



# **The Australian bee bulletin. Vol. 11, no. 1**

## **April 28, 1902**

West Maitland, N.S.W.: E. Tipper, April 28, 1902

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# The Australian Bee Bulletin.

A JOURNAL DEVOTED TO BEEKEEPING.

Edited and Published by E. TIPPER, West Maitland; Apiary, Willow Tree, N.S.W.

MAITLAND, N.S.W.—APRIL 28, 1902.

The following is a list of advertisers in our present issue:—

### Supply Dealers.

R. K. Allport, Chuter St., North Sydney.  
 A. Hordern & Sons, Haymarket, Sydney.  
 The W. T. Falconer Manufacturing Co.,  
     Jamestown N.Y., U.S.A.  
 Chown Bros. and Mullholland, Ltd.,  
     Thomas St., Ultimo, Sydney.  
 R. Beuhne, Tooborac, Victoria.

### Queen Raisers.

W. Abram, Beecroft.  
 H. L. Jones, Goodna, Queensland.  
 A. A. Roberts, Muswellbrook, N.S.W.  
 Jas. McFarlane, Lyndhurst, Victoria.  
 Mrs. Jennie Atchley, Beeville Bee Co.,  
     Texas, U.S.A.  
 J. W. Miner, Ronda, N.C., U.S.A.  
 R. H. Jervis, Moss Vale, N.S.W.

### Miscellaneous.

A. Hordern & Sons, Haymarket only,  
     Sydney.  
 Allen & Co, 242 Sussex street, Sydney  
 The Farmers' Co-operative Company,  
     Ltd., Sussex street, Sydney.  
 P. J. Moy & Co., 161 Sussex St, Sydney  
 W. L. Davey, Plenty Rd, South Preston

### Foundation.

R. Beuhne, Tooborac, Victoria.

While some members had come prepared even for a couple of days' session, others seemed anxious to get away. Let us hope a good coming season will enable more to attend next year.

THIS issue of the *Australian Bee Bulletin* commences the eleventh year of its existence. With it we give the index for the past year. To those who kept the numbers and volumes as they evolved year by year, and have them bound in their book shelves, it must be, as with us, a great source of pleasure and instruction to occasionally peruse them, and refresh the memory with ideas and information apparently forgotten, also to mark in what way the industry has developed. First, the wonderful tales by enthusiastic lecturers, backed by enterprising supply dealers, then the revulsion against paid Government servants competing against struggling men, or men who derived their greatest support from the labour and money they had expended on the industry; then the great hopes of the English market, the efforts of the Export Board. The successive bad seasons, successive inventions or discoveries, or new ideas, that promised to revolutionise the industry—and didn't, and are now forgotten, or nearly so. Do you blame us if we have a feeling of pride we have travelled so far? We will tell our readers what we think is the reason. We have always given every side—the bad and the good. Has it been a money-making concern? We answer with an emphatic NO. As representing a comparatively small industry the Sydney general advertisers will not patronise the A.B.B., and there are many subscribers who are much in arrears. That it has paid the actual expense of

THE Annual Meeting of the N.S.W. Beekeepers' Association is over. We do not feel quite satisfied with it. There was no waste time during the whole of the sitting, but several subjects sent in by members who were not present did not get the attention they demanded, and were practically pushed aside. Perhaps it would be better on future occasions to hold the meetings in a place where an evening session would be practicable.

printing, leaving a small margin for editorial work, is all that it has done. We are not supply dealers, and so get no advertising gain thereby. The A.B.B. relies on subscriptions and advertisements alone.

We conclude by again thanking our many friends for their past favours, and trust to have a continuance of same, promising if possible to do better for them to do so, and wish every member of the industry every prosperity and success.

Honey and water must not be boiled to make vinegar.

A field bee is said to carry twice as much poison as a nurse bee.

This has been the driest season in California for over 30 years.

We have been asked who had the principal hand in drawing up the schedule at the recent Royal Agricultural Show.

Mr. R. Beuhne, we are sorry to hear, has been laid up with a severe attack of congested liver. We trust ere this he will be himself again.

The price of glass has risen in America. *Gleanings* says, discarded photo negatives can be purchased cheap from photographers cleaned with potash, and come in well for facing sections.

West Maitland, N.S.W., is a money order office. The postal officials in some of the other States don't seem to have this information, so some of our correspondents say.

Another American bee journal to hand, *Lone Star Apiarist*, published at Floresville, Texas. Louis Scholl is the editor. It has absorbed the *Southland Queen*, Mr. Atchley retiring from the editorial. We wish the new venture every success.

To detect adulteration in wax, the *Schleswig. Holst. Bzg.* says to burn a piece on hot iron. If a pleasant smell arises, the wax is pure. If it is impure there will arise a disagreeable, fatty, white smoke. Burn a piece that you know is pure, and then compare the suspected article by burning.—*Gleanings*

Asking a Maitland beekeeper the cause of the price of honey being so low, he replied: - A man goes to the produce sales with two or three 9lb tins of honey. He is anxious about the price of his other goods, and perhaps in a hurry. Somebody offers him, say 1/6 for each. He takes it.

Is there any bee-keeper any where who can with any degree of certainty pick out a superior queen from a batch of them, just by their looks? She may be yellow; she may be large and beautiful; she may be without fault and blemish as to her outward appearance; but who can tell what her workers will be?—*American Bee-keeper.*

WATERING BEES.—We have a trough 8 feet long, 2 feet wide, which we use to warm honey to prevent candying before sending to market. Now, about 3 or 4 inches of water at bottom, a batten on top full length, and bagging over this batten, down into the water. It is a grand arrangement for bees to get water. Hundreds are constantly on the bagging sucking the water.

At the Royal Agricultural Show, Sydney, there were two entries for honey display suitable for grocers' windows. One was a regular grocer's window display of a lot of things, a neat little lot of honey in glass in the centre. Honey was really represented as a nice luxury, not an every day article of consumption as it should be. There was too much of the luxury side at this show.

Honey likely to candy should be put in small household quantities—say 4lb.—a good saleable quantity in a store. When sent to a commission agent, and it candies in the 60lb tin, dealers who buy it from them don't like to have the trouble of cutting it out, or of warming it either. Small receptacles enable the public to get what is very often asked for, but not obtainable—candied honey.

Wax is a natural secretion of the bee. When a honey flow is on honey is brought in, and wax is produced to make receptacles to put it in. If there are these

receptacles already made, wax is still produced by the bees but wasted, let drop. Give your bees starters, between full sheets when the flow is on, and you get the maximum of honey and wax with our modern system of working. Did we not want straight combs perhaps more wax might be produced by starters altogether only. Wax is only produced during a honey flow.

The honey displays at the various country shows this year have been very small, and mostly by new hands at the industry. Perhaps the older hands have their reasons for neglecting these matters. We know one case where several years ago there was a very grand display. Speaking to a non-successful exhibitor at the time, he complained that schedules and prizes were all made out in the interest of one person. Next year the display declined very much, and three years after scarcely any at all competed.

