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West Maitland, N.S.W.: E. Tipper, November 28, 1899

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The Australian Bee Bulletin
Vol. VIII No. 8
November 28, 1899

The Australian Bee Bulletin.

A JOURNAL DEVOTED TO BEEKEEPING

MAITLAND, N.S.W.—NOV. 28, 1899.

PUBLICATION RECEIVED.—The *Southern Cross*, very readable.

Next issue an article on brush foundation. Very interesting.

£1358 worth honey imported into Great Britain during the month of Aug.

Some talk of Doolittle cell cups being sold manufactured by the A. I. Root Co.

There is a duty of 20 cents a gallon on honey imported into the United States.

A case is recorded in the *American Bee Journal*, of a queen being fertilised after being caged 7 weeks.

—In case of a horse attacked by bees, as speedily as possible throw buckets of water over bees and horse.

An envelope and postal note received from Raymond Terrace. Nothing to intimate who the sender was.

Mr. H. L. Jones says he has found laying workers in sufficient numbers to lay over 20,000 eggs in 24 hours.

For sticking labels on tins, flour and water well blended and boiled, with perhaps a little alum to preserve, is as good as any.

Good heather honey according to the *Beekeepers' Record* will fetch 1s to 1s 2d per lb., and pressed heather honey 9d to 10d in bulk.

Possibly honey will be more scarce in N. S. Wales this year than last. From what information we can gather this seems to be the tendency. So hold out for prices.

There are bakers in the States who take 10 to 40 carloads of honey every year because there is no other sweet that will take its place—not even glucose, cheap as it is.

During 1894, 2,433,969 milograms (5,354,000 lbs.) honey were exported from Cuba, 4,300,000 lbs. of which were

shipped to the United States, mostly all in transit to European markets.

A writer in an English bee journal satirises the Dickel theory. Possibly he does not seem aware how he lessens the value of any argument he has brought forward when he states, "I have just concluded a season's work with the bees, and have had for months past, and have now eighteen to twenty hives without queens. Drones are there still and also laying workers by the dozen." We wonder if he holds a beekeepers certificate?

According to the *Cocoon* a good cocoon will have a continuous thread of silk 800 yards long. 250 cocoons weigh 1lb avoirdupois, and Victorian cocoons brought last season in Italy 30s 11½d per lb., the highest price obtained in the Turin market for 6 months previously. The value of the silk industry to China, is £18,000,000 per annum. The silk trade of France is estimated at £29,400,000 per annum. Germany consumes £6,800,000 of raw silk, the resulting goods being worth £14,500,000. America manufactures silk goods to the tune of £20,000,000 sterling. Silk culture needs a good stock of white mulberry trees—the Rose Leaf variety.

H. H.—Mr. Editor, Dear Sir,—Last year I had a good crop of honey and sold it all locally without any trouble. This year will be a poor one, and what is worse for me, several of my customers have taken to beekeeping. There is a doctor and a lawyer, and when anything is wrong with their hives they come and expect me to advise them. If my child is ill, and I take it to the doctor for advice he charges me 7/6. If I want legal advice the lawyer will charge me 6/8. I'll not give advice in future in bee matters unless I get paid too, as at the low prices now ruling there is not a living in beekeeping.

We acknowledge receipt of the New Edition of A B C of Bee Culture, by A. I. Root, revised by E. R. Root. It is beautifully got up, both in printing and binding. Of the immense circulation of

his work most beekeepers are aware, but the title page bears the item "67th Thousand." It is a compendium of pretty well everything connected with beekeeping, new and old inventions and ideas, discarded and practical everywhere-in-use ideas. In this edition everything is brought up to date. All kinds of hives and frames are described, and how to make them, queenbreeding, together with a vast amount of other information. The different supply dealers who advertise in our pages will no doubt be able to supply it to any of our readers.

N. B. K. A.

A meeting of Committee of above was held at Mr. Trahair's rooms, Newtown, on Wednesday evening, November 22nd. Present: Mr. Tipper, (vice-president) in the chair, Messrs. Roberts, Trahair, (Sec.), F. J. Ward, J. D. Cadden, and Branch.

Apologies for absence were received from Mr. Gale, (President), and Mr. Lord.

The Secretary explained owing to a clerical error, Mr. R. Pender had not been notified of this meeting. It was resolved a letter of apology be sent him.

The following communication was received from Wellington:—

Wellington, Oct 4, '99.

The Secretary National Beekeepers' Association.

Sir,—I am directed by the Wellington Progress Committee to forward you copy of resolution passed by that body, and to ask your association to give effect to it as it may deem most advisable.

I have the honour to be Sir,

Yours obediently,

JNO. COLLINS, Sec. W. P. C.

COPY OF RESOLUTION.

That the Secretary of the National Beekeepers Association be written to asking that steps be taken to prevent the spread of the disease known as "Foul Brood", and intimating that this committee would heartily join in urging Legislation for the purpose above referred to.

On the motion of Mr. Cadden, seconded by Mr. Branch, that the letter be received, and acknowledged, asking them

to communicate with us through the Wellington Beekeepers' Association.

The following communication was then read from Mr. Dick:—

Rylstone, Nov. 21, '99

The Secretary N. B. A.

Dear Sir,—I regret being unable to attend the meeting for to-morrow, business detaining me. I see one matter to be dealt with is a foul brood question from Wellington Association. I should be much interested in any discussion on that subject, as I am now fighting one of the worst attacks I ever had, it has run my apiary from 118 hives down to 45. Another subject I would ask you to discuss is the horrible treatment the steam companies deal out to bees handed over to them. For instance, I had shipped at Port Macquarie, 12 hives of the value of £12 (cost that to me), they were landed at Sydney and run into the shed at 3 a.m. on trucks and toppled off any way. I found them four on their side, three on end, two top side down, and the other two right way up. The contents were smashed to atoms, and I had to refuse them and informed the Company to that effect. I received a reply that they were at my risk and expense, the Company sold them, and I enclose the result. You will see they take good care to take freight on what was destroyed. May I ask the committee to pass a resolution of condemnation for such gross destruction, and forward it to the chairman of Directors. Apologising for my absence,

I remain, yours truly,
J. S. DICK.

The N. C. S. N. Co., 17th Nov. '99

Mr. J. S. Dick, Rylstone.

Dear Sir.—Replying to your favour of the 15th inst.,

The 12 boxes bees realised £1/12/6

Less freight 12/-,

Advertising 3/-, 15/0.

Leaving a balance of 17/6., at your disposal.

You are entirely wrong as to the Company's care of perishable and other cargo, and we are quite satisfied that our officers and men handle their cargo better than other steam companies do. Your statement re A. V. Drew is also incorrect.

Yours truly,
Albert Allen, Assistant Sec.

Mr. Trahair moved, and Mr. F. J. Ward seconded, That a letter be written to the North Coast Steam Navigation Company, stating that this Association having heard complaints re handling of live bees, shipped by your company, we would like to know if you could make

any suggestions re method of shipping such cargo.

Mr. Trahair read a circular prepared, also an offer from Mr. Tipper for printing and publishing same for £2.

On the motion of Mr. Roberts it was carried that they be issued.

H. R. B. K. A.

A meeting of above was held in Technological Museum, on Thursday evening Nov. 23rd, at 7.45 p.m.

Present:—Messrs M. Scobie (in the chair), W. S. Pender, R. L. Pender, Geo. Pender, Cox, Watt, Lathleen, Payne, Stevens, Reid, Vollmer, and the Hon. Sec. (Mr. R. Turton.) Apologies received from Messrs Garnham, J. W. Pender, and Munday.

Minutes of previous meeting were read and confirmed.

Mr. E. J. Tierney was unanimously elected a member of the association.

Correspondence:—A letter was read from Mr. E. Tipper, editor of the *Australian Bee Bulletin* stating that he had some books belonging to the Association and that he would forward them on to Secretary; also asking why the A. B. B. office was not informed when meetings were to be held so that they could be duly reported.

Mr. R. L. Pender said the reason was that the circulars were printed by Mr. Tipper, and that was considered sufficient notice.

Letter received from Secretary of H. R. A. & H. Association, stating that his committee would be pleased to meet the deputation from the Beekeepers' Association on Monday, Nov. 27th at 3.30 p.m.

The principal business of the evening was then proceeded with, the reading of correspondence in reply to a circular sent out by the B. K. A., asking beekeepers if they were in favour of clubbing together and sending honey to England in charge of a responsible person, for sale, and how much would they guarantee to send.

Some 20 replies were received, all of which were in favour of the proposal, but very few had honey in any quantity. Seven had none at all, and several would not have any till next year.

Mr G. Pender said the replies were very gratifying, showing that the beekeepers were enthusiastic over the proposal, but unfortunately there was only two or three tons available, judging by the replies. He had received a telegram a few weeks ago to send a ton to Tamworth, he thought to feed an apiary on. There was no honey in Muswellbrook, Glen Innes or Dungog, and no sign of any. Melbourne speculators had bought a lot of honey in Sydney markets. There was no honey in Melbourne at present. After several members had spoken of the scarcity and low price of honey, Mr. G. Pender moved and Mr. N. Watt seconded that the matter stand over till the Convention to be held in Maitland at Show time. Carried.

The next business was the reading of a paper on "Queen Rearing," by Mr. Munday, but a telegram was received from that gentleman stating his inability to attend through illness.

Mr. W. S. Pender placed a microscope on the table and shewed several mounts. The first was a bee louse (*braula caeca*) found on queen bees arriving from Italy. They do not trouble the bees in the hive only when confined. They are very quick in their movements, springing on to the thorax, queen very restless while they are on her, and has great difficulty in dislodging them. Has a comb on the foot composed of 25 or 30 teeth at right angles to foot. Mounts of both male and female were shown, also one foot.

