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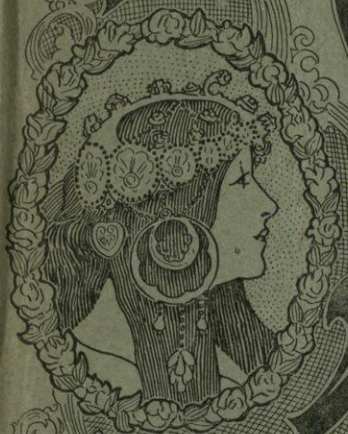
The Southland Queen



April, 1903

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The Southland Queen

DEVOTED TO THE EXCHANGE OF THOUGHTS ON APICULTURE.

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BEEVILLE, TEXAS, APRIL, 1903.

HIVES.

Shallow Hives and their Advantages—The Value of Proper Manipulation to Get Strong Colonies—Will Bees Gather More in any Special Size Hive—Different Opinions.

J. E. Chambers.

Bees, and not hives, gather honey. So say the wise ones. The bees may store a good crop of honey in a hollow tree, said Allen Pringle, at the meeting of the American and Canadian bee-keepers in Toronto in 1895, and some who are considered good authority have declared that it makes no difference about the size or shape of the hive, so you have the bees. And some have contended that all manipulation is only a waste of time, especially in our Southern climate, with its long seasons. Adam Bradford, of Menard County, made that assertion to me some seven years ago. At that time he was considered one of the foremost bee-keepers in this section, and I had no doubt but what he knew what he was saying. Since then I have found out that he did not know, for I know beyond the faintest doubt that with a properly constructed hive, adapted to the ever developing requirements of the bees and the ready manipulations of the apiarist that a much larger force of bees can be brought into the field, and at a much more convenient time; not only that, but a far greater per cent of the colonies could be brought to that high state of energy and development so necessary to success. The shallow hive, with shallow frames, can be manipulated so as to bring every colony to this condition. One of its chief advantages is that in giving room to colonies that are breeding up fast, but are weak in mature bees, it can be done without the danger of overdoing or giving too much room all at once; and if one is found now and then too weak to receive an extra super, one or two combs of honey can be removed and empty combs inserted, and in a week's time the colony will be strong enough to take a full set of combs. From that time on development is rapid and unchecked, and one super is

given every week. Every time a super is given after the colonies get fairly strong, the frames are alternated, half raised into the new super and half left below. This way of manipulation gives abundant room for the queens and forces both bees and queens to do their utmost. It also has a strong tendency to abate the swarming fever. Among 150 colonies the past season only seven swarmed, and many colonies among this lot gave over 200 pounds of honey each. Some were tiered up seven stories high at my first extracting in June, and many of these colonies went into winter quarters with over 100 pounds of honey on the hives and boiling over with bees. Another great advantage is that these shallow hives are much lighter and more easy to handle than deep ones, and they are also more easily freed of bees when taking off. Another big advantage with me is that in hauling over rough roads to out yards no combs are ever broken, and when uncapping the knife reaches clear across the shallow combs. They are all everywhere interchangeable, easier to handle, and more bees and more honey can be produced with them than with any other hive. That I know, and I have used many kinds and sizes during the last twenty years. Of course I do not contend that the hive produces the honey, but I insist that if it is possible by the use of a certain hive and a certain system to get more bees at the proper time, it is also possible to get more honey. Nay, it is not only possible, but it is a certainty. If bees gather the honey, then the greatest number of bees will get the most honey; provided, of course, that other things are equal.

For a long time I experimented with a great many different kinds of hives. I tried them every way —deep and shallow, long and short, wide and narrow, and I found out some things not found in the books, though they are said to contain all there is. One of the most important to me was this: In order to make a living by keeping bees it is absolutely necessary to have good control of the bees, to be able to get a big force on the scene of action at the right time to catch the flow of nectar, and to have no unproductive ones, and not to keep certain hives just because they are called standard, nor certain bees because they are called golden, but to have some judgment of your own and use the things best suited to your locality, to your own common sense. Another thing I learned was this— the systems in use among most bee-keepers would not always pan out with me, and I had to hunt up one that worked better, and this is the one I have just been speak-

ing of, I do not say it is the best, but I know it to be a good one. Now, in regard to whether any special size of hives will be more certain to favor a development of full strength in the best possible season, I do not know any bee-keepers of note who have ever said much on that point. But if I am not mistaken both Mr. Heddon and Mr. Bingham have at many different times made that statement. I am aware of the prevailing opinion that the interested party must be regarded with suspicion, and both of these gentlemen are interested in the shallow double hive. I remember years ago some one made the argument that the queens would not lay up near the wood of the top and bottom bars, and that the queen would not break her circle, and I remember that I at once constructed some large hives and deep frames and some shallow hives, and after two years' trial discarded the big hives and frames, but I still continued to use the shallow double hives, and now have over 200 colonies in them. I have learned that both the big hive and little hive is right at different times and seasons, but not the big frame by a good deal. That frame reverses the advantages of manipulation. By the use of shallow hives I have gotten over 200 pounds of section honey per colony, and have had the great advantage of a large hive for breeding and a small one for the storing, and if you can do that with any big hive I want to see it.

Vigo, Texas.

BRIGHT PROSPECTS.

L. B. Smith.

Now that we have had two years of drouth and short crops of both the apiary and farm products, let us start 1903 with new energies and with the determination of making the present year a record breaker as to crops of all kinds and especially the honey crop. There is a good season in the ground throughout the state, and we have had almost an ideal winter. All of our leading honey plants are up and in a flourishing condition, and the prospects for a great honey year were never more promising than at the present time. If you have allowed your enthusiasm to run down in the apicultural line, now is the time to take hold with new hope and new energies, for we have every reason to believe that 1903 is going to be a record breaker in the way of a honey crop in the grand old state of Texas. If through neglect you have allowed your little pets (the bees) to die the two past disastrous years of starvation or otherwise, go right this minute and gather up the hives and other fixtures and take them to a dry place, scrape and clean up the

frames, tighten and clean the covers and bottom boards, give your hives, bottoms and covers a fresh coat of paint. Go over to neighbor Jones, who perhaps has a few bees in hollow logs, box hives or in dry goods boxes that you can get very cheap, perhaps for a few days' work, or at a very low price for cash. Get these bees, restock your hives and start anew, and my word for it you will never regret it. You can't afford to allow your nice factory made hives to be made into kindling wood or hens' nests. What would you think of a farmer that would allow all of his plow tools and machinery to lie out and take the weather, and that just because he had made a failure in his crops the past two years? Why, you would say he was a poor, shiftless farmer, and doesn't deserve the name of such. And it is just so with bee-keeping. While I would not advise every one to rush into bee-keeping as a sure road to fortune and success in life, yet I would say to those that love bees and bee-keeping for the real pleasure they get out of it, aside from the dollars and cents it is to them, that there is both pleasure and profit in bees. But to make a successful bee-keeper one should not be too easily discouraged, and should not invest too much in bees and fixtures at the start. Better go a little slow at first and see if bee-keeping suits you, and that you suit it. Bee-keeping is like most other callings in life where one's efforts are crowned with success. It is necessary to have a real love for the business. Now let all that are interested in this our beloved pursuit (apiculture) send in their dollar and let us have a journal that is second to none in these United States. We have the country and the bees and an editor that will give us the paper if we will give him our support.