The beekeepers in the neighbourhood of Bathurst seem to have done better this season than those in any other part of the colony. Mr. Seabrook having secured 12 tons from 160 hives, and another 40 tons, so we heard in Sydney, but we could not get the name or the number of hives he had. The Messrs. Bloxham Bros. have also had a better season than for several years past, but it could not be called a first-class crop. A real good crop would be a ton for every 6 or 8 hives. A ton for every 20 or 30 hives is the best we have heard of.

We visited the "Bees and Honey" pavilion at the Royal Agricultural Society's Show. Had our opinion been consulted we would have had it "Honey" only. The display was not as great as last year. There were good shows of honey by Messrs. Abram, Roberts, and Seabrook. As usual Mr. Abram, and justly too, secured the largest share of prizes in honey and bees. The Messrs. Hordern and Co. had a splendid display of bee goods, mostly those of the well-known American makers, A. I. Root and Co. We understand that before long they will

start manufactories of their own in this line. Honey was being sold from the beginning to the end of Show, nearly all in glassware. We were told by one interested lady this show was the Christmas or harvest of Sydney honey dealers. Mr. Trahair had a fine exhibit of honey, non-competitive.

## VICTORIAN APIARISTS' ASSOCIATION.

### ANNUAL MEETING.

**Will the members and friends** please remember that the Annual Meeting will be held on 9th June. Circulars will accompany the May issue stating full particulars as to place of meeting, time and subjects, etc.

**Will the Committee** all try and be present and send word to the Secretary as to any particular subject they want ventilated, or any business they wish the Association to take in hand.

**Will the beekeepers** at large bear in mind that this Association is not selfish but intensely loyal to the industry and to the Beekeeper, no matter whether you have sent us a subscription or not. If you are in difficulties as a beekeeper, send us word of your troubles, we want to help you. We want to be in sympathy one with the other, there is no one outside of our industry that knows or understands our cause. In the swift march of time the ruthless axe makes way for cultivation, "at our expense." The world at large will also beat us down to the last farthing, the last mite. The unprincipled adulteration man will vie with you in lining his pockets, "at your expense." Truly there is no sympathy outside for us. Is it not time we were all one in sympathy, and in unity of purpose, building up an organisation that will make itself felt throughout the whole of the Commonwealth.

**Come and help us.** If you can no come send your subscription, if you

cannot afford the half-crown because of the bad year, then send your name and address, so that we can correspond with you and thus known our strength, and know our friends.

**The Apiarists' Association** has not gone backward during the bad season but has gained in numbers, and is now stronger than ever and is on the right road to a useful and long life.

Will members please note that 14 days notice must be given if they desire to move that any rule be struck off or otherwise altered.

W. L. DAVEY, Secretary.

#### VICTORIAN NOTES.

R. BEUHNE

**WINTERING BEES.**—I have had several inquiries as to my method of wintering. To save time, ink, and postage, I will answer them here. Up to a few years ago, I made it a practice to take all supers off for the winter, store them indoors and shut the bees down into the bottom box. As the number of colonies increased and I provided two supers to each colony I found my storage room too small, so I left some supers on; but the result was not satisfactory to my way of looking at things. If there was anything wrong with a colony, or I thought there was, or I wanted to examine one for stores or brood early in spring, I had to remove the super, possibly the honey board, and break asunder the joint made air-tight by the bees, thus causing cold air to enter where it did not enter before. The following winter I put the super underneath the broodnest, in half the number of colonies, and left it on top in the case of the other half. The difference in September, October and November was so strikingly in favour of those which had had the brood on top during winter that I have since adopted that system altogether. I can now examine any colony any fine day in winter and leave them as comfortable as they were

before. I raise the cover, remove the quilt and can see at a glance the size of cluster and the amount of stores. On closing the hive the weight of the cover presses the quilt down airtight on to the edge of the hive all round. In this part, where there is a good deal of sunshine, even in winter, I think they winter much better this way than any other. The sun striking the sides of the lower as well as the upper body, the penetrating warmth rises and is retained by the cluster of bees and the stores surrounding them, escape of heat upwards being checked by the three inches of saw-dust on top of the quilt. This saw-dust being immediately over the brood-nest with only a piece of Hessian between it and the quilt, also absorbs the moisture generated by the cluster of bees, and thus prevents it falling down between the bees and combs. After the last extracting I put the combs on top first to get them cleaned up, so as to give no inducements to robbers. When putting them below I contract the entrance to three or four inches. Colonies so prepared may be left untouched till quite late in spring. When the queen needs room they will extend the brood nest down into the empty combs. If there is a fair flow later on a super may be put on top or the position of the two they wintered in reversed. For putting below the brood-nest when wintering down (or rather up), I use all worker comb, rejecting drone and clear white combs, as the former are not wanted for what may be the future brood-nest, and the latter are wanted for hiving swarms on next spring. For this purpose they are put on the hives after last extracting, to get licked dry and then stored away indoors. They are much less liable to be attacked by moth worms than dark combs, and after being trimmed back with the hot uncapping knife to  $\frac{1}{8}$  inch (to get a fresh face on them), they are the very best thing to hive swarms on, where the weather is fitful and changeable at swarming time, and the spring flow short. A swarm hived on drawn combs has the

best chance of storing at once, when its numbers and vigour are greatest, and thus keep on breeding through any cold spells which may follow. A set of foundation may be placed on top and the resulting combs or such of them as remain clear will at the end of the season again provide combs for swarms for the following spring. But I am wandering. Where am I? Oh yes, "wintering." Well, I am convinced that the bees prefer wintering on top, for in many cases where I left the super on top (empty) without a honey-board between they shifted upstairs, in four cases even through the honey board, leaving the queen below to perish. I am quite prepared to admit that when you leave the super chock full of sealed honey they will winter at the bottom, and even when the brood chamber is on top they cluster on the lower half of the combs, but the animal heat generated by the cluster of bees is better conserved and a more even temperature maintained when the stores are on top than when the heat escapes into a super of empty combs above the bees, for who is going to leave a super full of sealed honey on top? I am not, particularly this season.

#### BEE-NOTES

[By LOYALSTONE]

BEE-STANDS—Placing hives on mounds of earth about 4 inches above the surface appears to be the favourite stands for bee hives. Many do not like the idea, and the following make excellent stands—procure quart beer bottles with a sloping neck on them. Take a crow bar pointed at one end, where you intend making your stands. Procure a long string so that you go in a straight line. At the distance to suit yourself between each colony make 4 holes with sharp end of crowbar of such a distance apart as will suit the hive you used to set on. Place the bottles in neck down-wards and hammer them down level with a mallet, first placing a thick piece of bagging doubled over the bottom of the

bottle, as otherwise you will break them during the hammering process. You can have the height to suit yourself, and you have an everlasting and clean stand. Mr. James I think first mentioned these kinds of stands in the A. B. B. some years ago. I notice the Hawkesbury Agricultural College is going in for establishing an apiary to teach the "young idea" how to keep bees. These experimental affairs are proving nothing more than "white elephants" to this state, and very expensive ones at that. It is about time people should object to seeing their money squandered with these costly affairs. At the College they intend placing the hives on cement concrete, which forms a hive stand and alighting board. The hives will have no bottom board, simply resting on the concrete. A great idea, don't you think so Mr. Editor. I vote we form a deputation and wait on the Minister for Agriculture, and ask him also to form concrete stands for the bee-keepers throughout the state. Fancy me going to the H. A. C. to learn bee-keeping. The lecturer takes me out and says: Now look here! young fellow. The first thing you want to do is to form concrete stands for your bees. Very good, says I, but I can't afford such expensive ones. Nothing to do with me; says the lecturer. The Government built these, and sent me here to show you how things should be done. Excuse me, says I. Will this apiary pay for all this expense. Oh no! says Mr. Lecturer. The Government don't mind losing a hundred pounds or so a year. As long as I teach you how to lose the same amount. It puts money in circulation, don't you know. Well good-bye says I. I am going to work bees on a cheaper basis than what you will teach me.