Mr. M. Scobie said Cheshire described those insects very minutely, great difference in class and peculiarly constructed. They were no trouble in Australia or Italy. He had seen one before.

Mr. W. Pender said two years ago the Bee Mite made its appearance in an apiary at Lismore. It covered the bees like dust. Very like ordinary louse

only smaller. The Bee Mite is mentioned by Professor Cook in his book.

The next mount shown was the sting of a bee with the barbs pointing upward.

Mr. M. Scobie showed three photos of his apiary as it appeared after the gale on the 8th November. To say the least "it was badly bent." Hives, bees, frames of comb, supers, smokers, &c., lying everywhere, some on their side, some on end, one hive lifted five yards in the air and landed in a clump of bushes.

Mr. Turton said he had a queen that laid two and three eggs in a cell.

Mr. W. Pender said it was quite common with a young queen. She was over stimulated by the bees, and not having sufficient bees to cover combs sometimes laid seven or eight eggs in a cell.

During the evening some samples of South Australian honey were handed round and tasted. One of the samples was very thin and watery, and had a strong smell like brandy; the other was very fair quality. The samples were brought by Mr. Harden, and came from Mr. Meineke's apiary, Kapunda, South Australia.

There being no other business the meeting closed.

G. E., Thornleigh—Being a subscriber to your valuable paper, and a new beginner with bees, would you answer the following questions: 1. What appearance foul brood has in the combs, and how can I detect it when it appears? 2. In one of my hives there is no brood, though a week or so ago there were some and on the combs were some five or six queen cells, not on the brood nest, but amongst the honey frames. What sign is that? I am led to think the bees won't work without a queen, but mine seem to work well, still have no brood. 3. What is the best thing to feed with to encourage brood rearing, and the best way to do it? You will greatly assist me if you can let me know through your

valuable paper how to mitigate these evils and assist my bees to build up.

1. Foul brood is known by a number of sunken cells, either capped over or broken in the centre. Take a pin, and if foul brood is in the cell it will draw out in aropy manner, is coffee coloured, and the smell is like bad glue.

2. The hive is queenless. It is possible they are trying to raise queens from the last eggs laid, on the outside of the circle of last brood and eggs. They will work away gathering honey, if such is about, till they all die. The best way is to get a new queen, and give with her a frame of brood, large enough only that the number of bees left can keep warm.

3. Artificial pollen, made of pease meal is said to be very good. Our idea is sugar syrup, half water, half sugar, poured into an empty frame, is one of the best stimulants you can give.

QUEEN RAISING.

To raise good queens the first essential is a strong force of nurse bees. They only supply the royal jelly with which the larvae to produce queens is fed. Larvae not more than a day old should be chosen. Larvae older than that are liable to have started on the way to become workers, and so cannot make good queens. To raise queen cells choose a strong colony with plenty of sealed brood. Add to its strength a frame or two of uncapping brood. Take away queen. In a couple of days remove all unsealed brood, and destroy any queen cells started. In a few hours after or next day go to the hive of your choice queen, and cut out larvae of the right age, eggs just turning into larvae; cut into strips. Fasten these strips by dipping in hot wax on lower side of strip of wood in centre of a frame. Have cell openings downwards. Destroy each alternate larvae with a bit of stick or match. This is done to prevent the ultimate queen cells not being too close together, or difficult to cut out without destroying some. Some queen raisers, when they remove queen from prepared hive, place a frame of worker comb in the centre of their choice queen's brood chamber, which the queen starts at once to lay in, and when the larvae have come

to the proper stage place in the prepared hive, leaving the bees to do the rest. Many of our oldest and best queen raisers still adopt this plan. The only objection is the cells are apt to be in clusters, and separating them causes some to be destroyed. Another plan is, make artificial queen cells by dipping a suitable sized piece of wood several times in melted wax, then get royal jelly and place at bottom of same. The royal jelly can be obtained from any queen cell. Then transfer proper aged larvae from breeding queen to these prepared cells. Do it quickly or the royal jelly is apt to dry up. Mr. H. L. Jones uses drone comb in place of artificial made cells for the same purpose. Some queen raisers instead of placing prepared cells on the strips, fix them on the combs. On the ninth or tenth day form nuclei by giving a couple of frames with brood and young bees, and a follower, giving a queen cell to each nuclei. Better give them in a protector. Close the entrance of nuclei for a day or so, so when they go out they will be sure to mark their new location. Before the young queen goes out for her flight, give a frame of young larvae or the chances are all the bees will go out with her, and perhaps not return.

THE PAST SEASON.

In 1896 there was with us no winter flow. It was a cold, rough winter. Our first extracting was on Oct. 28th. In 97 we commenced extracting on August 2nd. In the winter following, in July, both yellow and white boxes were in bloom and continued so till end of November. The fall flow from white gum and minor plants was not much, but we left it on. This year after an unusually cold winter, we had a moist spring, so our bees gathered a little honey from spring flowers. These have been all off since early in September. With the stores left on from the fall, and this slight spring flow, they bred up well. There was, however, not much

prospect for this year. Only the yellow boxes in the flats are in bud. Those on the foot-hills and the white boxes on the ridges are not out this year, though promising well for the next.

Cold weather following kept back the box buds from blooming. Such a long spell without bloom is playing havoc with the bees around. One box hive apiary of 15, three miles away, were all dead out a month ago. In another case of five hives in frames, the owner was delighted to see three swarms coming out, but his countenance fell when he found they were only deserting a starved-out home, not a drop of honey or healthy brood being left behind. We visited the owner of an apiary of 14 hives, eight frames with half supers. Two weeks before he had taken four cwt. of honey from them, left over from last year. A week after several of them swarmed out. We asked him if he had looked at the brood chamber. He is rather a nervous beekeeper and told us, "No! He never looked at that." We "hae our doobts" about the value of them brood chambers now. A strong, cold southerly wind has been blowing for several days. Our prayer is that it will cease soon, that the bees can hold out till it stops and the buds open. To go feeding nearly 200 hives is expensive.

A big frost on October 2nd. It killed all fruit buds, giving a great disappointment to orchardists. It chilled the young brood in the hives and stopped the queens from laying. We presumed the bees neglected the larvae to cluster for warmth for themselves. Three weeks after, any hive would have only dead brood, a few eggs, no honey. And, becoming discontented with such conditions, quite a number left their homes. Having queens all clipped, we had no trouble in catching them. We found the best way was to cut out all dead brood and give a little healthy larvae obtainable from such hives as could spare such. In many cases where the swarm was strong the bees themselves cleaned out much of the dead brood

In going round examining we took a bottle containing phenol and water and sprinkled the bottom boards as a precaution against worse disease getting a hold. Here a big query comes in, "*Would this dead brood, if left, develop into foul brood?*" We have found a swarm issuing is not always a healthy sign in an apiary. Through the late frost also the trees are kept back from yielding their nectar, and as we stray around the hives of an evening we sniff in vain for that overpowering perfume of new honey, and the roar of the bees as they ripen it at night after the gathering in the field by day. No parrots are flying round in flocks. Still we hope on.

Since writing the above a moderate flow from thistle has set in, breeding has again commenced, and what dead brood we left in strong hives is being cleared out.

HUSKS AND CHAFF.

G. R. HARRISON.

That proposal of Mr. Taverner's that the various Australian Governments unite to build a London depot, and a set of exchanges is in the right line. The Board of Exports here is willing, nay, anxious to help beekeepers, as they have helped poultry and egg raisers, and rabbit and hare shooters to a market, but they took expert advice, and the expert was probabty an expert of academies, and not practical beekeepers' practical requirements. We have only to show them what we really want and how they can help us, and it will be done.

The English people want our honey, and we sometimes have it and want the things they have to exchange for it, and the shipping companies are ready to carry it, and carry the exchange goods back; all we want is somebody to be responsible for it, and to see that it gets safely and in good condition to the man who wants it.

What the *Bee Bulletin* has said, and will probably find it necessary to say again, is, that there is some very poor honey produced on the coast. I'm a coastal man myself, and have produced a little honey, both good and bad, and I know that the very highest class honey is only produced occasionally, in very good years, but the people learn to use the strong, sometimes even coarse honies, and to like them, but that's a modification of the individual and not the honey.

If 8/- per dozen is all that is to be got for sections on the London market, I should not be

extra anxious to lay down much plant to produce comb for export.

It has taken a long time for the comb honey business to get a footing in Australia, but if the American and English folk can be got to use honey in the comb form, I'm sure the well-to-do of our big cities can be beguiled into so sweet a habit. We will have to learn to care for it, and cure it properly; "Dryness and warmth," as you said last month, and plenty of both, is what is needed to cure comb honey.

If the Northern beekeepers send, as they talk of doing, a decent shipment of honey in charge of a really capable man, to test the British market, they will lose very little, and probably gain very largely.

I know of no practical cure for bee stings, "Grin and bear it, or if you don't like to do that, bear it and don't grin; The breath of a good direct blast smoker, turned on at short range, is very comforting if you get an extra hard poke, it also covers the smell and prevents irritating the other bees. The practical beekeeper has not time to be hunting round for stinging cures while in the middle of a job.

The best uncapping knife I ever saw was a "brickys'" trowel, which had laid a few hundred thousand bricks, and then been ground up with a bevil underneath, it was the tool used by Mr. M. Scobie, of Oakhampton. It was a ringer. I don't see what a 12 inch knife is wanted for to work on a comb surface $8\frac{1}{2}$ inches wide, it would be like an old Roman sword. The hot water may be very nice to dip the knife into, but I never found it necessary.

The old Root simplicity frame, when wired a la Root, had a folded tin bar, vertically down the centre, and many who made frames of same dimensions, used to nail in a wooden centre bar, which stiffened it but took a lot of room. Dr. Miller's strips are very good, but I think a horizontal bar about three eighths square, set to one side to allow full depth cells at other side, would be about the best thing for the L size of frame.