Rescue, Texas.

NOTES FROM HAYES.

HOWARD GILMORE, M. D.

It affords me great pleasure to write once more for the best bee journal in the United States. Bees in my part of the country are in fine shape considering the very unfavorable spring. My bees have plenty old stores to last some time yet, but have very little brood for this time of year. I am afraid I will miss some of the rattan for the want of field bees. It begins to bloom about April 15th.

By the way, did you know that bees would eat cotton seed meal? By accident I found out that they go hog wild over it. I am somewhat in the truck business and was fertilizing my potatoes. I could hardly cover them for bees. Since then I have been putting it out for them, and they are just as

eager for it as they are for honey. They use it for pollen. Has the editor or any of the readers ever tried it as a substitute for pollen? It would do you good to see the little rascals roll and tumble in it. There is scarcely anything for the bees in the woods here now (March 10).

Truck growing is the latest fad here this year. There will be a large acreage of tomatoes and potatoes planted in this county this year. Franklin has a company which planted thirty acres in tomatoes this spring. They are setting in cold frames now.

The boty bug got us last year, and it affected us all alike. It dug heavily on my pill shop, but thank goodness it did not affect my honey crop.

I guess I had better close, as I have got clear off my subject. If this don't get into the waste basket I will try to do better next time, as the Queen has been dead so long I have got out of practice. I want to be the first subscriber, so here goes. Send me the Southland Queen one year and find enclosed $1 for your trouble, and if you want to send me an untested Italian queen just send her on with many thanks. I found an old queen that crawled out of one of my hives to die the other day. The colony is strong and I don't want to double up. Excuse my long chain of nonsense. Best regards to the Atchley family.

Hayes, Texas.

KIND WORDS.

It is a fine thing for us Texas bee-keepers to have a bee journal, and I am glad to know that the Queen is getting her head up again.

UDO TOEPPERWEIN.

San Antonio, Tex., Feb. 23, 1903.

I am doing all I can for the Queen. Send me a lot of extra copies.

J. E. CHAMBERS.

Vigo, Texas, Feb. 18, 1903.

Waxahachie, Tex., Oct. 2, 1903.

The Jennie Atchley Company:

Now that the Lone Star Apiarist has gone defunct I would be glad you would recommence the publication of the Southland Queen. I would like very much to have a bee paper that is published in the south. I do not see why we could not have as good a bee journal published here as in the north. Then it would be more homelike. What would be contributed would be something that has happened here among us. A great many of the suggestions in the northern bee papers come too late for us to put them to use the same season, and by the next perhaps they are forgotten.

I will get a very good fall crop of honey. Did not get anything in the spring on account of the drouth. The queen I got of you last year was the only one to swarm in the spring, and will give

me thirty pounds of surplus, stored since the first of September. Hoping you will consider the suggestion to publish the Queen, I am yours truly,

L. C. ROSSEAU.

Friend R: I am happy that it is so arranged that we can have a southern bee paper, but I am sorry the Lone Star Apiarist suspended. I am also glad that your queen proved a good one. Lend us a helping hand and send us an article for publication.—Ed.

Rescue, Texas, March 24, 1903.
Mr. E. J. Atchley, Beeville, Tex.:

DEAR SIR—I send you in this letter $1 in silver. I will just send it in a registered letter, as this is not a money order office. This is Mr. R. C. Abernathy's subscription to the Queen. His postoffice is Ladonia, Texas. I hope to be able to send you others soon.

Yours respectfully,

L. B. SMITH.

Bro. Smith—This is the way to do, and if all friends will pull as you are doing we will soon have a large list.—Ed.

SOUND DOCTRINE.

A Southern Bee Journal a Necessity, Says Bro. Chambers.

Kind reader, I want to call your attention to some of the reasons why we need a bee journal here in our Southland, and I also want to review some of the things I have read, things that, through constant repetition, have come to be accepted as facts, or else through indifference, have been allowed to go unchallenged, to our injury.

And in order to present these subjects in a more intelligible order I have copied extracts from editorial notes, and from the general correspondence of those northern bee journals. Omitting all names and references in order to avoid personalities, but lest some be led to consider this an evidence of untruth, I will say evidence will be presented if needed. And now to my subject: For a long time I have noticed quite frequent allusions to the south not being progressive and up to date, more especially with regard to adopting new ideas and approved appliances, and incidentally would follow the observation that the poor quality of southern honey was due to these facts. Of course this insidious falsehood was covertly made to appear as nice as possible, but the cloven hoof was there, and it did not deceive many, but it gave our pursuit a stab in the dark, and wounded the pride of every true southern apiarist, and that was just what it was intended to do. But we had no bee journal of our own, and others could not be expected to guard our interests.

Not long ago I read a long article setting forth numerous and specious reasons why northern bred queens were better than southern bred stock, and the author of that article went clear

beyond the province of bee-keeping to find argument to sustain his position, but never did bring one single iota of established proof to support his contentions, for as a matter of truth there never was and never has been any test made to determine this question, so one might well ask where was the foundation for these claims. And the only reasonable answer would be that it was in a desire to strike and cripple a southern industry that was growing fast and threatened to supplant the northern queen trade.

Discussing the government census report for 1899, and the honey statistics of California and Texas, a certain bee editor of the north felt called upon to question the correctness of these reports, saying that statistics were not gathered as systematically in some states as in others, but he did not name the systematic state or states, so some might be led to believe that he did not exactly know himself, but one thing he did point out in unmistakable terms. Texas must not be allowed to occupy the front seat among the great honey-producing states.

In going over a file of old bee papers I was surprised to find only an occasional reference to southern bee-keeping, and that generally by correspondents. Editorially there was but the slightest notice and recognition given of our existence. The states of California and Colorado were mentioned just thirty times to Texas once, and the editor of one of these papers is considerate enough to advise the people of the south not to waste their money starting other bee papers, and the space in these papers that should have been given to a fair and equal discussion of things that were of interest to all beedom was taken up with long-winded articles on how to make cellars and raise onions and lettuce, and religion took a hand along with the rest, and Christian science stepped in, too. Meantime, there are, I have no doubt of it, others, like myself, who felt that they were paying for the ox but only getting his tail, but they might have remembered that ox-tail soup is a healthy beverage. If so they must have been very solicitous about our health.

In a very recent issue of one of these papers I find the following editorial note: "Bee-keeping in the south is in its leading features, the same as in the north, the natural history of the honey bee, and its habits are the same everywhere." And further on he says: "This journal is not sectarian, and if a greater number of contributions are sent in from one part of the country than from another, it is because the correspondents so will it." Exactly so; no doubt of it, but that is a weak argument, and

shows only too plain that there is truth in the statement that called out this declaration, which was to to the point involved in this article. Now, as regards the first of these statements, nothing can be farther from the facts that bee-keeping in its leading features is the same in the south as in the north. I think I am fairly familiar with the practices of the bee-keepers of the north, and if there is one single instance to be found where any southern apiarist follow in details I dont't know of him. And in the other statement that bees in their history and habits are the same everywhere, it is in the main true, but climate, flora, hives, systems and other surrounding influences have to be considered, and these very influences may so modify or change the nature or rather habits of bees that even his last statement will need a good deal of qualifying in order to make it good doctrine, but why go any farther, for every man who can lay claim to being even fairly posted must recognize the wide difference between the methods employed here and at the north, and the wider difference in the seasons and the bloom, and these very differences affect materially the management necessary for the greatest results. Thus, one of the brightest bee-keepers of the north, speaking of what constitutes a good queen, had good reason to use the following language: "One that will give the maximum of brood in the minimum of time, and reduce that brood to the minimum thereafter," but we know that would not be the ideal queen here with us by any means, for such a queen would leave us in bad shape for an after flow, which is apt to come at any time, and with only short notice at best. For me in my locality the best queen is one capable of bringing the greatest number of bees on the field in the shortest possible time, and keeping them there, in spite of a honey dirth, always ready to catch any short flow that may come.