GOVERNMENT ASSISTANCE—Strange is it not? that the Government will go to the trouble of fostering up an industry, and do their best to kill it at the other end, at one and the same time. I refer to the destruction of forests. I have written and tore this subject about time after time, and at last I believe the Government have

a hazy idea of replanting forests and preserving the best of what timber is left. I do not believe that the bee-keepers are trying in anyway to prevent wholesale ringbarking. There are bee-keepers in every electorate in N. S. W. Why don't they interview their members when visiting their electorates and point out to them clearly this ruination of timber. Their member then, if he is a man worthy of the position, will use his influence to prevent the frittering away of this valuable asset to the State. People do not seem to realise the value of timber. It is the timber which is the largest national asset of Russia, turning in to that Government annually millions of pounds. If as I say every one used his influence to the member for his electorate and gave each member a few statistics from other countries, it could not fail to do good, but if things are still allowed to run on as at present then I say the best honey producing forests in Australia will be destroyed. It will only mean a matter of time. I have often spoken to the member for my electorate, and always found him willing to listen to every argument on the subject. He also says that very few Members of State Parliament appear to understand much about the timber industry, and he has converted several in favour of Forest Conservation on the strength of mine and other beekeepers' arguments in this district.

### QUESTIONS NEXT MONTH.

1. Have you had any experiences as to the influence of nurse bees over young bees? Or will the bees of a savage swarm have any influence over the offspring of a new queen given them in place of their mother?

W. B. MCINTYRE.

2. Has any one experienced trouble in Root's Foundation Rollers with cell-butts sharp and square at corners, instead of round—it is one of the latest. If so can it be remedied?

3. What time does the box of Victoria bloom, especially in the Wimmera? Is its honey producing quality certain?

4. Does the Victorian mallee give good honey, and is its blooming regular.

GEO. COLES.

5. Will foul brood germs die on combs if left off hives six months?

6. Do you know of any way of treating combs to kill foul brood germs, so that combs may be safely be used on a clean hive without any danger of infection?

7. How would you go to work to cure, by McEvoy's cure (an apiary of 100 hives) of foul brood, work to be done in spring when a small flow of honey is coming in?

### SEASONABLE WORK.

See that all hives have a supply of honey to last them till spring time. If some have any to spare give to those that appear not to have enough. That there is top warmth in the shape of linoleum and newspapers on top of cluster. Paint hives, especially tops—white lead and linseed oil makes a good paint. See that tops are waterproof. As the swarm contracts with the winter coming on cut out all drone and old black comb and melt into wax. The combs so cut will make good starters in the spring. Be sure there is food enough in the hive. Contract entrances.

### PUBLICATIONS RECEIVED.

We acknowledge receipt of first copy of *The Dairymen*, a journal devoted to the dairying industry, dairy stock interests and the trade, published by the Dairying Publishing Company, 91 Pitt-street, Sydney. Though there are many journals published in the interests of the dairyman, yet no dairyman will find this one too many, being full of sound, practical information.

From the U. S. Department of Agriculture, Proceedings of the "Thirteenth annual meeting of the Association of Economic Entomologists."

Constitution and Rules of the Machine Shearers and Shed Employees' Union.

From Messrs. Burns, Phillip, & Co., Sydney, Land Settlement and the New Hebrides.

Catalogue for 1902 of the W. T. Falconer, Manufacturing Co., Beekeepers' Supplies, Hives and Extractors, etc., Jamestown, N.Y., U.S.A.

### Hand-Fertilization of Queens.

Inclosed you will find a paragraph that I copied from a report of Nelson W. McLain, apicultural agent of the Department of Agriculture, who made experiments with bees at Aurora, Ill., in 1885. I have looked through other reports of the Department of later years but could not find anything further on this subject, which, if it is practical, would be a great thing for bee-keepers.

In McLain's report he tells of experiments made in trying to fertilize the larva, and also when the queen is just hatched, but he met with no success, except in the latter case, which you will find in the inclosed article.

MINNESOTA.

The paragraph from Mr. McLain's report reads as follows :

"When the virgin queen was 6 days old orgasm occurred, and on the evening of the seventh day we removed her from the hive and placed drops of the male sperm upon the vulva as she was held back downwards, by gently grasping the thorax between the thumb and finger. The instant the male sperm was pressed from the testes and seminal sack of a mature drone upon the excited and distended vulva, it was curious to observe the effect. The action of the abdomen and vulva resemble that of young birds while being fed. There was the reaching up after the seminal fluid, and an action of the parts resembling the opening of the mouth and swallowing food. As much seminal fluid as could be obtained, by the imperfect method employed, from three or four drones, was utilized and readily absorbed by the queen, after which her wings were clipped, and she was dropped on a frame covered with bees and returned to the hive, and the bees were liberated. Up to this time her appearance and actions were those of a virgin queen. The next morning, 12 hours after exposure to the seminal fluid, her abdomen was distended, and her appearance and actions in all respects were those common to fertile, laying queens. She was moving about

slowly over the combs, and peering into the cells, and in 24 hours afterwards she had 400 or 500 eggs. In due time the worker-larvae appeared, and at this date (November 13) worker-bees in considerable numbers are being hatched. We then reared two queens from the eggs laid by this artificially fecundated queen, in queenless colonies, and as soon as they were hatched I clipped their wings, and when orgasm appeared they were treated as before described, and in three days one laid a few eggs in worker-cells. The other has the appearance and action of a fertile queen, but has laid no eggs, and the lateness of the season forbids advantageous continuance of the experiments."

The success claimed by N. W. McLain in fertilizing a queen by hand was well known in bee-keeping circles, and the fact that the thing has never been repeated by him or any one else, in all these 16 years or more, gives some ground for the belief that no such success was ever attained. He reports success in three cases.—*American Bee Journal.*

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### Starting Queen-Cells with Eggs.

Some months since a writer in the A.B.B. proposed to take away from a colony its queen and all its unsealed brood, leaving nothing but eggs in the hive, and said:—

"Only eggs being present they cannot start too-old larvae to make queens with."

The *American Bee Journal* says:—A novice is very likely to entertain this view, and yet there can hardly be a surer way to get bees to start queen-cells with larvae too old. For they are not satisfied with what queen-cells are first started, but will continue to start cells for several days, and by this time the larvae will be too old. If all are allowed to remain, no harm will be done, for these later and poorer cells will be among those destroyed by the bees. The harm comes when the ignorant novice takes the cells one at a time and distributes them. The experienced bee-keeper will see that in the distribution of cells each

nucleus shall have two or more cells, so as to give the bees a choice, and among those given there will be, in each case, one that shows by its appearance that it is not among those later started.