With a decent price for beeswax, we can't afford to waste wax to line casks with it. It is not the best thing for the purpose, its melting point is too high, the right thing for the purpose is the mineral wax, or paraffine wax, a heat which only softens beeswax, renders that perfectly liquid, and it soaks well into wood, while beeswax only lies on the surface. Costs less per lb. and goes twice as far, and is much less labor to apply.

Loyalstone's bee range must be a rattling good one, yellow box out all the year!!! why I should expect to make beekeeping pay with box hives. I wondered what was the secret of the success of the hive we Hunter river men had "wrestled" with and been thrown by, yielding so well, its a continuous honey shower. If Loyalstone tries to work the Heddon hive by long idea methods, he will find it inferior to the Long Idea for the purpose, but its all there for

got in good
a turkish bath.

Quite right Mr. Chambers! it is the bee-keeper who produces the honey, just the same as it is the farmer who produces the wheat. Also the cheaper an article the greater demand will arise for it, that's correct economics.

Tell "Smoker" that though his fields are full of clover, and his forests of box, and his bees the same breed and appliances, the same build as those used on the interior table lands, there are still many factors which go to producing quality of honey.

All coastal honey is not bad, all inland honey is not good, but generally the very best inland honey is better than the very best coastal, and there is a larger percentage of coastal honey which is not the very best. This had to be demonstrated to me, for I am a coastal man with coastal interests, and I didn't want to be convinced—but I was though, the convincing argument was the *very best* inland honey, and though I have produced some very good honey, and had seen much very good honey produced at sea level, or thereabouts, below the range, it was not nearly so good as much I saw from the interior.

been held, and with the idea. On making inquiries round the town, he found that there were canary, pigeon, and various other fanciers, and if they could form a society including all of them it ought to be a very good one. They might be able to get the Horticultural Society to fall in with them, as a good many of its members would be only too happy to do so. By amalgamating the lot, their success would be more certain, because it would be the means of keeping down expense. The membership fee would only need to be about 5s per year. Possibly, after the club was properly formed, they might be able to hold an exhibition of their own. He did not see why that could not be done, as it was done successfully in other places, and there was plenty of energy and other requirements here for doing so. This season, of course, they would not be able to do much; but they would be able to raise funds, and, in the setting up of this club, it would



be a good idea to give prizes at our local show at the first opportunity for local exhibits, and so on until they were on a sound footing.

After discussion in which Messrs. Budden, Weidmann, and Paul took part, Mr. Paul moved, "That this meeting form itself into a club, to be called 'The Muswellbrook Poultry, Pigeon, Canary and Dog Society,' and that we invite the Beekeepers' Association to co-operate with us."

Mr. Weidmann seconded the motion *pro forma*.

Mr. Dolahunty moved, as an amendment, "That the gentlemen present who are not already members of the Beekeepers' Association be asked to join in with them for the purpose of forming the society as named in the advertisement."

Mr. Budden seconded.

The amendment and motion were then put to the meeting, and the former was carried.

Mr. Roberts moved, "That Messrs.

Budden, Pellatt, Baker, Flanders, R. McNeill and the mover, be appointed a sub-committee to draw up a code of rules, to be submitted to a general meeting of members on Saturday night next, the 18th November."

Seconded by Mr. Dolahunty and carried.

PRICES OF HONEY.

Chicago, July 19.—Comb honey: Amber grades, 10 to 11 cents, and dark 7 to 8 cents, Extracted, white, 7 to 7½ cents. Amber 6 to 7 cents. Beeswax, 26 to 27 cents, on arrival.

Kansas City, July 7. New comb honey on the market is selling at 14 to 15c. Good demand.

New York, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices; Fancy, 7 to 7½c; choice, 6 to 6½c, fair, 5½ to 6c; common, 57 to 60c per gallon. Some demand for comb honey at from 11 to 12c for white, and 9 to 10c for amber. No more demand for dark. Beeswax dull at from 25 to 27c per pound, according to quality.

San Francisco, July 12.—White comb, 10 to 10½c; amber, 7½ to 9c. Extracted, white, 7½ to 7¾c; light amber, 6½ to 7c. Beeswax, 26½ to 27c.

The same journal says:—"good beeswax will realise from 1/3 to 1/6 per lb."

THE DICKEL THEORY V. THE DZIERZON NON SPERM THEORY.

C. THIELMANN, IN *A. B. J.*

At a bee-convention held in September, 1898, at Salzburg, Austria, Prof. Dickel brought out indisputable facts against the fallacy of the non-sperm theory. He gave the bee-keepers a very simple formula by which they could convince themselves of the correctness of his experiments. For nearly 50 years the Dzierzon theory, based on his observation, and supported by Prof. Stebold's microscopical experiments, was, that the queen has the faculty of laying impregnated and unimpregnated eggs at will. From the first-named, queens and workers develop, and from the latter, drones; and whoever said or wrote anything to the contrary were laughed at, or past unnoticed. Nevertheless, I have been convinced of the fallacy ever since July, 1883, when accidentally a colony of my bees gave me a glimpse into their secret laboratory, which is described on page 594 of the *American Bee Journal* for 1883. Probably not many of the present readers are in possession of it, therefore I will herewith give, in substance, the occurrence:

About the middle of July, 1883, I hived a swarm of full-blooded Cyprian bees on frames with starters; it was a big swarm. The queen was one year old, and one of the most prolific and regular layers I had in my apiary. I hived them about 10 a.m., and they went to work immediately in their new home. The next morning, on examination, I found the colony rather smaller than I wished to have them for comb honey production, as many bees went back to the parent hive.

Pretty soon a second swarm came out, which I decided to unite with the Cyprians. Knowing from previous sad experience of their sensitive and fighting character, I prepared some peppermint and sprayed them and the second swarm which I had been shaking before the entrance, while in the meantime I shook the Cyprians from the frames on top of

the swarm, and let them run into the hive together; but the fighting began before they were all in, so I repeated the spraying and shaking of the frames, but the killing was still kept going. By this time other swarms came out to be attended to; I gave them another good pepperminting and closed the hive. I was kept busy at swarming and other things until dark.

The next morning I looked at my Cyprians, and found not a live bee in the hive. On examination I found on two frames new pieces of all-worker comb built about as big as my hand, one of which was filled with an egg in every cell regularly, as far as the cells were deep enough. Some of them had eggs when the cell was hardly 1/8-inch deep. There was not a drone-cell in the two pieces of comb.

After this close examination another swarm came out, which I put into this hive, and they went to work vigorously. About a week after I examined them, and found the frames filled with all drone-combs except the two pieces above described. The one which had the eggs now had all capped brood, and scattered among it were about 25 drone pupæ in enlarged worker-cells, and three queen-cells, and about 300 worker pupæ. There was not an empty cell in the whole batch, as far as it contained eggs on both sides. There was no other brood or eggs in the hive. This last swarm undoubtedly lost its queen while swarming, and to save their existence they had produced queens, drones and workers from all worker-eggs, and no one can convince me otherwise since I made this experiment. It is evidence that the workers or nurse-bees can at their selection, produce either sex at will by different food.

I am pleased that Prof. Dickel has found a way to get at the true facts without having to depend upon uncertain, fickle unreliable analysis.

The formula of Prof. Dickel is this:—Take the eggs from a drone-comb laid by a normal queen, and introduce them

into worker-comb in a colony that has been queenless long enough to have become somewhat apathetic. The bees will not accept transferred eggs, but tear them out. The development of these eggs will show that workers and queens may be produced from drone-eggs.

Another:—Remove from a drone-comb all larvæ and replace with just-hatched larvæ from a worker-comb, and give the one thus prepared to a colony under the same condition as before. You will then see queens and drones reared from the impregnated or worker-eggs even after they had hatched out.

Now I hope that many of our advanced beekeepers and queen-breeders will try the experiments and report results.

In addition to the foregoing I recommend the formula I have under my treatment at present, which needs no artificial manipulation, and which almost any beekeeper can try. It is as follows:—

Hive a swarm with a good laying queen on starters of foundation, in a good honey-flow. Let them build comb three or four days, then take out a frame of all worker-cells, stocked with 300 to 500 eggs, and give it to another just issued with a clipped queen. Cage the queen and lay her at the entrance of the new hive with the frame of eggs, and the rest filled with empty frames placed where the old hive stood, and where the swarm came from. The bees will come back to their queen and cluster about her. Let her be caged until sundown, then take her away and drive the bees into the hive; they will find the eggs before the next morning, and will stay and make use of the eggs as their instinct directs them, to save their existence, and in due time you will find queen drone and worker pupæ in the comb that was all worker-cells stocked with eggs of a fertile queen when given to the queenless swarm. Try this and convince yourselves of the long-disputed non-sperm theory in drone-eggs.

HUNTING BEES IN TREES

DURING A HONEY FLOW.

The following methods are given in the *A. Bee Journal*:— Go where you have reason to think the bees are, and find them at work on water. When they leave the water they won't circle, but go straight to the tree. Generally they get water at the nearest point, so if you are a mile from tame bees you may rest assured they are wild. If you don't get the line the first time, wait and the bees will come back to the same place as soon as they can unload.

