in order to distinguish them commercially. Both were manufactured from the same material, and alike, with the single exception of the addition of other chemicals to solidify that designated as grape sugar." This knocks the last prop from under Mr. A. I. Root's defence of grape sugar, unless he can manage to rake up some new line of defense. We should think, though, that he was rather tired of the argument by this time, for the editor of the *Bee Journal* has been, "whacking" it to him hot and heavy on the subject for some time past.

In sending your subscription to the INSTRUCTOR try and get a neighbor to send with you, and enclose a dollar bill. It will cost less than to send two subscriptions separately, and will be much more convenient for us. If you can not

do this way, however, we will accept stamps as cash, providing they are of the denominations named elsewhere.

No "Review" yet up to the time of going to press.

The Northeastern Bee-keepers' Association will hold its Twelfth Annual Convention in the Common Council Halls, at Utica, N. Y., on the 25th, 26th and 27th days of January, 1882.

The Executive Committee are determined to maintain the high standing and enviable reputation the Association has justly gained in the past, and propose to outdo all former efforts at the coming Convention. Business of vital importance will be brought before the Convention, that makes it the duty of every member and bee-keeper to attend. None can afford to stay at home. The meeting promises to be the largest and most interesting ever held in America. All are invited.

Elegant and appropriate diplomas will be awarded to worthy competitors on essays, display of implements, comb foundation, honey extractors, bee-hives, smokers, boxes, crates, etc.; also for comb and extracted honey.

All are invited to send implements for competition, or exhibition. Articles sent to the Secretary will be disposed of, or returned, as the owner directs. It is desired that all articles forwarded have charges pre-paid, and the same as sold to purchasers.

Reduced rates of board at hotels.

DR. A. H. MARKS, Pres.

GEO. W. HOUSE, Sec.

The Union Bee-keepers Association will meet at Eminence, Ky., on the 27th day of April, 1882.

G. W. DEMAREE, Sec'y.

Honey and Beeswax Markets.

REPORTED FOR THE INSTRUCTOR.

Chicago, Jan. 9.
Honey—Is quieter since the holidays, yet the trade is in all respects larger than on corresponding date of last year. Values remain unchanged and stocks of honey decreasing, receipts being light.
Beeswax—18 to 22c.

R. A. BURNETT.

St. Louis, Jan. 11.
Honey—Is in ample supply, and in consequence moves very slowly. Comb, 18 to 22c. Strained and extracted, 9 to 11c. to 12 $\frac{1}{2}$ c. Largest figures only realized for very choice in small packages.

Beeswax—Scarce. What stock is here is held

very firmly—22 to 23c. No receipts of consequence.
R. C. GREER & Co.

Cincinnati, Jan. 12.
There is no change in the prices of honey or beeswax. The demand for honey is and has been slow for a month or more.
C. F. MUTH.

Cleveland, O., Jan. 11.
Honey—Our market is unchanged. Best quality white in 1-lb sections we sell at 22c. No. 2 grade, 20c. Buckwheat very dull at 18c in 2-lb sections, best, 20 to 21c. Extracted in small packages, 12c.; half barrels, 11c.
Beeswax—22 to 25c.
A. C. KENDAL.

Baltimore, Jan. 7.
Honey—In demand at last quotations; but little on the market.
C. H. LAKE.

San Francisco, Jan. 7.
Honey—No life observable in this market. The unfavorable prospect thus far for a prolific yield this season has not stimulated the demand in the least. A sale of 58 cases dark extracted at 8c. is reported. We quote: White comb, 16 to 20c. Dark to good, 10 to 14c. Extracted, choice to extra white, 8 $\frac{3}{4}$ to 10c. Dark and candied, 7 to 8c.
Beeswax—23 to 25c.
Root & HATCH.

Boston, Jan. 13.
Honey—Trade has been quiet all through Dec. We are holding our honey. 1-lb. white clover is selling at 22c.; 2lb., 20c.
Beeswax—22 to 25c.
CROCKER & BLAKE.

New York, Jan. 13.
Honey—Best white in 2-lb. sections, 18 to 20c.; fair white in 2-lb. sections, 15 to 17c.; dark and buckwheat in 2-lb. sections, 12 to 13c. Extracted, white, 10 to 11c.; extracted, dark, 7 to 8c.
Beeswax—Prime yellow, 24 to 25c.
H. K. & F. B. THURBER & Co.

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Convention Directory.

That the following table may be kept complete, Secretaries of Conventions are requested to send us notice of the times and places of future meetings. The limits of our journal will not often permit of our giving full reports of these conventions, but we are willing at any time to publish such notices of future meetings as will conduce to their benefit. We desire to aid the "cause" all we can, and these conventions are one of the progressive bee-keeper's best aids.

- Jan. 24, 25—Indiana State, at Indianapolis, Ind.
- 25, 26, 27—North-Eastern, at Utica, N. Y. Geo. W. House, Sec'y, Fayetteville, N. Y.
- Feb. 1, 2—N. E. O. & N. W. Pa., at Jamestown, Pa. W. D. Howells, Sec'y, Ashtabula, Ohio.
- April 11—Eastern Michigan at Detroit. A. B. Sec'y, Detroit, Michigan.
- 25—Texas State, at McKinney, Texas. Wm. R. Howard, Sec'y, McKinney.
- 26, 27—Western Michigan, at Grand Rapids. Wm. M. S. Dodge, Sec'y, Coopersville, Michigan.
- 27—Kentucky Union, at Eminence, Ky. G. W. Demaree, Sec'y, Christiansburg, Ky.
- May 25—Iowa Central, at Winterset, Iowa. Henry Wallace, Sec'y.