### Something to be Thought Over.

Results of two consignments of honey, exactly same quality and package sent from one apiary in December last to two separate Sydney commission houses. The honey was all iron bark and yellow box:

Dec. 7. By 36 tins honey, 2051lbs.	
at 2½d per lb.	£21 7 3
2 tins, 11lbs. at 1½d	0 16 4
Charges	
38 " .... ....	£22 3 7
Charges	3 2 3
	£19 1 4

Dec. 14 By 17 tins honey, 986lbs. at	
2½d per lb.	£11 6 0
19 tins, 1100lbs at 2½d	12 12 1
Charges	
36 " .... ....	£23 18 1
Charges	2 2 6
	£21 15 7

It is a mistaken idea that bee-culture is a lazy man's road to wealth and affluence. It requires hard study, hard work, and unceasing activity the year around to be successful. The same amount of capital, brains, and energy, invested in any other occupation would yield as good or better returns. If love of ease and the luxuries that gold will buy are the overwhelming passions of your life, do not seek bee-culture as a means of gratifying them, as failure all around would be the inevitable result.—D. W. WAKING, in *American Bee Journal*.

### FOR SALE.

ABOUT 60 SECOND HAND HIVES  
10-frame Langstroth, well made, cheap.  
Together with Extractor and Honey Tins.

Apply at Office of this Paper.

### NOTICE.

MR. R. R. BEUHNE, Tooborac, is appointed Agent for Victoria for the AUSTRALIAN BEE BULLETIN, and is authorised to receive subscriptions and advertisements for same.

E. TIPPER.

### TO BEEKEEPERS.

FOR HIGHEST PRICES and PROMPT RETURNS CONSIGN YOUR HONEY, WAX, Etc. to

P. J. Moy & Co.,  
161 SUSSEX-STREET,  
SYDNEY.

### Beekeepers' Supplies and Specialties.

IN consequence of many requests to do so, and in order to utilise labour during the winter, I have decided to receive orders for Beekeepers' Supplies, as well as certain specialties, during the winter months, and execute same as far as time and present conveniences will permit.

No Goods will be stocked (Foundation excepted), but made to order only, of good material and accurate, sound workmanship.

Langstroth 8 or 10 frame Hives.

The New Rapid Noiseless Extractor, a high-speed 4-frame reversible Extractor with brake and removable comb baskets, and without cog-wheels.

New pattern Honey and Wax Press (not supplied for Victoria.)

Circular Saw Bench, with attachments for all hive work.

Queen introducing Cages.

Hatching Cages, &c., &c.

Beekeepers' own wax made into foundation, 6 7, 8 and 9 sheets to pound at 1d. per sheet; 10 and 12 sheets, 1½d.

Full particulars on application to

R. BEUHNE,  
TOOBORAC, VIC.

Agent for "A. B. Bulletin" in Victoria.

N.S.W.

## BEE FARMERS ASSOCIATION.

## ANNUAL MEETING.

The above took place at the Farmers' Co-operative Rooms, Sussex-street, Sydney, on Tuesday afternoon, April 1st. There were present—Messrs. Hessel Hall, M.A., President; E. Tipper, J.P., Hon. Sec.; J. A. Rien, Hagon, Gee, Niven, Packham, Ager, Johns, and J. E. Taylor.

Mr. Tipper read the minutes of the previous meeting and the annual report and balance-sheet, as follows:—

*First Annual Report. April 1, 1902.*

A letter was received some time after waiting on Mr. Price from that gentleman, stating that the law at present enabled beekeepers to obtain land on forest reserves. The thanks of the Association are due to Mr. Price for the trouble he has at all times taken in bee matters when called on. And the special attention of beekeepers should be called to the efforts being made by the present Government for the preservation of State Forests.

Owing to the very dry seasons for several years past numbers of small beekeepers have given up beekeeping, and many large beekeepers have suffered considerably both in returns of honey and loss of bees. It becomes more and more apparent each year that beekeeping is no child's or amateur's occupation. To succeed in it requires skill, experience, capital and perseverance. The falling off of a number of small beekeepers is a matter not to be deplored, as they were the chief source of the lowering of the price of honey, their chief occupation, whatever it may have been, not being affected by the price they sold the honey at.

THE LONDON MARKET.—The Farmers' Co-Operative Co. are entitled to the thanks of the industry for their endeavours to place our honey on the London market. Through the time it arrived in England, and there being also a good season on there at the time, it was not a success. The English beekeepers are doing their best to create a prejudice against all honey but what they raise themselves. I would call your attention to the proposition of Mr. Gaggin, to be considered later on, that united efforts should be made by the beekeepers, not only of this, but the other Australian colonies, to induce the Federal Government to use their influence with the people of Great Britain to abate the prejudice complained of.

Honey should go home from here so as to arrive in the English winter, and beekeepers wishing to export should remember there are many centres of consumption in England besides London and Birmingham.

One of the greatest matters for concern at present to N.S.W. beekeepers is the low price of honey. In Melbourne and Adelaide the wholesale quotations are up to 3½d. per lb., and the retail 6d. per lb. In Sydney the wholesale newspaper quotations are 2½d., and at Newcastle 2d.

The paid-up members of the Association now represent 5,500 hives or swarms of bees. 1st April, 1902.

## BALANCE SHEET.

## RECEIPTS.

To Subscriptions	...	£3	7	6
Balance due	...	3	8	0
		£6	15	6

## EXPENDITURE.

Dec. 26.	Circulars, ballot papers and postage	...	£0	12	6
Feb.	[Circulars with proxies	...	0	12	6
Apr. 9.	12 months' standing advertisement to April, 1902...	5	0	0	0
Feb.	Advt. Annual Meeting	...	0	10	0
		£6	15	6	

Mr. Gee moved, and Mr. Packham seconded, the adoption of the report, and Mr. Niven moved, and Mr. Packham seconded, the adoption of the balance-sheet.

In reference to the balance due by the balance-sheet, Mr. Ager moved, and Mr. Johns seconded, "That the offer of Mr. Tipper to forego the charge for standing advertisement in the A.B.B. in the event of subscriptions not enabling the accounts to be paid, be thankfully received."—Carried.

Messrs. Ager and F. W. Smith were appointed scrutineers of the ballot papers, who ultimately declared the following elected:—President, Mr. H. Hall, M.A.; Vice-Presidents, Messrs. Penberthy, Bradley, and Eather; Secretary and Treasurer, Mr. E. Tipper; Committee, Messrs. E. J. Rein, J. Pennington, F. Bolton, J. R. W. Gaggin, G. Packham, E. Dowling, J. R. Irvine, F. Gersback, J.

Anderson, W. Gee, P. Riddell, W. E. Bagot, and W. Niven.