But why go any farther or argue any longer to prove what is self-evident, that we must have a bee paper of our own to spread and popularize bee culture in the south, to disseminate the practical and valuable ideas and discoveries, and to defend our people and their product against slander and untruth and to help ourselves and our bee-keeping brothers to rise higher and become more proficient in our pursuit. In order to accomplish this we must come together on the high ground of unselfish devotion to the best interests of our beloved pursuit. Let us do this, let each one labor in this cause as for himself. Only by this kind of effort can we succeed in building up and maintaining a journal that shall be repre-

sentative of the spirit and genius of our Southland and its highest type of bee-keepers. I will dedicate my utmost efforts and if all will unselfishly do the same failure is impossible.

J. E. CHAMBERS.

Vigo, Texas.

LETTER FROM WACO.

Editor Southland Queen:

We have had a hard spring on our bees. In February before the freeze it was warm and brood-rearing was going on at a lively rate. When I examined my bees I found them full of brood and the bees bringing in pollen. The freeze came and killed all the flowers and stopped everything. March came in with cold rains which lasted during the entire month, and when between rain and freezes, the bees would go out and load up on cold water, start homeward in the chilly wind and die with cold before reaching home. So they have dwindled down to a mere handful to each colony. It will take them until the middle of June to build up. We do not expect to get any surplus honey before the middle of July. Our horsemint is very late. It is the plant we always get our first surplus honey from, and in fact every honey yielding plant is late.

You may look for another bee-keeper there in southwest Texas, for I am coming. I am tired of this country. It is no place for bees—too much cleared up, and we have to depend on the annual plants, and in the early spring they show a fine prospect for a big honey crop, and we will prepare for a big yield and then comes a drouth and cuts us off and our hopes are blasted. We have only had two years out of six that we got any surplus at all, and they were very light. Last year we got 800 pounds of extracted honey out of thirty-five colonies. Yes, sir, I going where I can get a good location for my bees. I am in it for a living.

I do hope we will hear reports through the Queen from all our Texas bee-keepers. I wish you a big circulation for the Queen.

C. S. PHILLIPS.

We are having an old-fashioned swarming year, and the fever and swarming heat has reached the superlative degree. The mania is holding out well, and all the non-swarmers are pouring out.

As comb foundation has been scarce and hard to get I tried empty frames in some yards, and find that heavy first swarms fill ten-frame brood chambers in about eight days, and I do not know yet whether it pays an apiarist to use foundation to hive swarms on, but one thing I don't like is the large amount of drone combs, but really these can be used later as store combs in the supers.

THE SOUTHLAND QUEEN.

PUBLISHED MONTHLY.

E. J. ATCHLEY - - Editor and Publisher.

Application made for transmission through the mails as second-class matter.

BEEVILLE, TEXAS, APRIL, 1903.

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Dear friends, here we are again, with no excuse nor apology than that we have been urged and pressed by our friends to start the Queen again. I have hesitated a long time about the venture, and whether or not it will be prudent and profitable to start the paper again, but have decided to do so.

I want a reporter from different states and bee-keeping neighborhoods to send in bits of bee news and other items concerning bees and bee people. So come along without further invitation.

Being right among the apiaries, the editor will try to give some practical thoughts each month.

Send in matter for publication as early as the first of each month to insure insertion the following issue.

I will try to run school as best I can, and you can send in your questions right along, and I will take pleasure in helping you all I can.

Honey buyers have been through our locality, but as yet we have not sold. It don't pay to be too hasty every time in selling our products.

If you know anything good that will help bee-keepers do not withhold it, but take your time and tell it to the readers of the Queen and Bee happy.

I sold and delivered to J. A. Simmons of Oakville last month 100 colonies of fine bees. Joe used to be a reader of the Queen, and is a good bee man. Success to you, Joe.

I want to be excused for editorial work this time and promise better soon, as I have been attending to eleven bee yards scattered in two counties, working all the daylight and moving at night, and have lost but few swarms so far this season.

All supply dealers in south Texas have run out of foundation and many other supplies, as the bees have swarmed and swarmed —and swarmed till everyone seems tired of swarming.

We have not needed to start but few cells this season, as each yard is a natural queen-rearing establishment. We just pick cells from select colonies of our liking and it goes easy, and oh, such a fine lot of queens.

One colony in the Oakville court house has swarmed nine times this season, and still the parent colony works strong. This shows how bees will swarm when left to themselves and the right year comes along.

Old subscribers who have paid for the Queen, and whose time had not expired when we sold the paper, please report and give time you should have the paper for your dues, and same will be recorded and the Queen sent to make all lost time good.

I shall not do a lot of useless preaching to you about a honey pond and fritter tree in south Texas, all waiting for the hungry bee-keeper, and a whitewashed, inside and out, bee-keepers' paradise, for there are lots of countries as good as this for bees, but I want to tell you how I manage bees and attend to about 1000 colonies with only two little boys and one Mexican boy, and how to make bee-keeping profitable in this locality, which will no doubt apply to other southern countries, and I hope to help some of you along with your work.

Bee-keepers have called at the factory for supplies as fast as we could make them for some time. They came on foot, horseback, wagons, hacks, buggies and wheelbarrows. The bees swarming makes the people swarm to get something to hive them in. All this, besides telephone, telegraph and mail orders, we have been a month behind, but are catching up now.

Some good editors seem to be afraid to have an advertiser spoken of or whispered to outside of his paid-for space, and this has scored me to give my advertisers a full page, where they can tell of their little changes and specialties free of charge. For instance, when you get behind for a few days and catch up, say so, or if you expect some new line soon, a lot of queens will be ready so and so, call attention to it under our advertisers' editorial head, directing notice to your regular ad. for prices, etc. Of course one person will not be expected to use all the space or talk every issue, but mind you, our advertisers' editorial page is free for all advertisers.

The Queen will be published the 15th of each month, and the mechanical department will be conducted by our same printer, E. C. Goodwin, who is also an up-to-date bee man, with his apiary near by him, and right among the bees of one of our yards. The Queen ought to be fairly buzzing when she reaches you.

Bees can beat mules in taking people by surprise. Fix a colony this minute and pass it by with the words, "Now, I guess you won't swarm for a time," and turn around to light the smoker, and before you can turn back to see what that noise means, that same colony is half in the air. There may be non-swarming seasons, but no non-swarming bees.

BRUSHED SWARMS.