100 COLONIES

Of Italian Bees, in

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For sale. I make a SPECIALTY of
Full Colonies and Nucleus Hives.

Prices of Full Colonies:

1 colony in April.....	\$14.00
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" from July to October.....	8.00
10 colonies in April, each.....	13.00
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" " June ".....	9.00
" from July to October, each.....	7.50

Safe arrival at express office guaranteed.

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1 2-frame nucleus and queen in April.....	\$4.50
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For 10 or more of each 20 per cent discount off the above prices.

Albino, Cyprian and Italian Queens,
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Best of references given if required.

Books for Bee - Keepers!

COOK'S MANUAL OF THE APIARY is one of the latest additions to bee literature, though by no means least. It is particularly valuable to the scientific bee-keeper (although in part II, under the head of "The Apiary, Its Care and Management," instructions are given that the most inexperienced can understand), as in it Prof. Cook has opened up a hitherto comparatively unexplored field, by giving a full description, illustrated by numerous engravings, of the physical structure of the honey bee. It is fully illustrated, and handsomely printed and bound. Price, in cloth, \$1 25; paper, \$1.00.

QUINBY'S NEW BEE - KEEPING, by L. C. Root, is a handsomely illustrated book of plain, practical information for bee-keepers, very neatly and substantially bound. Its author follows apiculture as a business—being one of America's most successful honey producers—and is therefore thoroughly qualified from personal experience to impart that information to bee-keepers that is essential to their success. Cloth, \$1.50.

The A B C OF BEE CULTURE, by A. I. Root, embraces "everything pertaining to the care of the apiary," arranged in the handy cyclopædia form, and contains much useful information to both the novice in bee-keeping and the experienced. Cloth, \$1.25; paper, 75c.

THE BEE-KEEPERS' TEXT BOOK is one of the older works on bee culture. It has lately been re-written and revised by A. J. King, and is now fully up with the times. Cloth, \$1.00; paper, 75c.

BEE CULTURE; OR SUCCESSFUL MANAGEMENT OF THE APIARY, by T. G. Newman, presents in a condensed form instructions for the apiary's successful management. Published in English and German. Price for either edition, in paper, 40c. each; per dozen, \$3.00.

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HARVESTING, HANDLING AND MARKETING EXTRACTED HONEY is the title of a very neat, thorough and exhaustive pamphlet on that subject, by Charles and C. P. Dadant. Price, 15c.

Any of the above will be sent by mail, post-paid, on receipt of price. Address W. THOMAS & SONS, Somerset, Ky.

THE Bee-Keepers' Guide.

A STANDARD AUTHORITY

ON ALL MATTERS PERTAINING TO

APICULTURE.

ITS CORRESPONDENCE

Is prepared by successful and practical Apiarists.

ITS EDITORIAL DEPARTMENT

Contains results of experiments made in a large Apiary which is devoted to the production of Queens, Bees, Comb and Extracted honey. Its colonies have been wintered successfully for six consecutive winters, and the experiment of the coming winter is looked upon with much interest. This Department also contains Comments and Criticisms on New Theories, appearing from time to time through the Press. Thro' these Criticisms the reader often obtains valuable information, as he receives different views on a subject.

ITS LETTER DEPARTMENT

Is open for Notes, Reports and Interesting Facts from all quarters.

ITS NOTE AND QUERY COLUMN

Is conducted for the benefit of Beginners, or the Unskilled, where the most simple as well as intricate questions will be answered.

SELECTIONS.

A part of the third page is usually made up of Selections. In choosing them, we use our best judgement in selecting such articles as are thorough and substantial, some of which are very valuable in Scientific Knowledge.

An Interesting Feature

For the coming year will be our Successes and Failures in Wintering, given through twelve consecutive winters, by which will be seen the "Rises and Falls" through which the Bee-Keepers of the country passed during that time, and ourselves along with them, until a happier fate befell us.

THE BEE-KEEPERS' GUIDE

Is now in its fifth year of publication, and has, during its time, been given a wide and numerous patronage, which we shall endeavor to sustain and increase by good efforts made to advance the industry which we uphold and follow.

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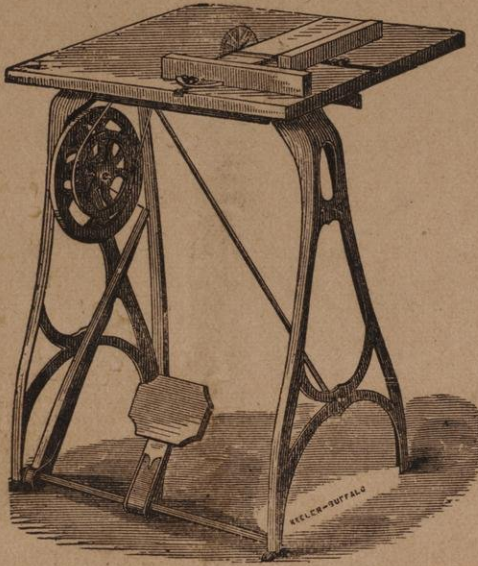
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FOR 1882

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Send full address—Post-Office, County and State.



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Wanted:—Beeswax; also a student apprentice.
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200 Colonies of Pure Italian Bees,

Warranted in good condition in every respect. 50 colonies are in 2-story Simplicity hives, and 150 colonies in 2-story Everett Langstroth hives.

PRICES:

In lots of from 1 to 25 colonies, each	\$10.00
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