The following was the balloting for officers:—President Hall, 7; Pemberthy, 1; Burke, 1. Vice-Presidents—Pemberthy, 23; Bradley, 20; Eather, 17. Committee—Rein, 25; Pennington, 21; Bolton, 20; Gaggin, 19; Packham, 19; Dowling, 19; Irvine, 18; Gersback, 18; Anderson, 18; Gee, 17; Riddell, 16; Bagot, 15; Niven, 15.

Mr. H. Hall spoke of the injury caused by bush fires. He said it was a greater evil than bee diseases to beekeepers. Steps should be taken to try and prevent the occurrence of such.

Mr. Niven and Mr. Johns spoke strongly on the matter.

Mr. Packham moved, and Mr. Tipper seconded, "That a deputation wait on the Railway Commissioners on the matter."

The memorandum of Mr. Pemberthy was now considered:—The Railway freight is too high for honey in comparison with butter, the both being on the same class, and honey being only quarter the value. It takes or costs one ton of honey to take 15 tons of honey 250 miles, but the price of one ton of butter will carry 62 tons of butter the same distance.

It was resolved that the deputation on bush fires should also approach them on this matter.

In the matter of empty new tins, it was also resolved this should be one subject to the Railway Commissioners.

A proposition by Mr. C. H. Miles was also discussed:—That organisers be appointed in several districts with the object of forming Local Associations, with the signatures of Secretary and President, with the object of carrying out Rule 7.

The following motion was carried on the motion of Mr. Tipper, seconded by Mr. Johns, "That beekeepers in different localities be urgently desired to join local associations to regulate the selling price of their honey, and deciding the best methods of disposing of same, also purchase of tinware, etc."

The following suggestions from Mr. C. H. Miles was read:—I would suggest

a deputation wait on the Minister for Lands to try to get an alteration in the Land Act in regard to special leases to have it something similar to the Victorian Act. In that Act they have a right to get a license to have a bee-farm on Crown Lands, under that Act get a license fee. Whereas under the Land Act of N.S.W. you have to make an application and pay a deposit of £4 for an area of 4 acres which after all with other expenses amount to nearly £10. As I am about to make an application of that kind, and cannot get better terms than this at the Lands Office, I will have to try for private lands. See, I have to go through the same formalities as if I was selecting 340 acres. You see by this proposition how beefarmers are placed. Hoping the Association will take the matter in hand.

This matter was discussed at some length, the Chairman expressing the opinion that the simplest way was to lease an acre from a private person adjoining the Crown Lands. As the afternoon was drawing late it was felt there was not time to discuss this matter properly, and the subject dropped.

Mr. W. Niven spoke on the matter of the destruction of native timbers. The trend of the discussion was that we must fit ourselves to the changing conditions by having less hives in the apiaries.

Mr. Tipper spoke of honey quotations in the Sydney press. While in Melbourne and Adelaide the newspaper quotations were from 2d to 3½d per lb., in the quotations in the Sydney press till within the last week or so was from 1¾d to 2½d, Newcastle even lower. Commission agents would quote the Sydney prices to those who had honey to sell, and so make good money out of them to the loss of the producers.

The matter of Auction Sales under the control of the Association was brought up, but as time was short, and it was thought a quantity might glut the market, the matter was allowed to drop.

The following communication was read from Mr. Gaggin:—Might I suggest that it strikes me it would be wise for the Association—in conjunction, if possible,

with other Australian combinations of beekeepers—to approach the Federal Government through the Minister for Trade, etc., pointing out to them the most unremunerative prices obtainable for Australian honey in London—about 27/6 per cwt. being the top quotations of that market for our product—while at the same time New Zealand honey of no better quality than our best brings from 35s to even 50s per cwt. It is just about time that the cause of this startling disparity in prices was inquired into and ended, and could not the Federal Government try to obtain equal chances for the beekeepers of Australia as the fortunate New Zealanders already enjoy? To me it seems this might well come within the scope of the duties of the Commonwealth Government, which seems so zealous for the establishment and maintenance of industries of all kinds. Certainly, to Australian beekeepers, there should be no subject of such vital importance as the export of honey to Great Britain. It is our one hope to prevent the continual glutting of the local markets, which makes honey a "dead bird," a drug on the market nearly all the year round.

Mr. Tipper thought if the upper 10,000 of English society could be induced to patronise Australian honey, it might get into popular favour. Such might be worked through our own Governors or such men as Lord Carrington, who took great interest in Australian matters.

Votes of thanks to Mr. McFadyen, Manager of the Farmers' Co-operative Society, for the use of the room, also the Chairman and Hon. Sec. concluded the business.

The deputation waited on Mr. J. Harper, railway traffic manager, who represented the Railway Commissioners, on Wednesday, April 2. Mr. Hall after waiting till ten o'clock, had to leave. Mr. E. Tipper (hon. secretary), introduced the several members, Messrs Ager (Moss Vale), T. Johns (Braefield), W. Niven (Engowra), and G. Packham (Molong), and asked the Commissioners to make some reduction in the rates at present charged for

the carriage of honey. He pointed out that honey and butter were rated in the same class, but whereas the value of one ton of honey would only pay freight on 15 tons of it over a distance of 250 miles, the value of one ton of butter would carry 62 tons of that product a similar distance. Another matter was the injury caused to beekeepers by the sparks from engines igniting bush lands adjacent to railway lines. The deputation also asked that new tins be carried free to apiaries the same as returned empties. Mr. Harper, in reply, said the Commissioners could not make any alteration in the rates charged for the carriage of honey, as it was included in the same class as butter and many other products. If the Commissioners acceded to the request of the deputation it would perhaps necessitate a general reduction in rates for these goods. With regard to the danger of sparks from engines, he said that from experiments in Victoria and throughout the world that had been made he felt satisfied that they had the best means in use here for preventing the nuisance. It was a matter of very great consideration to them, the Commissioners, as they were liable to great losses through it. The third matter brought forward by the deputation would necessitate consideration before the Commissioners could give a definite reply.

Since the Convention we have received the following communication from the Railway Commissioners:—

New South Wales Government Railways  
Sydney, 8th April, 1902.

SIR,—With reference to your call at this office a few days ago, relative to the rate for honey and empty tins when conveyed by rail, I beg to inform you that the matter has received the careful consideration of the Commissioners, but it is regretted that at the present time no reduction can be made on the freight charges on honey. It has however been decided to in future carry the empty tins free of charge provided a declaration is given that they will subsequently be returned full by rail.—Your obedient servant,

JOHN HARPER,  
Chief Traffic Manager.