F. GREINER IN GLEANINGS.

It seems that before a certain thing is thoroughly understood and fully appreciated by the many, it has to be brought up again and again, in the press and everywhere, talked about in the convention, harped on in private conversation, etc. That seems to be the way, because one person can seldom present a thing at one time that everybody will see in the right light. Therefore we keep on talking about lots of other things as well as brushed swarms.

When Gravenhorst first (to our knowledge) made known this method of treating strong colonies perhaps only few realized the value and the importance of it. G. M. Doolittle hit on the same thing, probably without any knowledge of what the former had written.

This must have been in 1877 or 1878; at least, it appeared in print about that time, and I practiced it according to his instructions in a limited way for a few years, but without seeing the possibilities the method afforded. Some years later the keeping of out-apiaries made it desirable to manage our bees in such a way as to prevent their swarming to keep them at work rather than let them go to the—woods. This was the time when we came back to the Gravenhorst or Doolittle practice.

One reason, perhaps, why the method of brushing swarms did not come into more general use sooner was because it has some drawbacks as well as advantages. These drawbacks have not been kept from the public. Stachelhausen and others have attempted to show them up. Let us consider them again.

A brushed swarm is not always a success. About 20 per cent turn out to be failures. Why? Because of absconding. Robbing a colony of all its possessions has a tendency to produce a discontented condition among the bees. I have not yet found out to my satisfac-

tion just how this brushing should be done to prevent such a state of affairs, for the majority of swarms go right on and do their level best after the operation. Only the few seem bound to seek other quarters. Entrance guards do not every time prevent absconding. I have recorded several cases of absconding when the guard had been applied. In one case the queen was left with just a handful of bees. In another the queen and all were gone. Still I do make a practice of applying the entrance-guard after the bees (and in particular the queen) have gone in.

In one instance last summer I removed the guard on my next visit three days after applying it. The swarm left me even then. I now keep the entrance guard on for a week after brushing.

A comb of open brood is very apt to hold the bees, but does not every time. The rule is a good one, but there are exceptions.

A brushed swarm is also apt to build a large lot of drone comb Natural swarms, on an average build far less of it. The age of the queen has a good deal to do with this matter. If every brushed swarm had a young queen there would not be much trouble as to building drone comb. Unfortunately the average honey-producer has not things so well regulated but that a portion of his colonies are headed by old mothers. These colonies, if brushed, will build the undesirable comb.

In the hurry of the busy season it is next to impossible to keep close track of our brushed swarms as to their building comb. At the close of our white honey season they should at least then have an overhauling. The combs taken from them in the early part of the season may in part be used to replace drone combs, and to regulate things generally in their brood chamber. If the drones in the combs that are to be removed have not yet hatched I behead them with an uncapping knife and shake their carcasses out of their cells. They make good chicken feed and excellent bait for fishing. The combs are placed in upper stories to be extracted later. Finally, they may be melted up, if not wanted for extracting combs.

It is not an uncommon thing for brushed swarms to store pollen in sections. Nearly all my pollen-containing sections have come from this source. A small brood-chamber, and particularly a shallow one, will often force a good deal of pollen into the sections when the honey-flow is light, as is usually the case with the large majority of honey-producers. The 400 pounds of surplus per hive (Gandy), or the 450 lbs of section honey (Wilson, Nebraska, p. 739), appear like myths to most of us, and I think we having these meagre

honey yields are excusable for not believing such reports. This is voicing the sentiment of the people hereabouts.

In order to prevent pollen being stored in sections a zinc excluder will help. The old Heddon honey board, of which James Heddon once said, "I want to go on record as saying my honey-board has come to stay," is the best thing, any way, to produce fancy comb honey, and may also be used for the purpose here. It lessens pollen in the supers; it lessens travel-stain; it lessens burr-combs and propolis. Let us give it another trial, friends. We would certainly have better quality if we used it extensively.

I am about done, and only wish to say that, with all the enumerated disadvantages, I continue to "shake." The best yield of comb honey I have had in out-apiaries came from the brushed swarms. It is the best we can do under the circumstances.

Some of the brushed swarms have now superceded their queens. With others I have taken matters into my own hands. It is about the same with my natural swarms.

As to melting up good combs (worker size) I would say don't do it. They are worth more as combs than as wax. If I had a surplus I would advertise them for sale.

A set of combs full of brood, as we gain them by the brushing method, may be set up anywhere in the yard as a separate colony after having them kept eight days on some other hive with queen excluder under them. A natural queen cell or a queen should be given after the separation. A colony thus formed will do well on buckwheat, and be in good shape for another year. If thought best, or in order to reduce the number of colonies, it may also be reunited with its parent having the old queen.

If Mr. A. J. Wright is right—if really a drone is not virile unless his mother has mated, then his virility is due to the influence of the drone that mated with his mother, and he has, therefore, a father. I am glad there is a prospect of the drone recovering his honor, for it is a sort of dishonor not to have a father, though nobody can be made responsible for any such lack in the list of his ancestors.

CELLS IN A SMALL WAY.

Brief Explanation of the Swarthmore Plan of Queen-Rearing When Only a Few Cells are Desired at a Time—A Cell-Starting Frame and Nursery Cage Combined—Starting From Eight to Sixteen Cells.

Cut off the top bar of an ordinary brood frame close to the lugs and drop the piece removed down 1½ inches, where it should be nailed fast to the end bars in the

usual way. In the space below the bar fit a piece of worker comb or a full sheet of foundation. Fasten the lugs in the usual manner so the frame will hang in any hive exactly like any ordinary brood-frame. In the upper 2½ inch space, to one end of the frame, place a Swarthmore nursery cage, and to the other a cell-bar, having eight ¾-inch holes, into which holes the compressed cups are to be placed for the purpose of starting the cells. Now hang this prepared frame in a ventilated hive-body and place at either side two or three combs consisting of honey and pollen (no brood) and sprinkle a little fresh water into one of the outside combs. Cover the tops of the frames with an enameled sheet; split the sheet in the middle and adjust the halves so as to completely close the bees inside the brood-chamber so none can escape, but leaving the tops of the shells exposed to the entire length of the frame for ready and convenient drawing of the cells when they shall be started, for grafting, or for examination.

At 10 o'clock in the morning go to any populous colony and shake into this prepared hive body the bees from off three or four brood-combs, being careful not to get the queen. Tack down the sheet and remove the confined bees to the honey-house and there let them remain undisturbed for six hours, at the end of which time the cups are to be grafted by drawing one at a time. As soon as the cells have a good start, usually in 36 to 48 hours, shift them over into the nursery cage; then return the bees you have used in starting them, to the colony from which they were borrowed; at the same time spread the combs of the losing colony and hang the starting frame, containing the cell, in the midst of the brood-chamber. The bees of the full colony will then enter the cage and complete the cells. On the day they are due to hatch divide the cells among the nuclei previously prepared to receive them, or they may be placed at once into Swarthmore fertilizing boxes to hatch and mate. If sixteen cells are wanted at one time a cell bar long enough to reach across the starting frame is used; this long bar will accommodate sixteen shells, and when the started cells are removed to the full colony for completion, this bar is taken entirely away and two cages are dropped into place in the holding frame.

SWARTHMORE.

March 16, 1903.

Mrs. K.—"So this is really artificial honey. Where does it come from?"

Mr. K.—"I understand it is gathered from artificial flowers by artificial bees."