I have traced bees three miles, and have found them in trees. First, take a box about the size of a cigar-box (a cigar-box will do); cut a hole in the bottom about an inch square, then place two wires through the box about half way between the bottom and the top, and place the bait on the wire. Then take a glass for a lid, and put it on top of the box. Take the box, and when you see a bee on the blossom, place the hole in the box right over it, then it will go into the box, thinking it can go right up through. When you have about a dozen in the box take it out in an open field, set it down quietly about four feet above the ground; watch through the glass lid till they begin to work on the bait in the box, then lift the glass lid, which will leave them ready for their home. Lie right down below the box, so that when the bee starts you can see her circle three or four times. Then she will make a straight line for her home. The bait is some fresh honey, with about half fresh water with it; make it about half water, so it will be nice and thin, almost like water. To about half a pint of bait add about three drops of golden tincture or ether, and I will guarantee any bee to work on this bait in any time of the year. An empty comb is best to put the bait on.—S. Varnes.

First, take some strips of lumber $1\frac{1}{2}$ inches wide, about $\frac{5}{16}$ thick, and make three boxes $2\frac{1}{2}$ inches wide, $3\frac{1}{2}$ long, nail a bottom on one. This will be the

comb-box. Before nailing the other two together cut two grooves on the inside of each side-piece of the box, one groove near the top, and one near the bottom; then cut a piece of glass that will just fit into the top groove, when you nail the box together. When nailed, fit a thin wood slide in the bottom groove—these are the catching-boxes. In the comb-box fit a piece of black broad-comb—the old black comb is the best, as it won't soften in the heat of the sun. Take some good granulated sugar and water, equal parts, mix well together, and fill the piece of comb in the comb-box. Get a very small vial of oil of anise, and now you are all ready to start. Go where the bees are working on the flowers, set the comb box on a stump or stake—on anything that will be seen by the bees when they "come back." Don't set it too near the flowers (at this time of year). Then take one of the catching-boxes, draw the slide nearly out, take it in the right hand with glass side up; when you come up to a flower with a bee on it, put the left hand under the flower, bringing the box down over the bee, and the left hand up under at the same time; the bee seeing the light through the glass will fly up against it at once, when you push in the slide, and you have the bee. Go to the comb-box, put the catching-box on top with the slide side down, then draw the slide, put your hand over the glass to darken it inside, and the bee nine times out of ten will at once begin to fill. You can look in the glass and see if she is loading up alright. If so, raise the catching-box gently, and take it off; then sit down and watch the bee go; also note the time so as to estimate the distance they are from you. Be sure to put a little oil of anise on the outside of the comb-box, so that when a bee comes back she can smell it. She will be sure to go into the box when she comes back, as the smell attracts the attention more than the flowers. After a bee has been a few times she will go straight off the box without whirling at all. Then if she is

gone so long that you wish to "carry them" and set off again, you will now need your second catching-box. As the bees come back and alight on the comb you must catch them at once, by putting the catching-box over the comb-box. As they fly off to the glass, push in the slide, and you have them. Then take the other catching-box and do the same, and then put the two catching-box slides together, open both slides, and the bees will go into the top one; take the empty one to catch some more off the comb. When you have enough bees, you "go on the line," nearly as far as you think the time they are gone will take them, allowing 15 minutes for a mile the first time a bee goes, then set off again, and so on until you find them.

OH DEAR!

The Daily Free Press, London, has the following:—Honey is enjoying a renewed flavour. Men of wealth and leisure are testing and experimenting with the different kinds of honey, and wrinkling their brows over the problem of producing what seems to them the most desirable flavour during the coming summer. For the bee is no longer allowed to pursue his own sweet peregrinations and sip of the nectar of flowers wherever he chooses. Honey made in this promiscuous way is much too ordinary. His actions are restricted and guided. As a result, such honey as never was tasted before is tickling the palates of many. If it is the white sweet clover flavor that has gained favor with the epicure, he goes systematically to work to produce it; and plants a large plot of ground, perhaps half an acre, with this particular kind of clover. He has it carefully kept from weeds, or any other variety of clover that might endeavor to find a footing there. The whole bed is enclosed and roofed with a fine wire netting, and the beehives are then placed within the inclosure. From the bee's life, therefore, the spice of variety is plucked, and try as he will he can produce none other

than white sweet clover honey. In flavor it is very delicate and almost white in colour. Yellow sweet clover honey is preferred by others. The flavor is slightly stronger than that made from the white variety, and its colour is a deep yellow. Then there is the honey that is made from thistles and milkweeds; it is amusing to hear producers of such flavours tell of their tribulations in making these wayward plants grow within their restriction. Some of the wild flower honey is almost black in colour, and the flavour is certainly very different from what it was in the days when honey was honey and that fact settled the question. It is almost verging on the indiscreet to mention buckwheat honey nowadays, although it is still acknowledged to have wonderful "staying properties."

A USEFUL HIVE-TENT AND COMB-RACK.

E. FRANCE, IN A. B. J.

The hive-tent is 10 feet square, 7 feet high, with covering made of cheese-cloth. The top is made separate from the sides, and the sides and top are fastened together with snaps and rings, leaving an open space of two inches all around the top to let out bees that leave the hives that we are at work with. The sides come down tight to the ground.

To get in and out of the tent, raise one side high enough to go under by stooping, then drop the side down again.

We use the tent in the spring-time to clip queens, when fruit trees and dandelions are in blossom, or at any time when the bees will rob, when there is no honey coming in.

To make the frame: The corner posts are made by ripping a 2x4 pine; dress the pieces smooth, then dress off the corners, leaving them 8 square, except 6 inches at the top and a foot at the bottom, which leave square. Bore a half-inch hole in the centre of the top of the post down 6 inches, and put a staple near the top to tie the brace-ropes; put another staple near the bottom for the same pur-

pose—to hold the brace-ropes. We use a $\frac{3}{8}$ -inch rope. Now we want five pieces of good pine, 2 inches wide and $\frac{7}{8}$ thick, to go around the top—one of them across the middle to hold up the center of the cover. Bore a half-inch hole through all of the pieces $1\frac{1}{2}$ inches from the ends; get six $\frac{3}{4}$ -inch bolts 6 inches long. Lay the 2-inch strips on top of the posts, and drop in through the strips and down into the posts at each corner, one of the bolts. For the centre strip we have a half-inch hole in the middle of two of the side-strips, with a bolt in each end.

We must fasten the tent to the ground. Get four pieces of $\frac{3}{8}$ -inch round iron 22 inches long; bend one end at right angles 4 inches, and sharpen the other end. Now we want two staples for each post—one about two inches up from the bottom, the other one above it about 6 inches. Leave the staples out far enough to drop in one of the stake-pins, then put your foot on the top of the pin and push it into the ground. Those pins are all that we want to hold the tent, with those brace-ropes inside. Put on the cover and it is ready for work.

To move the tent, one man at each corner, pull up the pins, take hold of the post and lift it up and walk off with it to where it is wanted; set it down, put one foot on the pin, push it into the ground, and we are ready for work.

Mr H L Jones, says:—I cannot imagine how you progressive Yankees, with your love for labour-saving methods and short cuts, still prefer the dipped cells to the *more rapid* and just as effective drone-cell method. I find from long and careful observation that, on an average, the queen begins to lay when about ten days old, and I have never known a queen to lay under nine days.—*Gleanings*.

PHASES OF THE MOON.

DECEMBER.

New Moon, 3rd, 10.48 p.m.	Perigee, 7th 10 p.m.
First Quarter, 10th, 7.3 p.m.	
Full Moon, 17th, 11.31 p.m.	Apogee, 23rd 9 a.m.
Last Quarter, 25th, 1.57 p.m.	

CAPPINGS.

From American and other Bee Journals.

Honey in San Francisco last year was three cents a pound. This year, it is seven cents.

Getting bees out of supers, may be accelerated by placing honey on the escape board, so a writer in the *American Beekeeper* says.

Dr. Miller says in *Gleanings*;—I don't know of any way in which a bee-keeper can get more comfort out of ten cents than to spend it for a pound of saltpetre, put that in two or three quarts of water, wring rags out of it, dry them, and cut them up into pieces of 20 to 50 square inches, to be tied up into little rolls to start his smoker.

Henry Alley says: "Remove the queen from a hive, and the bees will in no case start a cell cup around an egg, but always select a larva two or more days old." The only exception I have known is when eggs only are present. I formerly thought they would wait in that case till the eggs hatched out, but this summer I saw at least one case in which a cup was plainly formed about an egg, nothing but eggs being present.—*Gleanings*.

The *Canadian Bee Journal* corrects a statement by Mr. Stephenson of the N.S.W. Export Board. Mr. Stephenson states:—"In Canada bee farmers were prepared to receive £16 per ton spot cash at the apiary for their honey," The *Canadian Bee Journal* says;—As in Australia they have English coin, we expect they have English tons, 2,240 lbs, this would make the honey less than 3½c. per lb. or even at 2,000 lbs. very little over 3½c. per lb. Such a statement is quite misleading, 6 cts per lb. is more like it.

The tendency amongst advanced apiarists is to supersede towards the end of the honey harvest, this plan giving the opportunity of testing the capabilities of the queen after introduction and also a chance of ensuring that the colony is going into winter quarters headed by a

young queen, and thus laying the foundation for a successful harvest the following year.—*Beekeepers' Record*.

REMOVING COMB HONEY.—A good plan is to lay a regular bee-escape board crosswise on top of an empty super or box on the ground, which leaves an open space at each side of the escape-board. Then pile on the supers of honey from several hives, and on top of all invert another bee-escape board. We have done this towards evening, and by the next afternoon all the bees were gone back to their hives, and the honey was removed just as you would take bricks out of a waggon-box. By using two escape-boards the bees can go both ways out below and out at the top of the pile of supers. It works splendidly, and by this method only a few escape-boards are needed in an apiary of quite a good size. *A. B. Journal*.

What strange things appear in some periodicals. The following is cut out of *Answers*:—"Will you buy a honey sponge?" By utilising a rather original idea a bee-keeper in the Midlands has procured more than double the quantity of honey from his bees during the last two seasons. Having come to the conclusion that his bees seemed to spend more time in making their combs than in procuring honey, he at first did away with the natural comb by giving them one made in the usual manner of wax. But this seemed to have a detrimental effect on the bees, many dying. It was then that he struck out on an original line. He procured some very large West

PROLIFIC QUEENS.