Mr. E. Tipper,

## SCOTLAND.

Mr. J. F. Meiklejohn writes:—I got one or two *A.B.B.* since you wrote, and I need not say I am interested in the wee beasties yet. Unfortunately in my present abode I have not the accommodation for an apiary, otherwise I would go in for a few hives. Still I have got the offer of a fine place for a few, but it is so far away (2 miles), I am afraid I could not supervise it properly, particularly at the swarming season. I have been invited to inspect the largest apiary of the district, belonging to a gentleman who appears to thoroughly understand bee-keeping, and whom I heard reading a paper on the subject to the members of a Literary Society. From what he said and from the exhibits he had he works his bees in much the same way as you do in N.S.W. I asked if he carried his bees to the heather. He said no, the bees could go themselves, as they were only about two miles from Sheriffmuir, which is covered with heather. At a show held here last August he had some very fine exhibits, honey in comb, and very beautifully got up, and of fine quality. He sells all his honey in the comb. I have not been to see his hives yet, but as soon as we are done with the frost and snow I mean to visit him. Last autumn I noticed a good deal of honey in 1lb. sections in the shop windows, both here and in Stirling, and other places. These sections are retailed at from 1s to 1s 2d each. I had an opportunity of tasting the honey in this state and must say it was very fine, and quite unlike that which I told you of in a former letter, and which was called extracted honey. I see from the *Sydney Morning Herald* which I received this week, that notwithstanding the new Protective Tariff you have now got, the price of honey is as low, if not lower, than it was in Free-trade times. This must be very disappointing to beekeepers, particularly to those who thought a protective tariff would cure all evils. Still it would be premature for me to say anything on the subject just yet. I only trust, that at no very distant

date, protective sweets may be secured all round by both producers and consumers. You know me of old on the subject and I am still a pervert, I have not altered in my opinion as to an effort being made by Australian honey producers to put their produce on the English market. And I have still very little faith in it being done successfully and profitably it attempted to be done as in the past, through middlemen. I hope to learn soon that a united effort will be made by the beekeepers of N.S.W. to thoroughly test the matter. I trust you have had a good season with your bees and a lot of honey. We have had a pretty severe winter with frost and snow, but I have not been put about over it. I have got through it without colds. Indeed, I rather like the hard frost with ice 7 inches thick on the ponds. I must say I was a bit sorry for you folks out about Willow Tree and down in the Hunter valley, at being exposed to the awful heat you have had, and grass and everything burnt up. Some of our friends not far from you, tried to frighten us from going home, as the winters were awful. I know which weather I would have, 10 degrees of frost or 100 to 110 degrees of heat. Of course we knew all about it as we had gone through it all before, which they had not. We will soon be into more genial weather, and you know what spring and summer is at home. The war drags on, but the grinding process must go on all the same. No matter what mendacious continental snarling is indulged in, Joe must carry it out to a finish. Australia and New Zealand have done splendidly. I think it may turn out to be a blessing in the long run. Britain did not know her strength before, and I rather think the envious continental nations will have to be less bumptuous than formally when they have to do with John Bull. As hard work hardens the sinews of a man, so will this tough struggle strengthen the Empire as she has never been strengthened before. All honour to the Britains beyond the seas for the noble work they have done for humanity.

**Mating Queens in Confinement.**

Vice-President W. T. Flower has been conducting some experiments in this line during the past summer, and although, as he says, he is not yet prepared to throw up his hat and shout "Eureka," he avers modestly that he believes he "is on the road to success." He means to carry on his experiments next season and begin earlier. He ascribes the comparative meagreness of results to the fact that he started too late. He read a paper before the bee-keepers at their last monthly meeting, in which he told briefly what he had done and exhibited a photograph of the test under which the experiment had been made. The tent was 12x10x6 feet, the frame being composed of shingling lath with a 12-inch board on edge at the base and the covering consisted of muslin and netting. Seven three frame nuclei were employed. The entrances upon the outside of the tent being covered with zinc excluders, which permitted the worker bees to take flight but retained the queens and drones. Three one-half inch holes were bored in the back end of each hive to permit the queens and drones to take their flying spells under shelter, when the mating time came around.

Mr Flower said his investigation had shown him that the queens had all hatched and disappeared except one, and that she had undoubtedly become fertilized because she had begun laying, her progeny being dark bees, probably hybrids. What became of the other queens was a mystery, although an explanation could be found in the presence of clusters of dead bees in the upper corner of the tent, indicating that they had died of starvation. The newly hatched queens had probably been the centre of each of these groups. There was no doubt that the one queen had mated, because several leading members of the association who had been out to his apiary had examined the contrivance used for mating, and had seen the queen and her progeny and Mr. Flower was confident that another season he would be able through his recent experience to overcome the difficulties on

this account. In the discussion following the reading of this paper it was suggested that strips of zinc constituting bee escapes might be inserted at intervals along the upper edges of the roof of the tent to overcome the tendency to clustering, the apparent purpose of the bees being, in ascending, to get to the outer air, and an improvement in the shape of the roof, so as to make it more conical, with an escape in the top was proposed. Altogether everyone appeared to be hopeful regarding the outlook of the experiment.—*American Bee-keeper.*

**Aiken's Honey and Wax Separator.**

A VALUABLE ADJUNCT TO THE SOLAR WAX-EXTRACTOR.

BY R. C. AIKIN.

The principle upon which this device works is specific gravity. Honey weighs 12 lbs. to the gallon, and water about 8 lbs. I do not know what is the weight of bees-wax, but I know what every apiarist does—that wax is lighter than water. It is immaterial as to the exact proportion, so we will call it 8 for wax and 12 for honey.

Now, suppose you take a cake of wax 3 inches thick and put it into a bucket of honey or into a tank where the wax has plenty of room so it does not touch the bucket or tank in any way that will interfere with its floating, and the wax will stand one inch above the surface of the honey. You see it is just a matter of weight; 2 parts of the honey are as heavy as 3 parts of the wax, hence the wax carries its surface clear above the honey, just as a cork floats a considerable part of its bulk above water. It matters not whether the wax is liquid or solid. It is bound to float just the same. A third of its depth will stand above the honey, and the rest will be submerged. This is placed under the drip as it runs from the pan supporting the mixture of wax and honey-cappings, broken or any kind of comb. The first to flow from the melting combs will be honey, dropping into the separator at the larger of the two compart-

ments. The partition between these compartments does not reach quite to the bottom by about  $\frac{1}{2}$  inch, hence the honey will pass under and rise in both compartments alike.

The outlet for honey is deeper from the top than the wax-outlet; and so when the honey rises to the opening it flows out, and will continue to flow as long as it pours into the other compartments, passing under the partition. The wax will begin to come shortly, and, being so much lighter than the honey, will begin to rise or pile up in compartment A. No matter what amount of wax falls into the honey, it keeps rising above and settling below the level of the honey-outlet;  $\frac{1}{3}$  the depth of the body of wax is above and two-thirds below; thus it increases until it flows out at its own overflow-outlet, and thereafter maintains its position, becoming neither deeper nor shallower. As long as wax and honey continue to flow in, the wax floats in its own compartment; and the honey, being so much heavier, sinks right through the wax and comes up and out at its own level. If wax stops coming, that body of wax in compartment A just remains as it is, neither less nor more, and honey may pour in all day, but will pass through and out at its own door; and, likewise, should honey stop coming, but wax continue to flow, the honey in the separator remains stationery, and the wax overflows into its own place. There is no limit; the two must separate and flow their own way when they come into the separator, whether it is tons or pounds.

There should be a check or dam to keep back the slumgum that would wash down into the separator. There is always more or less of sediment that will get down; but if the cocoons and more bulky foreign matter are kept back the fine sediment will be found accumulative between the honey and wax; and when the remnant of wax cools and is removed the sediment comes with it.