Mrs. K.—"The idea!"—Philadelphia Press.

OUR SCHOOL

BY THE EDITOR.

I would like to have some specific information about Carniolan and Cyprian bees as to color, size, hardiness, docility, etc. I have three-band and five-band Italians, and I desire to improve on them.

DR. S. H. SMITH.

McKeesport, Pa., March 10, 1903.

Doctor—The Carniolans are a dark race of bees, or rather a mouse colored gray. They are hardy and as a rule gentle and fine comb builders. The Cyprians are yellow-banded bees, but differently marked from Italians, having bright, narrow, yellow bands, and are somewhat different in shape, very prolific and easy to handle if one understands them, but not so gentle as Italians and Carniolans. Either will work well on red clover.

I have some colonies in old box hives, and I want to know if I could transfer them and introduce Italian queens at the same time? When would be the best time to transfer. How many colonies do you keep, and what part of Texas do you live in. JOHN W. JOHNSON.

Canton, Mo., Feb. 25, 1903.

Friend J.—It will be best to transfer your bees and introduce new queens a few days later, or as soon as the bees are settled down to work, as transfering disturbs them, and taking queens away makes the disturbance worse. Fruit bloom will be a good time to transfer. We keep something over 1000 colonies, and live in South Texas, near the Gulf of Mexico.

I write to you for information as to the best time to transfer bees from old hives into frame hives, and the price of the brood chambers and two supers, also the Hoffman frames and comb foundation. What is the best make of smoker and price of same. I live in Mills county among the mountains, and I think bees will do well here if we have rain.

R. S. MCDONALD.

Mullin, Tex., January 14, 1903.

Friend Mc—The best time to transfer is when settled warm weather sets in and new honey comes. It is always somewhat discouraging to transfer bees when no honey is coming in. There are a great many people that wait till the colony or colonies have swarmed, and then in about twenty days there is no brood in the way to bother with. A good plan is to wait twenty-one days after swarm issues, then burst open the old boxes, take out combs and shake bees into a hive. Get a frame of brood from another hive and give foundation or empty frames and make wax of the old combs. See catalogue, mailed free, for prices.

I want a little information about the different races of bees you breed. I will try and tell you how my honey flow is then you will know better how to advise me. There is two or three light flows with a period of drouth between

them, in which Italians cease laying and almost starve unless there is plenty of honey in the hive, but this could be remedied by feeding. This brings us up to the first part of June, when alfalfa begins blooming. In about two weeks it is cut off, but from now on they will get a little from sweet clover, and the Alfalfa that the morning kisses at the second blooming in August is the main flow, and they continue to get honey on through most of September. Without feeding Italians are never in shape for the first blooming of Alfalfa. There are so few bees that it just stimulates them, and when the August flow begins they are in good shape, but they then fill the brood chamber with honey, crowding out the queen. Now, is there a race of bees which, if supplied with honey, will continue to breed during the drouths in April and May, and the first ten days in June? You see, I want out apiaries and don't want to go every day to feed them. I could give them a big feed easily once every ten days if they did not have honey in their hives. What race will best keep their brood chambers full of brood during the honey flow so as to still be in good shape for the light flow that follows it and the next big flow that follows the light one, and another light flow after the light one in August. You see, there are two light flows and two heavy ones after about June 10, or rather a continuous light flow, with two fairly good ones during said time of about three months. With such a season what race would you advise me to adopt. I will run mostly for extracted honey, likely entirely so for the first few years, and I will also want all the increase I can get and not cut down the honey crop too much for the first three or four years. I would not want many swarms. I would want to run either by "shook" swarms or by taking out enough brood to keep down swarming and use it to build up other colonies with. Very truly,

O. R. WEAVER.

Pagoasa Junction, Col., Feb. 3, 1903.

Friend Weaver—There is no race of bees that I know of for such a locality as yours than the Holylands. The Carniolans may be better than the Italians, in as much as they do not crowd the brood nest so badly, but to cover all the points you mention I would say get the Holylands.

I wish to ask you a few questions. I have a colony of bees whose queen has just died. Could I introduce one of your queens and make a go of it? Would I have to have more nucleus or not? I will send you $1, for which send me one Albino queen; that is, if it will be all right to put her in with my queenless Italians. Also send me your printed matter. I am respectfully,

GENE ROGERS.

Mansfield, Mo.

Certainly you can introduce an Albino queen to your Italian colony just as well as any other kind. You can have queens sent to Missouri by mail, and it is not necessary to have a nucleus sent with the queen.

WHAT THEY SAY.

Dear Friends: Yours of recent date to hand, and in reply would say I am pleased to know that you are going to venture again in the publication of the Southland Queen, and trust your venture will be a marked success. I shall be happy at any time to send news from this vicinity; also

an article occasionally, as time and circumstances will permit. If you will send me sample copies I will do my best to get you subscribers, as there are several bee-keepers around here and others just starting, and will try to do you all the good in my power. Please don't forget to send me catalogue when issued. The weather has not been good here for bees—too damp and wet, still I am looking forward to a booming honey season when it does commence. With best wishes I remain yours sincerely,

THOS. F. JORDAN.

Biggers, Texas.

My Dear Friend—You do not know what a pleasure it is to me to hear that you are going to start up our dear old Southland Queen. Now I will sure give you an ad. for it and send in my subscription with this letter. I will send the ad. in a few days. I was thinking of writing you to start up the Queen, as the other paper was dead. I will send you an article for it if I have time to write one. I am very busy now. We are having some fine rains here this winter. Prospects are fine for a honey crop here this year, as the horsemint is up fine. We had a failure in the corn crop last year, and it has worked a hardship on us all this winter, having to buy all our corn. How are the prospects for a crop down there this year. I hope that you will make a good crop. I hope that Mrs. A. will soon gain her usual health. This leaves us all well. Will wait with pleasure the coming of the Southland Queen.

Your friend,

FRANK L. ATEN.

Round Rock, Texas.

Well, Frank, here is the Queen, and your ad. is inserted. We will still look for that article. Prospects are good for a honey crop this year. Mrs. A. is able to be up now.

Have you given up the idea of starting the Southland Queen? I was very much in hopes you would start it again this year, as we are much in need of a good southern bee-paper.

W. M. BAILEY.

Well, Bro. Bailey, here is the Queen to answer for herself.

Dear Sir and Friend—Your card to hand and what you say regarding the starting of the Southland Queen noted. Replying to same will say I was much disappointed at you giving up the idea of starting the paper again. I suppose you thought I had not responded as promptly with my dollar and an article for the same as I might have done, and had not shown the interest in other ways I should, but if such were your thoughts you were mistaken, for I have written not less than twenty or twenty-five letters and postal cards to as many bee-keepers in the south asking their support in starting the Queen—to get their promise to write for the paper. As to what sucess I will have in securing subscribers is a thing none of us can tell in advance. I know times are hard and money very scarce, especially so with most bee-keepers in the south. But I believe better times are close at hand, but don't let anything I say influence you against your will. I am not selfish enough to want you or any one else to undertake the publication of a journal devoted to southern apiculture at a loss to themselves, but I am very anxious to have a journal devoted to our beloved pursuit, and will pledge myself to write at least once a month for a journal, and will at all times do all I can in the way of getting subscribers. Now, friend Atchley, decide as soon as you can what you will do in this matter and let me know, as I have written a good many of my friends that I would receive subscriptions at this office if they wished to send money direct

to me, so if I receive any I will know what disposition to make of it. Your best wisher and friend,

L. B. SMITH.

Rescue, Texas.