NO FOUL BROOD IN QUEENSLAND.

WE can supply Italian Queens, which for prolificness cannot be surpassed. First Prize winners International Exhibition, 1897; Queensland National, 1899. Untested, 5/-, 3 for 13/-; Tested, 8/-, 3 for 22/-; Select Tested Breeders, 15/-. Safe arrival guaranteed.

G. & G. W. BUTLER,
Red Hill, Brisbane,
Queensland.

Indian sponges, washed them thoroughly, and then put them into the hives. The bees took to them immediately, with extremely lucrative results, as instead of wasting a lot of time in building their combs, they spend all the summer in collecting honey.

An English queen-breeder, H. W. Brice, says:—"Two lots of cells are started in nearly every instance, the first being from larvæ within the hive when the queen was removed, and the second batch started some forty-eight hours later, and *nearly always upon larvæ which were only eggs when the queen disappeared.* The first batch of cells raised may be any number from three to fifteen, or even more. On the other hand, the second batch will consist of perhaps of two or three, and occasionally only one. But whether one, two, or three, the last batch always produces the best queens, and on these later cells being seen the older ones should be all removed and the younger ones taken care of.—*Beekeepers' Review.*

Mrs. A. J. Barber of Colorado says that she always had trouble with her bees by their loafing and hanging out on the fronts of the hives after the sections were put on. Some of the colonies would swarm instead of going to work in the sections. Three years ago she began the practice of giving part of the colonies supers of half-depth extracting-frames full of combs, one super to each colony. In four or five days these combs were full of honey, while those colonies having simply sections filled with foundation were loafing or swarming. She then raised the supers of extracting combs and put supers of sections underneath. In two weeks the sections under the extracting-combs were better filled than the sections put upon hives that had no extracting combs given them. The honey in the extracting combs was just so much clear gain.—*Beekeepers' Review.*

R. C. Aikin in the *Progressive Beekeeper* says:—"Less than 300 feet from where I sit writing stands a colony of bees on 20 frames, dimensions of said frames $4\frac{1}{2}$ inches deep by 17 long, a "divisible

brood chamber" Heddon style. The bottom of the hive is a rim with common wire cloth tacked on it. That colony has stood there, a chunk under the front and another under the back, clearing the ground by 4 to 6 inches and open both sides so the wind can sweep under. It will soon be two years since it was so placed and it has wintered so for two winters. Just think of it! that colony with no floor between them and outdoors save a common window screen wire, last winter the thermometer 20 and 30 degrees below zero, and there for several nights in succession, yet this colony came through clean and dry, and hatching bees March 1st, when other colonies were wet and soggy and struggling for an existence, with little or no brood. There now, won't tell you any more about that colony till I get ready. My painted chaff hives did not winter so well—were not so well ventilated. See?

PAINTED HIVES.—Well, yes, I see all those reasons given for painting hives out in Colorado, and perhaps if I were there, I should paint, but it strikes me just now, away here in York state, that I should take two sticks $28 \times 1 \times 1$ and nail strips across them $20 \times 3 \times \frac{1}{2}$, spacing equal distances apart, and on top of these latter pieces I would nail a sheet of 20×28 tin. Then I would nail a piece $20 \times 4 \times 1$ to the under side of one end, this piece standing up edgewise, when I would place when I would place it over my hive in such a way that the latter named piece would stand on the extreme back edge of the cover to the hive, while the two first rested on either edge of the front of the cover, this allowing our shade board to jut out over the front or south side of the hive, thus shading the entrance, carrying off all rain, and best of all, allowing lots of air to pass over the top of the cover to the hive, so that no amount of hot weather would drive the bees out of sections when they were at work. And then this shadeboard is good for a lifetime, and costs less than the once painting of a hive does, while

the unpainted hive, underneath, will last nearly or quite as long as the best painted hive will exposed to the elements. Now that the reader has the two ideas about painting hives down to a fine point all they have to do is to use which they please, and no "blood" will hang on the skirts of either A. or myself.—G. M. Doolittle in *Progressive Beekeeper*.

Adrian Getaz says:—"As to the loss of bees, in my locality, the strong colonies lose less than the small ones. In fact, considerably less in proportion to their size, than the weak colonies. Exactly why, I don't know." Dr. Miller says:—"Allow me to give a possible explanation. In winter the bees assume a form more or less spherical, and the outside bees are the ones that suffer the most from the cold. In other words, an outside blanket of bees protects the rest of the ball. Of course the outside bees don't always remain the same, but that doesn't change the principle. For the sake of illustration, suppose this blanket of bees is one-half inch thick. If the ball of bees be three inches in diameter, the blanket will contain 42 per cent. of the entire lot of bees. But if the ball be six inches in diameter, then the blanket will contain only 29 per cent. of all the bees. It is possible, also, that a thicker blanket may be needed for the small than for the large ball, making the difference in mortality still greater. *Beekeepers' Review*.

All beekeepers of any experience can tell whether the bees have been getting honey of any amount during the day by the roaring they make at night, as bees only make this roaring while reducing their honey. Let two or three days of rain succeed a plentiful honey harvest and all roaring ceases with the night of the third day. Many a night have I watched this reducing of thin nectar to honey, and by the light of a lamp you can see the tiny drops of nectar sparkle as it is thrown out on the proboscis and drawn in again. When honey is coming in slowly you will not be likely to see this process, as it goes on so slowly at

such times. All have doubtless observed that when bees are gathering honey plentifully it shakes readily from the combs at night, while in the morning, before the bees go into the fields not a particle can be shaken from the combs, this going to show that most of the evaporating of nectar is done at night.—G. M. Doolittle in *American Beekeeper*.

That laying workers are sometimes treated as queens I have evidence, but as to their behaviour towards each other in the hive, or whether any jealousy ever exists between them, I should like to learn a little more. On one occasion I had a small colony swarm with a laying worker. This swarm settled on a small bush and in order to find the queen I shook the bees on to a bottom-board, but could find no trace of her. I noted however, one worker that they paid particular attention to and which they treated exactly as they would a queen by circling around her and moving out of her way as she moved along. I watched her for some time and from the respect and attention paid her it was evident that the bees regarded her as a queen. I then placed her in a new cage and set her down about a foot from the cluster of bees, when they immediately started towards her and clustered around the cage. I next removed this pseudo queen and killed her, and on carefully opening her found a single egg in her body. I am quite sure there was no other queen connected with this swarm and that the bees recognized this worker as a queen. Regarding the best means of deposing these pretenders I usually adopt the following method, which I find very successful:—I select a colony which contains the queen I value least and take her with a frame of brood and all adhering bees and place in the centre of the colony infested with laying workers, and seldom have any further trouble. If, however, the worker laying colony is pretty strong I give more than one frame of bees and brood and soon have a fine rousing colony.—H. L. Jones in *American Beekeeper*.

Last July, while driving in a distant township I struck a piece of road that was a pleasant surprise and a revelation to me. Evidently some bee-keeper must be road commissioner, or else he had learned something. Here, as in so many places in Illinois, the sweet clover was growing luxuriantly on both sides of the road. By running a mower up and down the road several times during the summer it had been kept from encroaching on the drive way. Not only that, but the cut clover had been thrown into the middle of the road; and how springy and delightful it all was! There was no dust, and the pleasant perfume of sweet clover filled the air. Some cattle in an adjacent pasture were reaching through the wire fence and feeding on the clover within reach; and the bees were on hand by thousands, carrying away the nectar and filling the air with their contented hum. Soon I passed into another township; and, though the sweet clover had extended for miles further, it had all been cut and burned in the road, leaving a scene of desolation; and, oh, how dusty it was! Again I passed over this road in October. I had been wallowing through the mud, and was weary enough, when I again experienced the pleasant sensation of my sweet clover road. Instead of mud there was that springy road bed, without mud or dust. Upon further investigation I found the sweet clover had all been cut when about done blooming, and carefully piled in the road where the sun had soon wilted it, and the waggon wheels had crushed and mixed it with the soil. Though this road ran through a level mucky country it was the best road there was anywhere. The millions of decaying roots in the ground on either side seemed to provide a sort of natural drainage that seemed to carry off all surplus water. It appeared that no work with plough or grader had been done on it for several years, and only the intelligent care of the clover had done the business.—C. H. DIBBERN, in *Gleanings*.

BEES, BIRDS, AND GRAPES.—Nearly every year about this time beekeepers are

met with complaints from their neighbours about how the bees are eating up their grapes. It has been pretty well established that bees never touch the sound fruit; and until within a year or so it was supposed by all fruit-growers, and even by some bee-keepers, that bees made a small round puncture through the skin of some soft grapes like the Niagara, and even pierced the more hardy Concord. But two years ago we were successful in finding the real culprit, and that was in the form of a little bird, quick of flight, scarcely if ever to be seen around the vines when any human being was present. This bird, about the size of a sparrow, striped, and called the Cape May warbler (*Dendroica tigrina*) has a long sharp needle like beak. It will alight on a bunch, and about as fast as one can count the grapes will puncture berry after berry. After his birdship has done his mischief he leaves, and then come on innocent bees to finish the work of destruction by sucking the juices of the pulp of the berry, finally leaving it dry and withered up. While the birds are scarcely ever "caught in the act," the bees, ever present during all the hours of daylight, receive all the credit for the mischief. Grapes broken in handling will be visited by bees independently of any tampering on the part of the feathered tribe; and at such times bees do very often prove to be quite a nuisance; but it may be said, on the other hand, that broken grapes are unsalable anyhow, and therefore this damage is slight if any, and the real mischief or harm done is simply the annoyance caused by the fear of being stung while handling over the bunches in the basket.—*Gleanings*.