This little contrivance I count as a valuable adjunct to any solar, and may be used to advantage in many places. I have made my solar with one end for all sorts of trashy combs, and the other end for

melting cappings, candied sections, new broken combs, and any clean combs that may contain honey suitable for table use that can not well be separated in the extractor. Cappings or broken combs placed in the solar will very soon release the honey and let it run into the separator, and from there it will soon be in a tank or receptacle underneath, and away from the heat and light. I have sold many hundred pounds for table use that has been through the solar and separator. The fact is, the separator is a sort of strainer, acting on the specific-gravity plan, and does its work when the honey is quite warm and thin, so so that it separates freely, the impurities floating up next to the wax.

For cooling and caking the wax, I use a series of small pans with an overflow from one to the other. The honey, besides being strained by the gravity process in the separator passes below into a tank, and there, while still warm and thin, goes through another gravity-straining process; and, if not yet satisfactorily done, can be drawn from there and put through cheese-cloth or other strainer. —*Gleanings*.

[We saw the idea carried out five years ago by Mr. R. Beuhne.]

### How Little Neglects Affect the Profit of the Apiary.

For want of a nail the shoe was lost;  
For want of a shoe the horse was lost;  
For want of a horse the rider was lost;  
Being overtaken by the enemy and slain;  
And all for want of a horseshoe nail;

How well this old ditty illustrates the losses that occur in the apiary for little neglects. For want of a pound of feed in the spring the colony may be lost; and for want of the colony the harvest is lost, as there are no bees to gather it.—*Canadian Bee Journal*.

To unite our queenless and weak stocks in the spring, I have found from practical experience is waste of valuable time. It is all very well to do it as an amusement, but for profit never unite two or three or ten weak stocks. See that they have enough honey and keep them

shut down and give them a good letting alone and they will be sure to pull through. If you have ten and you put nine together there is only one queen left and that may be the poorest queen of the lot. You have not only lost four or five but you may have destroyed the good queens and very likely got a poor one left, and you have got nothing but your queen. Don't unite in the spring, let them pull through if they can; if they don't you have got the hive for something better when the warmer season comes. That is my first experience after twenty-five years. I used to unite them and when we put them together they made a very good looking stock of bees, both in honey and bees, but in three weeks from that I had only one stock of bees and therefore I think my time was wasted.—MR. HALL IN *Canadian Bee Journal*.

Tough unglazed porous paper, waxed, are recommended for retail honey purposes by C. Davenport, in *American Bee Journal*.

Adrian Getaz, in *American Bee Journal*, thinks that in melting down wax, if salt is added to the water, the wax will separate much easier from the refuse.

W. F. Sladen gives in the *British Bee Journal* a statement that there is a segment in the abdomen of the bee, which gives a scent which forms an important means of communication between bees, quite as important, if not more so, than the "joyful hum." The standing and elevation of the abdomen at the hive entrance is for exuding this scent.

Mr. Neesam, a Thirsk hairdresser, has had a remarkable experience. While crossing the street he saw a swarm of bees. The queen settled on him and her subjects followed suit. He stood calm and still, and was soon covered with the creatures. An expert apiarist was fetched, and he transferred the queen into a hive, where she was followed by the rest. The discreet Mr. Neesam went his way unharmed.—*Canadian Bee Journal*.

ONE WAY OF WINTERING IN CANADA.—Without bottoms, hives placed on 2 x 4 scantling, 20 in. apart, over a 4 in. bed of

forest leaves, (Maple) three leaf beds 12 feet long, and over the other, 8 hives on each bed, 24 in all, supported on two slender trestles which can be quickly removed; 100 hives quickly packed in a space 10 x 12; no hives nearer another than four inches.

The Central Canada Exhibition, Ottawaa, prize list contains the following section:—

SE '57- -HONEY AND APIARY SUPPLIES

Exhibitors showing honey not the product of their own apiary, in competition for prizes, shall forfeit any prizes awarded and be debarred from exhibiting for two years hereafter. This rule will be strictly enforced by the directors.—*Canadian Bee Journal*.

Now, now, we have something to tell our readers. Something, ah! well just read it. The *Rocky Mountain Bee Journal* gives the following on the authority of the *Irish Bee Journal*:—Bacillus Alvei in Human Saliva.—Woodhead states on the authority of Vignal that the bacillus alvei is an inhabitant of the human mouth—that great home of the bacteria where Leuwenhoek first discovered them. It is well, therefore, in working among bees to remember that human saliva can infect, and can start foul brood, and if the conditions are favourable to the bacteria, can destroy all the colonies in the apiary. A spark, if it can ignite the fire, is just as effectual as a torchlight.

COMICAL QUEEN REARING.—W. A. FLANDERS, THE BEE-MAN.—Prof. W. A. Flanders—you may have heard of him—has his Aparian Institute on Kelley's Island, and of course we visited his Institution. Mr. Flanders has a host of bee-families dwelling in busy harmony under every green tree in the neighbourhood. Talk of big prices for Merino rams! Flanders can get more money for an Italian queen-bee, with three rings around her tail, than any ram-peddler can get for the best Vermont Merino in his flock. Flanders showed us (in a vial of alcohol) one of these amiable little females sovereigns that had lately fallen in a duel with another amiable little female sovereign, for which, he declared with a sigh—which came from as low down as the seat of his broad pantaloons—that he

would not have taken \$60! Bugs is riz! But then the thing can be settled by arithmetic. Here are 50 other amiable little sovereigns, bred from this insect in the vial, for each of which Flanders can take from \$20 to \$25. The demonstration is plain—a little insect not so big as a toothpick, worth more money than a short-horn bull! The idea would be ridiculous if it were not true. But Flanders has improved upon the original Dr. Jacob Townsend, and instead of being satisfied with the orthodox full-blood Italian with three rings, has gone one better, and showed us a queen of his rearing with four rings around her body, all of the royal purple and gold."—*Ohio Farmer*.

If it is accepted as probable that it may take some time for a queen to mature after emerging, it would be well, if we attempt to follow Nature, to select queens that are known to be of full age, probably the majority of breeders will agree upon the second year as the best age, but if queens are made to "do their duty in a full colony," it will probably be found safe to use a queen of any age over a year, when she is found in a colony that is strong enough for commercial queen rearing.—*Beekeepers' Review*.

**HAULING BEES.**—ADIN STONE says in *Gleanings*, I have noticed the experience of others in moving bees from place to place, and the trouble from stings to men and horses in the operation. It has often recalled my own experience to mind. I will tell you how I moved my bees without closing the entrances. I had about one mile to move, and about as many hives as I could place on a lumber-waggon as they sat in the apiary. I loaded them in as they sat, first using the smoker to drive the bees inside. I hitched a horse to the load and drove to my destination; unhitching the horse from the waggon, I waited until morning, when I set them on their stands. These were full colonies in eight-frame hives, Hoffman self-spacing frames, loose bottom-boards,  $\frac{1}{4}$ -in. entrance full width of both ends of hives. All of them were left open as they stood when at work in the apiary. I moved on a lumber-waggon without springs, over a

stoney road, and through a small village, in daylight, between 6 and 7 o'clock p.m. I don't advise anybody, nor claim this as the proper way to handle bees; but I tell what I did successfully. Not a person was stung, nor any trouble whatever came from the bees. Of course, they came outside and clustered on the hives. I walked and drove the horse (not a very steady one either). I found the same principle to work in this case as in handling bees in hives or hiving swarms. When thoroughly alarmed, and filled with honey, the bees attended to their own business and troubled nobody. I am satisfied I could have driven for miles with them. I can not say that this plan will always work. It did that time and season, between spring and summer. Some new honey was coming in at the time.