SWARMING MANIA.

WORK AMONG THE ATCHLEY APIARIES.

As promised, we will begin giving our management. As we are now (April 20) passing through one of the worst swarming manias that we have had for four years, we will try to tell how we are working to have as little loss as possible. When we open a hive that has cells started, we either make a brushed swarm and put the old queen off on a new stand with the major part of the bees, and give a frame of eggs and larva (not sealed brood) and empty frames or frames with foundation in them. In most cases this satisfies their desire to swarm for a time unless they have selected a new home. Do not leave the old queen on old stand, as this does not seem to give satisfaction, and many times swarms will rush out without even leaving a cell behind them. Now, as soon as all cells are sealed in parent hive and no larva left for the bees to start more cells, shake the bees off the combs and tear down all cells except one, and this seldom fails to stop after swarming. Do not fail to shake the bees off the combs, as it is next to an impossibility to get all the cells unless the bees are shaken off the combs. Another way is to place the old queen in a two or three frame

nucleus, and give sufficient bees, one frame of brood and two empty combs or foundation, and treat parent colony as before, and this plan leaves you with a big, rousing colony on the old stand to meet a honey flow with, and if you are careful to get all the cells except one you will seldom have a swarm from the parent colony. As soon as a virgin has hatched place a super on each colony and let them build combs if you desire combs built, as such colonies will build all worker comb, as a rule.

Tearing down cells to prevent swarming is a great loss and damage when bees are bent on swarming, as the queens almost stop laying, only in cell cups and drone combs, which practically means the loss of your honey-gathering force, as the old queens do but little laying in worker cells after queen cells are started, or at least this is the case when bees have a great desire to swarm, and the sooner you get your old queens away from old hives the more profitable will be the operation. Sometimes excessive swarming occurs where the queens are just about played out, and when you find it thus better save an extra cell and get a young queen in place of each old, worn out queen as soon as you can. You can take out and destroy your old queens three days before giving a cell, and you can calculate about the right time by noting when your cells are sealed in some of the colonies from which you have taken the old queens. If these instructions are heeded there will be but little swarming in any yard or with any kind of bees. Do not waste time trying to keep your old queens on old stands, as it will prove to be a failure, as a rule, and a great loss, too, after things have gone so far toward swarming as to have eggs in queen cells.

There is only one way to keep the old queens on the old stands and not have them swarm, and that is to take all the bees from her except a small force too weak to swarm, and leave no brood except a small amount of unsealed brood, and take the bees and brood off to an out-yard, as they will certainly return home if left near enough to do so. This is not as profitable as taking old queens away. Of course we can often prevent swarming by just staying with them and plucking cells off, but the loss of queens not laying is too great, and it would be better to take them away. We have been hoping and watching for a heavy honey flow to come to our rescue and stop swarming, but as yet (April 20) it has not arrived. So long as a light flow is on with an over-supply of pollen, just so long will swarming continue.

In my thirty-five years' work among the bees this is about the

tenth excessive swarming season I have experienced, and to my own profit the little experience gained has been great, as nothing demoralizes an apiary and destroys a honey crop quicker than a swarming mania. Giving plenty room and empty combs or foundation early in the season is a great preventative of excessive swarming if our queens are young and very prolific, but if the light flow of honey and heavy pollen-gathering continues for weeks and weeks then all colonies catch the fever, even the non-swarmers not excepted. Out of four or five hundred colonies that has had the swarming fever we only lost about 20 swarms, and these before we could get around to them, but we have felt the need of plenty empty worker combs and plenty ready-loaded supers.

Excessive swarming is brought about by an abundance of drone comb and drone brood as much as anything else. The presence of a large lot of sealed drone brood has a tendency to excite swarming almost as much as queen cells and sealed worker brood. Bees will take care of all the drone brood even if the worker brood suffers during a swarming mania. I am trying to root out all drone combs from brood chambers and use them for extracted honey in top supers after the honey flow begins or cut it all out and render it into wax. It is a fine time to get worker combs built right after all colonies have swarmed and have virgins or right young laying queens. Patches of drone comb in any comb can be removed with a knife, and the bees will soon build worker comb in their places. It can not be successfully done in colonies with old queens during the swarming period.

If your bees have swarmed too much, and their forces so reduced that you have no good forces for the harvest, you can throw the bees from colonies enough together, right at the beginning of a heavy honey flow, give them a virgin or young laying queen, and put on supers filled with empties, etc., and in spite of all the excessive swarming we can get some honey, and from these large prepared colonies I have taken 200 to 300 pounds of honey in twenty days, while if left scattered about no surplus to amount to anything is secured. Then, there is always bees and brood enough left with the laying queens where bees were secured for our honey colonies to enable them to build to good strong colonies in about a month, or as soon as the second brood hatches, and then if the second honey flow comes the scale can be turned and the now worn out colonies reduced by the first flow can take the brood and laying queens, and the force from the other colonies can be run as

before for honey, and after all the swarming fevers we can get a fair crop of honey, and all this management is less work than one might imagine, as one hand well up in apiary work can easily prepare fifty colonies in a day. It is best not to give these shook honey colonies but little brood, as bees to do their best at storing surplus honey ought not to have much brood to care for.

This plan is now being used in the Atchley apiaries, and out of 200 four story, ten frame hives we expect more honey than from 1000 colonies that run their own business during a heavy swarming period. Of course we mean to run these large shook colonies for bulk comb honey, on foundation or starters, as we can get considerable extracted honey out of weak colonies by taking it from outside combs in brood chambers, but for bulk comb honey they are next to a failure. If your bees have swarmed too much try this plan and let me know how it turned out.

E. J. ATCHLEY.

WHAT RACE OF BEES IS BEST FOR CERTAIN LOCALITIES.

LIVE OAK LEAVES FOR FUEL.

The case of large or small hives has been argued through the bee papers for years, and finally it was decided that locality was to blame for it all. Now I am fully convinced that locality has something to do with the kind of bees that should be kept for best results. There are three races that are good for South Texas, but all in all the Cyprians are a bit the best of the three—Cyprians, Holylands and Carniolans. I note that the Cyprians can be handled during a swarming mania better than either the Carniolans or Holylands and at the same time are just as prolific and equal to either as honey gatherers. It is quite true that Cyprian bees, as a rule, are bad to fight, but when properly handled they are easily managed. I find that the way to control vicious bees is to use dead live oak leaves in the smokers, and be cautious that you do not smoke the bees too much, as you can kill every bee in the hive in a short time with the smoke from live oak leaves. When they cease to make a noise better hold up and go right ahead with operations and get through before the bees recover sufficiently to fight. When honey is coming in freely and the weather is warm

Cyprian bees can be handled with very little smoke. The greatest objection to Cyprians is their vindictiveness, but as it only takes a little practice to overcome this trouble, I have decided to use Cyprians largely in out yards for honey. Another advantage Cyprians have is their hardiness. I have so far not found a single colony of these bees that had paralysis or any disease of any kind. They are so energetic and such good house cleaners that they do not allow disease to get hold on them. This fact alone makes them far ahead of Italians and other races for profit, as it is quite a drawback to the honey producer to arrange for a honey crop early and his colonies all keep reduced by paralysis until it is late in the season before they get started in the supers and far away into the honey flow before they are able to gather any surplus. Italians are so much given to paralysis that it is hard to get any early honey in this locality from them.