DON'T FORGET

Seen the latest! What? Those sample Labels from the *Bee Bulletin* Printing Works.

QUESTIONS.

E. T.

252.—Do you use starters, or full sheets in sections?

253.—O. K. query on page 156?

[JOHN THACKER.

252. We use starters, but prefer full sheets.

253. Had no experience. Should think your own suggestion about correct.

J. BURNETT.

252.—Starters; but would prefer full sheets if bees would thin the foundation. With me foundation remains practically the same when section is filled as when empty. I have not tried new style foundation.

253.—A puzzler to me if not our old friend paralysis.

A. A. ROBERTS.

252. I always use full sheets with a narrow bottom starter, allowing about $\frac{1}{4}$ inch between top and bottom, as the top sheet will sag a bit. I always get good sections this way, nicely filled, with less pop holes.

253. Cannot say. Have you plenty of bee eaters about you.

J. F. MUNDAY.

252.—Full sheets always. I am decidedly against having many drones reared in my apiary.

253.—O. K. says, speaking of his bees, "they caught this confounded plague. I don't think it was paralysis for I could never see any dead bees about the hives." By what process of reasoning O. K. concluded that his bees had caught some disease or plague when no dead bees were to be found, I can't imagine. And, as there were no dead bees about the hives, which there certainly would have been had the bees suffered from starvation. My answer to O. K. is, that his bees were stolen, or rather captured and devoured by birds, dragon flies or some other creature. I have experienced this loss in the spring by the martins and swallows. All the field bees are caught and only the young bees are left, so the hive dies out, leaving honey behind. But, not by spiders, a bee would feed a spider for a week.

H. B. MCFARLANE.

252.—A piece about $1\frac{1}{4}$ wide, full width of section, fastened to top bar of section. I also utilise all pieces of clean white comb which only accumulate for putting into section as starters, fixing them by thinly painting top bar of section with wax while the section standing upside down, then make the blade of a knife hot—heating it upon a hot iron is the best as it gives a dry heat—hold the piece of comb in the section close the top bar, pass the hot knife under it so as to slightly melt the edge of the comb and quickly press the comb

on to the top bar, when it will adhere firmly enough. If there is a piece of comb large enough to fill the section, simply cut it so as to be a tight fit and press it in.

253.—I have had similar cases where the bees have had abundance of stores, but have found no satisfactory explanation excepting what is known as spring dwindling. If O. K.'s trouble has been owing to shortness of food as he appears to surmise, it is entirely his own fault, as he should know and prevent this condition of affairs. If there are orchards near O. K., the trouble may arise from spraying the trees with poisonous spray while the tree are in bloom.

QUESTIONS NEXT MONTH:

254.—Queens raised under swarming or non-swarming conditions. Some say the former is best. Others try to raise under latter conditions. We want opinions?

255.—There are a number of bees working on thistles in our neighbourhood. They are nearly as long as the ordinary Italian bee, about one fourth of its bulk, and with several yellow bands on the abdomen. Can any of our readers give any information respecting them?

256.—Do bees work as well in old combs as new ones?

VICTORIAN NOTES.

R. BEUHNE.

A FEW MORE FACTS.

Saint L. T. C. in his reply to my Notes in September issue has quite forgotten, except in a vague, wholesale way, to answer to the charges I made. Why? Because the facts as stated are on record in the *Farm and Home* and in the *A.B.B.*, since 1895. Personally I am no saint, and never pretended to be. That babble about my selfishness is too ridiculous. "Satan reproving sin." If I were what L. T. C. tries to make me appear, then the very complimentary remarks he has made to others regarding me, as well as some eulogical letters to me, in his own handwriting, are falsehoods uttered with a purpose. However, I am in good company in regard to the policy I advocate: 1. Numbers of beekeepers; 2. One of the leading agricultural journals, which has published my articles for the last five years; 3. "The Drone" in the *Australasian*; and 4. The author of the letter from the Silk Council (not Miss Burke) from whom I have a letter approving of that policy (written after the "explosion.")

Will L. T. C. kindly point out a single instance in any article I ever published of bogeying off beginners or anybody else, although I have had good opportunity from my own experience, and from my knowledge of disasters which have be-

fallen our ablest apiarists. I have scores of times answered letters in the press "How to commence beekeeping," and given advice and instruction to people personally, some of them sent to my apiary by L. T. C. himself, as "the best place you can go to for all the information you want."

As to L. T. C.'s motives, they appear in his letters to me (filed), in his actions, and in his own words (before witnesses), and unless he is prepared to denounce them as liars the halo of the saint will get decidedly damaged. In regard to his letter "The source of Australian honey," I maintain that it is misleading, the saint and the silk people notwithstanding, and I am prepared to submit the question "Is it misleading or not?" to a referendum of Victorian beekeepers in the A.B.B. As to the facts enumerated in L. T. C.'s fairy tale, each is capable (perhaps) of being substantiated, and I have not contradicted a single one. But, "artfully," pieced together as they are, together with the conclusions drawn therefrom they are misleading. Just let a non-beekeeper read "the Source," and then ask for his deductions.

Miss Burke has only given half my answer, which was: The results stated might be obtained—it was a matter of opinion; *but the way the facts were put together and reasoned out were misleading.* By the end of this season the Silk people will probably have changed their opinion on the "Source of Australian Honey."

As to the authorship of my reply, L. T. C. does not report correctly. I never denied being the author, but said it was not written on my own authority alone. L. T. C. and the Silk Association have evidently not compared notes before going into print, for they contradict one another. The wording of the resolution which caused the explosion is immaterial (but it is not clause 8, page 139), it was simply a test point to decide between saint and sinner. I have the honour of being the latter.

Just fancy the wickedness of taking 5d. for honey instead of 2d. How greedy! But at any rate I have shared that pie with a few hundred others, L. T. C. included; but his interests in another business are larger, and how pleasant is the philanthropy which turns in the cash and benefits humanity at the same time. Like Cæsar's wife, he is above suspicion. Some people even suspected him when at one Convention he suggested another chairman in place of Mr. Ellery. "Mr. Ellery is not suitable, he allows too much latitude." (Who to?) Why Mr. A., the gentleman suggested, would have been so much more suitable, will be seen on page 135, A.B.B., Sept. '96, Vol. 5. Federation will bring down the price a bit, and I have stated as long ago as '93 that we must be prepared to produce honey at 2d., but we take more as long as we can get it. Victorian beekeepers have looked upon federation as inevitable, and hope a better state will follow. One advantage being the

breaking up of the supply monopoly. The fittest will survive, just so they have done so far. We came uninvited, some before L. T. C.'s time, and others will come the same way. They are welcome. There is no exclusiveness; they will get all the help they want on payment of a trifling subscription fee to an association, where they will work with us to obtain those objects which can only be achieved by united action, such as export, expansion of local market, and preservation of resources. On this point I have been completely misrepresented. Present beekeepers have nothing to fear from the competition of people attracted by booming. They will abandon the industry in disgust when their anticipations are not realised, and thus discredit the industry. Those who join voluntarily, and with a full knowledge of difficulties, are people who will survive, possessing as they do the determination to overcome obstacles. We do not boom beekeeping, and we do not discredit it. The supply trade does the former, and the boom victims the latter. We do not object to any business man pushing and advertising his business, but we do object to it being done with the authority of our Association.

I have advisedly said *we*. I am not speaking for myself alone, nor is L. T. C.'s attack directed against me alone, but against all who carried against him all the business of the last Convention, and a great many others who were not present. Who *we* are will become evident at the proper time. In the meantime £ s. d. is welcome to say his worst or his best, he cannot hurt me. I value his opinion as little as I did his compliments and offers in the past.

The policy advocated by me and so violently opposed by L. T. C. is simply that adopted at the 97 convention where it had the almost unanimous support of those present, including such men as Messrs. Bolton, McFarlane, Bennett, Ballenger, Davey, Willyan, Wilson, Mackay and others. Membership before benefit is an essential condition of success in undertaking objects requiring the support of all interested in the industry, and the much quoted Government assistance has nothing to do with it, any one can get that by joining and there is nothing to prevent anybody from doing so. But if the idea of Export or even local depot is to be carried out, it cannot succeed unless it receives the support of the majority of producers, who so far have not reaped the least benefit from their efforts to improve the condition of the industry. As the "Drone" in the *Australasian*, pointed out some months ago, all that has been done is instructing amateurs and that appears to be the motto again of the new Association. The "Drone" calls the condition of the Beekeepers needy, L. T. C. calls them greedy and would have the public believe that they are bloated capitalists.

In conclusion I am prepared to publish my yields for the last five or more years when Mr. Chambers publishes the Balance sheets of

his Supply Business, but my returns ill in no way substantiate his deduction of £100 per square mile of timbered country throughout Victoria. Mr C. accuses the A.B.B. of misrepresenting him, when the *Australasian* should bear the blame, as the error appeared in that paper and neither the author nor the Silk Association thought fit to correct it.

TOPICS OF THE SEASON.

This is the "off" year judging from reports. So far it seems to be very much "off." Most beekeepers report almost no swarms—a few where there were scores last season. Eucalypt bloomed heavily last season, and, as they had to ripen the seeds very few formed any quantity of buds. There may be something later on but it will not be much. What bloom there has been so far has yielded no honey and that was the case in places several hundred miles apart. The off year for honey is generally the "on" year for foul brood, happily there appears to be very little of it so far, but I am afraid it will turn up later on. Quite a number of instances have come under my notice during the past six years of apiaries clean or almost clean, getting foul brood badly when shifted into a new district, and in a year or two with some energy on the part of the apiarist becoming clean again without much fresh infection. It appears as if the whole of the disease in the locality finds its way into the apiary till exhausted.