The following bee-keepers have visited this office since it has been moved to the mountains among the bees: Charley Bankston, Nathan Pharr, the two Smalls, the four Gills, Bill David, D. Johnson, C. P. Jones, Burney Stanley, Will Atchley, J. S. Goodwin and others. Mr. Small is agitating a convention, and says there is plenty good timber in close range.

It was our intention to issue thirty-two pages and a cover for a starter, but owing to the fact that some valuable communications got lost in the mails while in transit to the printer has compelled us to come out with twenty-eight pages. It is also due to this fact that the Queen is somewhat later than was anticipated.

The tendency toward specialism is on the increase, and only a few more years will elapse before practically all the honey produced for market will be by those who make a specialty of its production. Low prices and the growing prevalence of disease are the leading factors in bringing this about. Fewer bee-keepers will keep the bees of the future, and there will be more bees kept.—Exchange.

If you produce a good article of extracted honey you can get it candied so dry and hard that you could wrap it up like a bar of soap or anything of the kind, and carry it home without any danger of its melting or breaking; you get a good, ripe article of extracted honey, and when you think it is beginning to granulate then stir it up well and run it through the honey gate while it is in that condition; let it go as far as it will go so that it will run well, then run it into your packages, and it will be hard and white and dry.—J. A. Green, in American Bee Journal.

Advertisers' Editorial Page.

N. B.—A page under this heading will be open to our advertisers, and they will be allowed to make—free of charge—any announcement of special importance to their customers, such as change of prices, reference to regular ad, arrival of new goods, etc.

Below we call special attention to the advertisers who have favored us with their patronage for the first issue:

Frank L. Aten, Round Rock, Texas, handles the Higginsville supplies, and we commend him to those in need of anything in his line. He also sells nuclei and produces honey, being the first to ship a carload of his own producduction out of the state.

"The Swarthmore" places an ad. with us. For full particulars see article on queen rearing, by "Swarthmore," in this issue.

"Farm and Ranch," published at Dallas, Texas, is devoted to the interests of the farmer, ranchman, bee man and kindred pursuits. See advertisement.

L. B. Smith, of Rescue, Lampasas County, Texas, raises for market Italian queens from imported mothers.

"The New Century Queen Rearing Company," of Berclair, Goliad County, Texas, is composed of C. B. Bankston, Rev. J. W. Pharr, et al. They breed all the different races and strains, and as they know the business from A to Z we bespeak for them abundant success.

Udo Toepperwein, 438 W. Houston street, San Antonio, Texas, is well-known to the fraternity far and near, and handles bee-keepers' supplies and fixtures of every description. He also buys whole crops of first-class honey.

The Jennie Atchley Company, known throughout the land as the "Old Reliable," manufactures all kinds of bee-keepers' supplies, buy honey and beeswax and sell queens of all the different races. Address box 18, Beeville, Texas, and they will do the rest.

The White Manufacturing Company, of Blossom, Lamar County, Texas, is a well-known and reliable enterprise, and deserve a liberal share of public patronage. They manufacture and handle all kinds of supplies.

Last but not least, comes E. C. Goodwin, of Dinero, Live Oak County, Texas, with an ad. He produces four kinds of queens—Italians, Cyprians, Carniolans and the "Southland Queen." He sends out nothing but the pink of perfection.

CARNIOLAN HYBRIDS.

Carno Italians an Excellent Combination, but Cypro-Carniolans Undoubtedly a Better One.

FRANK BENTON, IN ROCKY MOUNTAIN BEE JOURNAL.

The request for a statement of my views concerning the crossing of Carniolans and Italian bees is one that I am pleased to comply with in so far as my experience goes, and since this has been more extended with certain other crosses in which the Carniolan element was used, I shall take the liberty of making some comparisons which will, I think, throw light on the subject. It is some seventeen years since I first began using Carniolan blood in crosing with other races, and during that time I have had a great variety of combinations — Carniolans mated to Italians, Italians mated to Carniolans, Cyprians mated to Carniolans, Carniolans mated to Cyprians, also combinations of Syrians and Carniolans, together with numerous cross-matings back and forth, giving varying proportions of the blood of each element. From these experiments I have drawn the conclusion that the costitution of a cross is derived largely from the male element, also the temper, while over the prolificness the female element has greater influence. This is not only so as to the actual capability in egg deposition, but likewise the disposition to push brood rearing.

Considering now the special cross mentioned, that of a Carniolan queen mated to an Italian drone, we would expect the workers to be less hardy and less gentle than the pure Carniolans, and probably no more hardy, or at least but little hardier or gentler than pure Italians. The queen, of course, would have the prolificness of the Carniolans, and the workers could not fail to be excellent honey gatherers, although their wing power would not greatly exceed that of the Italians, nor would the tongue reach be better, although on the average the tongue reach of Carniolans is slightly greater than that of Italians. They would be excellent comb workers and enter sections readily, producing whitely sealed combs, excelling in this respect most pure Italian strains.

Crossing in the other direction, that is, using a purely bred Italian queeen and mating her to a Carniolan drone, we might expect, under the principles which have been enumerated above, to secure first merely the prolificness of the Italians, and their disposition as regards brood development, in so far as the queen herself is concerned; but since the mating of a Carniolan drone would give us the hardiness of the Carniolans, their quiet wintering habit, their strong wing

power, and their ability to forage in raw spring weather without great loss of population, we would have with this cross a more rapid extension of the brood nest than would be the case with pure Italians, since the queen would really have a greater population to cover and care for her brood. The Carniolans being somewhat more prepotent than Italians the progeny would have the physical characteristics largely of Carniolans, with the yellow markings, however, of Italians, the general color being gray, the body robust, wings strong, and tongue-reach measurably that of the Carniolans. Among such bees the yellow queens are easily distinguishable, having themselves the quiet disposition of Italians.

My own experience with these two crosses is somewhat limited, but accords with what has just been stated. Both crosses are excellent, and I would prefer either to the pure Italian.

Should the question of temper and hardiness not be elements that would be considered particularly valuable to work toward, the first cross mentioned, the Carniolan queen with an Italian drone, would be, all in all, preferable. But if, on the other hand, hardiness, wing power and general robust character, combined with gentleness, are considered important, and prolificness is regarded as secondary, then the second cross, the Italian queen mated to the Carniolan drone, would be preferable.