Paralysis seems to have become more general but milder in form, the longer it is present in an apiary. Some of us are of opinion that it is changing in character, becoming modified, or otherwise the colonies of bees surviving when it attacks an apiary are more immune from it and with the increase from then the immunity becomes more general. I have considerably altered my views on paralysis since 95, and should now prefer queens from healthy stock in a badly infested district or apiary to any queens however good from a locality free from paralysis. This opinion is the result of experience and experiments, the latter not quite completed.

Rheinische Bienenzeitung, has issued a jubilee number on the 50th anniversary of the foundation of the Beekeepers' Association of the Rhein Province. The number contains the history of the Association since 1849. The central honey depot is of special interest. It was established only in 1897, but has now 72 agencies in cities, towns, and villages throughout the country. 75,000 pamphlets on the value of pure honey were distributed and the agencies for the sale of honey advertised in the daily papers. The provincial Government bore the initial expenses, notwithstanding the fact that the depot handles the honey of members of the Association only. Members consign their honey to the central depot accompanied by a guarantee of purity; it

is sampled and weighed, and the cash minus the bare expenses returned to the producer. At the depot it is put up in suitable package with the label of the Association and distributed through the agencies or disposed of in bulk to the trade.

Practischer Weigweiser gives an instance of another Association. Their depot also returns cash on receipt of honey, and receives it from members as well as outsiders, but 20 per cent less is paid to non-members, thus most beekeepers join and the profit made on the honey from outsiders pays expenses.

These depots while guaranteeing quality and purity aim at raising the price, and what is more, they succeed. The public look for the Association guarantee, they have been educated to it, and thus beekeepers are in their own interests compelled to join Associations, and the latter are thereby enabled to obtain the highest value for their honey by controlling the market.

Bienenzucht.—Dr. Dzierzon, the well known veteran Bee Master, is now in his 89th year. Notwithstanding this fact, he spoke with great vigour at the movable convention held in Coln a/Rh; first on the question whether the standard hive measure adopted 19 years ago is still considered suitable, and later on the Dickel theory. The former question he answered in the affirmative. Other speakers of standing differed from him, considering the German standard size too small, pointing out that the hives of other countries were larger and a tendency apparent to increase the capacity.

Herr Fulde (*Practischer Weigweiser*) states that Foul Brood is not so infectious as is generally supposed or feared, and considers that the honey of diseased bees is the principal source of infection, and recommends not to feed it to bees in any form. Scanty feeding of the larvae by the nurses owing to dearth of stores predisposes to Foul Brood. Bees should be managed so that they will always have a certain reserve of stores to fall back upon during a break in the honey flow. Weak stocks should not be stimulated, as they will raise more brood in warm weather than they can keep warm during a cold change. When purchasing hives previously occupied by bees, be careful to clean them well with hot water and soda. Do all work about diseased hives in the evening.

WESTERN AUSTRALIA.

We are very pleased to get the following communication from an old friend, Mr. R. Helms, formerly of the New South Wales Agricultural Department:

Almost since I have been over here, I have supported an enactment for the suppression of diseases and the enclosed copy of Act is the result. It was high

time that something was done in that direction, for diseases have destroyed during last year nearly half the bees in Western Australia. The Registrar General consulted me on the subject lately, for the returns were so surprising that he could not credit the enormous falling off. I suggested a further or rather repeated canvas and full enquiries of opinions for the cause of the falling away as noticed from the present returns. When we get the papers in I will send you details. As regards the necessary regulations for the working of the act, I have proposed that no beekeeper can remove his stand to a new locality, without a certificate from an inspector that his bees are free from disease; and that it shall be an offence to expose comb for bees to clean out. The treatment of diseases is left to the inspectors, as I think it unsafe to define a special method for this. All beekeepers will have to register their stands.

The act will be worked in conjunction with the Fruit-pest act, and the inspector under that act will do the work, and in this manner no extra expense of any consequence is entailed by this act to beekeepers.

I may probably come to Sydney about new year, and it is possible that I may look you up if time will permit. There is a likelihood that I change my domicile again to N. S. Wales, and if so hope to be able to do something towards the elucidation of bee diseases.

1. *Short Title*—This Act may be cited as the Contagious Diseases (Bees) Act, 1899.

2. *Beekeepers to give notice of contagious diseases to Department of Agriculture*—Every person who shall have in his possession or under his care any colony, hive, or swarm of bees affected with foul brood or other contagious disease shall forthwith report the same to the Department of Agriculture, and take such steps for the eradication of such diseases as the department may direct.

3. *Penalty for non-observance of preceding section or for having comb affected with contagious disease*—Every person who, after one week's notice in writing has been served upon him by the department, or by persons appointed or authorised under this Act, knowingly fails to observe the foregoing section in any particular, or knowingly has on his premises any comb affected with foul brood or other contagious disease

among bees, shall be guilty of an offence under this Act, and shall, on summary conviction thereof, be liable to a fine of not less than Five shillings nor more than Five pounds.

4. *Appointment of bee experts*—For the purposes of this Act the Governor may from time to time appoint, and from time to time remove, one or more bee experts to carry out the duties necessary for the administration of this Act.

5. *Inspectors and others may enter beekeepers premises*—Every inspector or person appointed or authorised by the Department of Agriculture for the purposes of this act may, with such assistance as he thinks fit enter upon any land or premises where bees are kept, and inspect all bee hives and materials used for beekeeping thereon.

6. *Regulations*—The Governor may from time to time make, and from time to time alter and repeal, regulations for carrying this Act into effect.

G. S., Warrah Ridge:—I am slow in writing; if all your correspondents were as slow your papers would not be so very interesting as it is at present. Bad luck has reigned on the Ridge this season; we have lost a good many colonies; so have our brother apiarists. I believe I have not extracted since 23rd. November last; and the hives have no surplus honey yet. However the "darkest cloud has a silver lining." White box is promising well and I believe it will flow well next Autumn (late) and winter, till then I do not expect to extract any honey. I have been taking notice of the different prices of honey, etc., from time to time in B. B. and I find it pretty correct. I got word from London that it was bringing from £20 to £22 per ton, and from S. Africa that it was bringing 1/- per lb in tins and 1/6 in bottles, retail but the duty to Cape Colony is 2½d per lb (£21 per ton). Mr. J. Stirley, Bee king Port Elizabeth, would like trial a sample in 5 gallon tins; he is offering 2/5 per gallon. I have none to send, would some one else send some; but send good honey, for Australia lost its name in England through bad honey and bad management at the start. I do not join R. Beuhne in agreeing with you that Australian honey is worth £39 19s 11d if N. Zealand's is worth £40; I am a New Zealander and I know what N. Z. honey is like and my opinion is that Aus-

tralian honey is worth the £40 per ton. But as R. Beuhne says, John Bull does not think so and that makes all the difference to us; verily "if a dog gets a bad name, you may as well shoot him." I am afraid it will take Australia a long time to convince John Bull that Australian honey is equal to N. Z. Of course N. Z. has some bad and inferior honey. The honey from the flax and several different kinds of trees and scrubs is strong, dark and anything but good. But do not take Mr. I. Hopkins or any other exporter for chumps. If they sent this honey home it would soon spoil fair New Zealand's good name. Of the few honies that I've seen in this land there are good, bad, and indifferent, just as there are in fair Maoriland. A thing that surprised me in this country was the people do not care for solidified (candied) honey, while in Dunedin liquid has no sale. If people here could be made to like candied it would dispose of a lot of unnecessary labour. I believe a German up country a short way has got his customers that used to candied honey that they will have no other; you cannot give the Germans a start, but Australians want about 1500 yards in the mile and we about 100 ahead of that. I have thought of a good idea for a Solar extractor (perhaps it is already in use.) Instead of having the strainer near the bottom end of the extractor; have the comb lying on nothing but wire gauze; the gauze being 2 inches above lower part of extractor so the rendered wax can run under gauze to bottom end of extractor.

MERRIWA.

J. L., Merriwa, November 5th:—For some time past I have intended to write you re a strange disease that has killed about three-fourths of the bees in this locality. I suppose the complaint to be some kind of paralysis, though I can't say it quite resembles any particular disease I have read of or seen before. Out of 50 hives I had at the end of July all promising to come into the spring in fair condition, to day I have only 12 with

few bees, hardly enough to pull through should the disease cease now. And though the bees seem to be doing well just now, still I can't say that the complaint has gone for certain, as first one hive and then another shows a few bees affected. The disease is not confined to my apiary alone, all the bees in the locality are affected in a like manner. Some of my neighbours have lost, say 14 out of 25. One man has 8 left out of 30, another, two out of 22 hives, some again have lost 8 and 10, all they had. A friend told me the other day that out of 12 bees' nests he knew of in the bush, he only found three with bees in. I thought at first it was spring dwindling until I found the young bees crawling out of the hive to die, those poor little fluffy fellows a day or so old. Shortness of stores could not be the cause, as strong colonies would die out leaving plenty sealed honey in the combs and plenty pollen. And, strange to say, all the hives have been raising brood all the while until all the bees would be gone, sometimes leaving the combs laid up and young bees dead in the cells, some half eating their way out and died having no warmth to bring them out.

Sometimes the queen would be found in the hive with only two or three bees. Again, a queen would be found dead at the entrance and plenty bees and brood in the hive. I have found the queen prying about on the ground outside a hive like the other sick bees, and, like the usual disabled bee would not return to the hive, but crawl away and die. And yet all the young brood was quite healthy. I could detect nothing wrong with the brood, nor could I find anything wrong with the growing bees, further than they lost all power of flight and crawled away from the hive.

Very few bees would be found dead at the front of the hive. Some stocks would die out and not leave a dead bee at the entrance, only some eggs and some dead brood in the combs. In some of the hives that are still living and are doing well now, all the field bees would

bees in, and some of them have only a be gone, leaving the young fluffy chaps to look after the hive, and it seemed to me as soon as they went to the field they also disappear.

I tried sprinkling salt at the entrance, but no good. I sprayed them with salt and water with the result the result that it seemed to purge them very much perhaps I made it too strong. The next day the bees flew out to work on the fruit blossoms. They would work for a while and become helpless on the flowers, fall to the ground and die. I lost 12 hives that week. They all died out at the rate of five or six, before that, per week.

On going to the hives early of a morning large numbers of bees would be found crawling about on the ground in front of the hives, and they would crawl right off. Again, bees would return loaded with pollen and die at the front of the hive. I have often united queenless stocks with those that had a queen, but in no case did I save any one. I have watched the results very attentively but have utterly failed to find or locate a cause for the complaint. It could not be shortness of stores as they had plenty sealed honey, and honey and pollen coming in. Young and old bees were alike affected, including the queens in some cases. I should be glad to hear the views of some of my fellow beekeepers on this matter.

Bees did very well till about last December; then the honey flow ceased the weather being very dry and no honey to speak of until the spring sets in. I have now a large stock of empty combs on hand and the moth is commencing a feast. Should be glad to know the best way to poison them. I tried burning sulphur under one box but found that it did not kill all the grubs. I should like to know how long the sulphur requires to be kept burning.* And now Mr. Bulletin so much for the loss of my poor little friends and companions, most of whom are gone. But I can't say that the disease is still with me. I raised a fair lot of honey last season up to December when the honey flow ceased; I sent a sample of the honey

to the Board for Exports. It was classed for first grade. I should have shipped it only I thought the venture had fallen through. And now for the next fly in the amber. I sent 38 cases to Sydney for sale. The honey was delivered to the railway people at Muswellbrook in good order. The Agent received it at Darling Harbour, cases broken and tins in a leaky condition, and two empty tins in one case. So between bee paralysis low prices for honey, and careless railway people, the beekeepers in this locality will require to knock round pretty slick to keep up his end of the log. I was sorry the beekeepers did not fall in more readily re the Honey Export. Perhaps the plan was not the best, still it was an advertisement and if people want to do "biz" they must advertise, and "ads" have to be paid for as part of business speculations.

The last season being so very dry I don't expect much of a honey flow this season. Just as well, as far as this place is concerned for there will be no bees to gather honey. However, we must try and crawl up again.

*Give them as supers to your strong Italian colonies.

HONEY SECRETION.

JAMES BENNETT.

In the A.B.B. for September is reprinted a letter from the *Australasian* written by Mr. Chambers, in which he says, "the value to the colony of forest land for the gathering of honey is from 2/6 to 5/- per acre, at a low estimate."

It will be seen at a glance that the subject dealt with by Mr. C. goes to the very root of the "overstocking" problem, and as this is one of the most important subjects connected with the industry perhaps he will kindly favour us with a few further particulars.

The only evidence he adduces in his letter is that "a beekeeper....will be able to gather five to ten tons per year and yet his bees will not work further than a radius of a mile or so." And in the next sentence 200 colonies are quoted

as gathering 20 tons "without being seen at work more than $1\frac{1}{2}$ miles from home." In the first place I should like to enquire "why should the first lot of bees quoted be restricted to a range of a mile or so (say 4sq. miles)? when the second lot is allowed a range of $1\frac{1}{2}$ miles (say 9 sq. miles)? And secondly why should they be restricted to even $1\frac{1}{2}$ miles? I myself have seen my bees (not isolated individuals but great numbers of them) working over $2\frac{1}{2}$ miles from home and this at a time when there could be no mistake as mine were the only yellow bees at that time in the district. If we now apply Mr. C.'s figures of 2/6 to 5/- per acre, say £80 to £160 on an average of (£20 per sq. mile) we find that if bees will fly a little over $2\frac{1}{2}$ miles, an area of say 25 sq. miles (and there is no question of their ability to do it) then there is honey of an average annual value (I presume Mr Chambers meant "average" annual value) of say £3000 with perhaps an occasional blank" within easy reach of them. These figures are so startling that we may reasonably request further proof. If there are £3000 worth of honey within easy reach of my apiary it is obviously throwing time, talent, and capital away to start out apiaries.

I quite understand Mr. Chambers position that he includes all the honey secreted, both gathered and ungathered, though I cannot imagine how he estimates the amount of ungathered, but after allowing the generous margin of 75 per cent for ungathered, the difference between my returns are the figures as worked out above and so enormous that I am fairly staggered at the possibilities open to me.

If Mr. Chambers can prove his position (and in last number of *A. B. B.*, he states he is quite prepared to stand by what has been published over his signature) the information will be worth many pounds to me individually, and the benefit to beekeepers of this colony alone for a short term of years must certainly be counted by thousands of pounds. Will he kindly oblige us with further particulars.

CORRESPONDENCE.

When a swarm is caught a most sure way of keeping it is to place a frame of larvæ in the hive you place the swarm in.

A writer in *Gleanings*, who has kept careful records of his honey crops for 14 years, says he has had five full crops, seven light to fair, and two total failures.

W. D., South Woodburn.—The bees are doing very well at present and a great deal swarming is going on.

W. M., Bathurst:—My bees are pulling out a lot of drone larvae. Could you tell me through the *A. B. B.* what is the cause of it?

It is most likely there is no forage coming in and so no food to feed the drones. A cold spell of weather will cause such.

J. F. D. Bellingin, Bellingin River:—I have up to the present sold all my honey locally and wish to do so but as the quantity is increasing the demand must also be helped and I am of opinion that a nice attractive label will go a long way in that direction.

D. J. R., Mumbil:—My bees have come through the winter very well; and they are breeding very fast; there is every indication of a splendid spring here. I have already extracted from 10 hives 450 lbs. of honey. Trusting that you will have a good season.

J. B. F., Heidelberg, Victoria, 5th Nov.:—Are the queens imported from America and Italy through the Bee Supply Company sent under seal and under seal when you receive them?

We presume imported queens are sent either of two ways:—by parcel or post. No one has a right to interfere with them in transit.

F. T., Deans Marsh, Victoria:—I have only got two hives of bees yet; I had seven last year and they had the Foul brood so I killed them as they were too weak to bother with, and burned the combs and boiled the hives, and burnt the bees after they were dead. (I killed them with sulphur in the smoker.) And I got two swarms later and they wintered alright and are doing well so far, but it has been very

wet lately. The box-hive men are having bad luck this year about here.

J. G. C., Kangarilla S. A.:—Just a line to say that I am still in the land of the living, though things are not as one could wish with the bees. Swarming is over. What there was of it might have all been disposed of in one day if the bees had seen their way to manage it so. Some of my neighbours are feeding their's in hopes of better time in the future, which however does not look in any way promising just at present, robbing being the order of the day when ever there is the least opportunity to do so.

T. J. B., Wallabadah:—I have had a very bad time with the bees since the heavy frost. It killed a great quantity of brood and made some of the colonies so weak that I had to feed them. They have not a bit of honey, they seem to be barely living. I hope yours are doing well. I dare say they are as I looked at some boxes in Quirindi yesterday, and they had plenty of honey and new comb. I am sorry to tell you that I have had a very heavy loss by the frost; it completely destroyed my fruit not leaving me 10/- worth in an orchard of 500 and over of trees. My early wheat was also cut, and I had to cut it for hay.

G. P., Molong Nov. 14, 1899:—Business among the bees is very quiet just now. I thought by the way they shaped in the early spring that they were going to make things a bit lively this season but my hopes will not be realised unless a change takes place very soon. We have not had a good honey season here since 93 and 94 when I increased my stock from 60 single storey to 90 double and extracted 13000 lbs. of honey beside having over 1000 frames (Langstroth) filled with comb. Whether these seasons for honey have all been bad since or whether the bees have got lazy I am not able to say but I do know that my extractor has not been kept running. I am beginning to suspect that bees do not work so well in old combs. I am going to try one or two swarms in order to test the matter this season, and would like you to ask

the question in your next issue of the *A.B.B.* Trusting that you are having a good honey season.

E. C., Northwood, Victoria:—To our thinking the queens sent had both Italian and black blood in them, hybrids. Have asked Mr. Roberts opinion as follows:—

Dear Sir,—Your post card to hand but up to the present I have not received the parcel mentioned. The question seems to me to be a knotty one and if of Italian blood it will be difficult to say what the markings of their workers will be. For instance a black queen mated to an Italian drone would throw black and striped bees and if queens were reared from her you would have black queens and bright coloured queens according to the eggs the queen was reared from. If you have any further particulars I will give you my opinion on receipt of the queens. Yours &c. A. A. ROBERTS.

FOR SALE.

THE O'CONNELL BEE FARM, complete. or 30 Swarms in Langstroth Hives. All appliances. £35.

W. ROBERTS.

VICTORIA.

TO THE BEEKEEPING FRATERNITY,—Friends, I am still breeding and selling choice Italian queens. In fact I am devoting most of my time to this branch now. Having sold my dairy herd I intend making queen breeding a speciality. I import fresh breeding queens every season and from different places, so as not to inbreed (a great factor, I think, in preventing foul brood.) My bees have averaged me over a cwt. surplus honey each colony past 12 seasons (summer count.)

Prices as follows. Satisfaction and safe arrival guaranteed.

	One	Three	Five
Untested—	5/-;	13/-;	20/-
Tested—	8/-;	22/6;	35/-
Select Tested—	15/-;	40/-;	60/-

Extra Select Tested, the very best, 25/- each.

JAMES McFARLANE,
LYNDHURST, VICTORIA.