Although not strictly within the scope of the inquiry, it seems very proper here to allude to quite a different cross, namely, the one produced by using a Cyprian mother and mating to a Carniolan drone. To my own mind it is clear, and on the statement which I have made above of my own experience as to the relative influence of the parents in these crosses, it is plain that the Italian adds little to the cross, that is, it does not bring up the average of the product above either of the parents. It is therefore advisable to seek as a substitute for the Italian some element that is more prepotent and possesses important characteristics desirable in the cross-bred bee. This, it seems to me, is to be found in the Cyprian race. The most important objection that has ever been brought against this race is the temper of the pure bred bees, but it is readily seen, if the statement concerning the derivation of the temper from the male element holds good in all races or as a general rule, that by using the Carniolan drone with the Cyprian queen the progeny will have largely the disposition of the Carniolans, and it is likewise true of them that the hardiness and strong flight of the Carniolans will be secured, while from the queen mother

the prolificness and strong breeding powers of the Cyprians are derived; nor could there be any possible loss of wing power from the female side, since in proportion to the size of the Cyprian worker's body its wings are well developed, and all three forms in the same hive fly with great force. The bodies of the cross-bred bees are more like the Cyprians than the Carniolans, since the Cyprian in this combination has greater prepotency, its marking, size, etc., being more permanently fixed by long in-and-in breeding and natural selection in its native home; this also has an influence over the wing power, which in proportion to the body, is somewhat like that of the Cyprians. Comb honey produced by bees of this cross presents a better appearance than that sealed by pure Cyprians, but may not on the average present as white cappings as that from the Italian-Carniolan crosses. Like the Carniolans, they winter well. The hardiness of these bees shown while flying out in the spring is an important factor in their building up, since the workers are able to get out after their loads of pollen and water, and return safely to their hive, so that brood rearing can go on quite rapidly, the population not being decimated as is the case particularly with pure Italians through these early spring flights. I, therefore, feel safe in concluding that in the elevated Rocky Mountain regions, where winds are high and prolonged, and much weather occurs in winter and late spring which tempts the bees out, the cross is preferable to the other two mentioned.

BEE-KEEPING IN CUBA.

It is improbable that many bee-keepers appreciate the difficulties under which bee-keepers of the Cuban mountains have to labor. Colonies of bees, supplies, the honey produced, and all incidentals have to be "packed" upon the backs of horses, mules or oxen, along the mountain trails, a great distance, to and from the apiaries. Think of having to "pack" 200 tons of honey in this way to the seashore, thence thirty or forty miles by boat to a shipping point. Do Americans recognize no competition in people who display such remarkable pluck and enterprise? Everything about Colonel Vieta's apiaries was of the most improved order; steam power for extracting, and an automatic system of conveying the combs from the apiaries to the extracting house, or room. One case, of two cans on each side—240 pounds — constitute a load for a horse or mule in transporting honey from the mountains. In moving colonies of bees five are taken at once—two on each side and one secured on top. Few we

think, would care to undertake such difficulties in order to succeed in bee-keeping; yet it is this sort of pluck and determination which wins as in any other business.—Exchange.

Two things are essential in rearing prolific queens, a strong colony and a large hive when she is about to begin laying. I also find that a prolific queen is injured by putting her in a hive too small for her capacity, or by confining her through a honey-flow. A prolific queen that has her brood-nest reduced to four or five combs through a honey season will seldom be the egg-layer that she was, and I am inclined to believe that where large hives are used and care is taken, when the young queens are about to lay, that they have a strong force of bees. In several generations the egg-laying capacity of queens can be increased, and on the other hand, if in small hives the tendency is to degenerate and lessen the capacity of a prolific strain of queens.—W. J. Stakeman, in A. B. J.

I was induced to use large hives by some circumstances which I will relate: I helped a man cut two bee trees seven years ago, where the bees had been occupying the trees for four years; one gave us 517 pounds and the other 73 lbs, and both had the space in the trees filled with honey. The same year I had a man (who was managing an out apiary for me while running a store) put up fifty boxes in trees to catch absconding swarms. Among them he put up several sugar barrels, some cracker boxes and some nail kegs. We noticed that the barrels and large boxes were first occupied. One colony in a barrel we left on the ground until the close of the season, and it gave us 300 pounds of fine honey. Eight years ago I had fifty-six swarms come out in one day, and although I had four assistants helping hive them, seven or eight swarms clustered together and resisted all efforts to separate them, so I had two ten-frame hives and two ten-frame supers made, and placed one above the other, leaving the two openings. Now this colony finished up 365 sections of honey after filling two hives, while none of the other colonies hived that day gave a single pound of surplus. If I put a half dozen hives on a colony I leave an opening for each hive, and I seldom have a swarm from colonies s treated.—Somnambulist in Progressive Bee Journal.

The Bee-Keepers' Record gives an instance of a strong hive, in which the queen was confined by excluding zinc to the brood-chamber. In the supers above laying workers were in possession.

Farm and Ranch Contest.

WINNERS IN THE CONTEST.

In the $250 contest for local agents, which closed January 1, 1903, the winners of the prizes were as follows:

D. M. Jordan, Oglesby, Texas, number of yearly subscriptions taken, 75, prize $50.

M. A. Brown, Stone Point, Texas, subscriptions, 61 3-4, prize, $30.

A. E. Edwards, Greenville, Texas, subscriptions, 31 1-2, prize $20.

Geo. B. Simmons, Ben Franklin, Tex., subscriptions 26, prize $10.

L. Childs, Fairfield, Texas, subscriptions 13, prize $10.

M. Lister, Cleburne, Texas, subscriptions 11, prize $10.

Hattie B. Christie, Hammond, La., subscriptions, 10 3-4, prize $5.

A. J. Reeder, Granger, Texas, subscriptions, 9, prize $10.

Farmersville Times, Farmersville, Texas, subscriptions 8, prize $5.

A. S. Davis, McGregor, Texas, subscriptions, 7 3-4, prize $5.

K. McGinnis, Terrell, Texas, subscriptions 7. prize $5.

Green W. Butler, Mexia, Texas, subscriptions, 6 1-2, prize $5.

Perry Clements, Forney, Texas, subscriptions 6 1-4, prize $5

Lulu M. Brewington, Rosebud, Tex., subscriptions 6, prize $5.

J. M. Fletcher, Atlanta, Texas, subscriptions $6, prize $5.

T. L. Haynes, Tioga, Texas, subscriptions 6, prize $5.

Sherman Democrat, Sherman, Tex., subscriptions 6, prize $5.

E. K. Rudolph, Van Alstyne, Texas, subscriptions 6, prize 5.

The remaining ten prizes of $5 each, amounting to $50, were divided among the following agents, each of whom secured five subscribers: E. G. Armstrong, Bartlett, Texas, $3.57; Minnie F. Armstrong, Gainesville, Texas, $3.57; T. D. Ball, Decatur, Texas, $3.57; H. A. Carpenter, Franklin, Texas, $3.57; Clarksville Times, Clarksville, Texas, $3.57; Thomas M. Danforth, Goliad, Texas, $3.57; A. F. Ernest Senior, Texas, $3 57; B. G. Haskell, Stockdale, Texas, $3.57; T. M. Harrison, Centerville, Texas, 3.57; A. J. Keith, Mabank, Texas, $3.57; C. A. Moore, Poolville, Texas, $3.75; Florence Sheasby, Elgin, Texas, $3.57; J. T. Triplett, May, Texas, $3.57; W. H. Webber, Lampasas, Texas, $3.57.

Im making the awards two six-months subscriptions or four three months subscriptions counted as one yearly subscription.

It will be noted from the list above that in many instances the commission and prize money received by the agent amounted to as much or more than the total sum sent him to Farm and Ranch.

Write for particulars of the new $250 contest, closing June 1, 1903.

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