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A. K., Yangan, Queensland, April 2.—Weather is fearfully dry, but bees have been doing well on lucerne.

F. S. Echuca, Victoria, March 19th.—My bees have done nothing this year. I have not had a pound of honey this twelve months, and will have to feed what hives I have. I am thinking of shifting from this part, for there is nothing left for bees or anything. All those that have bees around here are the same, and from present appearances next year will be worse.

W. B. M., Lyndoch, S. A. April 5th—Find enclosed 11s for two years' sub. for A. B. B., which I am sure I would be loser by in doing without, though I have been lazy in forwarding sub. We have just got through the worst season, so an old Bee-keeper says, there ever has been in this part—no honey for 12 months, a matter of feeding; but a light flow on now. I started my extractor this week, the first time it has been used for 12 months last January. Can I trouble you with a few questions in the "A.B.B." I hope you will understand the kind I mean, for I never heard of trouble with the round butted cell.

See Questions next Month.

## CORRESPONDENCE.

P. C. H. Geelong, Victoria.—I only keep 2 or 3 hives, and am satisfied if I get enough honey for home use therefrom. At present I have reduced to one hive, as foul brood, which is prevalent about here, owing to the number of old box hives around, broke out, and if it occurs again, I think I will give up keeping bees altogether. I think I will have to try the plan, suggested by your N. Z. correspondent viz.:—Make them build fresh combs every year, and melt up the old ones.

H. L. Jones, Goodna writes:—Thanks very much for "Swarthmore's" pamphlets. I have been watching this system carefully in "Gleanings" but I get additional light from the papers you sent me. I will give the whole thing a good trial early next season, and write it up for the A. B. B. whether I find it an advantage over my present system or not. My trade has now become so large that I am compelled to employ skilled help, and Mr. A. A. Roberts, of Muswellbrook, is coming up here shortly to run one of my queen rearing apiaries and supervise things in general. Mr. Roberts is one of the finest queen breeders in Australia, and his assistance will enable me to devote more time to experiments. With Mr. Roberts' advent I will have experts at the head of all departments—bees, tinshop, and saw mill, so will make things busy as well as hum.

J. J. H. Tecoma, Brogo, April 9th.—This has been a good year for honey about here. There being a good flow from black and grey box, have taken about 2 cwt. per hive, besides leaving a good store for winter. I can dispose of all my honey locally at 3d per lb net, which is my lowest price. Some storekeepers tell me they can get honey cheaper from Sydney than from me. It is a pity bee-keepers would not put a reserve on their honey when sending it to Agents in Sydney and refuse to sell good honey under a reasonable price. This should be a favourable

time to make a demand for higher prices as it should really rise in price, in sympathy with butter and cheese. Is it a fact that bee-keepers accept the low prices quoted by Sydney Agents, for first class honey? Or if it is inferior stuff which is sold at these prices; why not class it as such. Sydney quotations are somewhat misleading if good honey is not sold at 2d per lb, or under, as many are under that impression, and it has an injurious effect on the sale of honey in country towns. I regret not being able to be present at meeting of bee-keepers, but hope you had a good attendance and that everything passed off satisfactorily. Wishing the A. B. B. success.

A. W. B., Salt Lakes, Victoria, March 15.—This is a very bad season for bees in this part, there seems scarcely enough honey to be got for them to live on. I have been trying to feed them, but that brings the ants about very much—they seem more plentiful this year than I have ever seen them. In looking through my bees I see a great amount of brood with the capping taken off. The young bees (larvae) in all the different stages are partly uncapped. Speaking to another bee man he told me his was the same, and he says the ants do it. It is the little black ants that are so bad about here. Cockroaches are also very plentiful about the hives. There is something that keeps the bees from doing any good, as strong hives that have honey dwindle away and die. I have only 20 left, out of 51 this time last year. By the look of the trees the coming season should be a good one, they are loaded with buds. If you could give me any information as to how to get rid of these pests through the "A.B.B." I should esteem it a great favour. In preparing the wax for market I cannot understand why sometimes it is a good yellow colour, and sometimes it is dark, and there is always a lot to be cut off the bottom of the cakes of wax, as the fine sediment which goes through the strainer is mixed with the wax on the under side. I should like to know if there is any way of making it

settle to the bottom of the water and leave the wax.

[If your bees are strong they ought to be able to resist the ants. I do not think the small ants do it. It must be the bees starving. The small ants make their nests above the brood for warmth. Write C. U. T. Burke, Lynhurst, N.S.W., for his ant remedy. Re wax, put sulphuric acid in the water you melt it with. After melting strain through flannel, then allow to settle and dip off from top to put in o moulds.]

H. W., Rockhampton, Q., April 1st.—Herewith please find remittance for 2 years sub. for the A.B.B., which I think is a very good paper and shall continue to subscribe to same. Bees have been doing well here for the last 5 months. Trusting you are having a good season.

W. H. C., Stoke, Nelson, N.Z., March 15.—I am very pleased with the A.B.B. and can recommend it to any beekeeper. I should like very much to visit some of your apiaries in N.S.W. Here, in Nelson, modern beekeeping is very little practised. I have about 10 colonies generally, attending to them together with my other farm work, and I work entirely for section honey. The main flow ceased about a mon' th ago, and was a very fair season, although rather short. The only bees (so far as I know) kept in this district are the common black bees. I know one apiarist, who has given up beekeeping now, that tried Italians, but could not keep them pure, owing, no doubt, to neighbours keeping black bees in boxes and straw skeps. I should like to have Italians myself if I could keep them pure. Would you advise me to re-queen and try them. In looking through a hive for a neighbour in early spring, I found a great many of the cells (brood) contained two eggs. I intended to watch them for the result, but owing chiefly to bad weather I was unable to follow them. Had it been one of my own colonies I could have watched it. Can you tell me the reason, and also what would be the result.

[Should certainly recommend you from time to time to improve your bees by getting new Italian blood. See our list of queen-breeders. More than one egg in a cell may be caused by several reasons. A laying worker will place

several such in. They will afterwards have a drone-shaped covering, and small drones will issue. It will be only a matter of time and the swarm will die out. A young vigorous queen without sufficient bees to attend her, or worker comb to lay in, will also lay two or more eggs in a cell. In this case give such worker comb or frame with foundation in centre of brood.]

W. A. Meryla, April 20th.—A few issues ago I asked the following questions through your journal, viz.: Which are the best rules to follow in judging queens both for show and general purpose? and What should be the minimum price of queens? Getting no satisfactory reply I venture to give my ideas based on my limited experience. As for shows what with the tricks of exhibitors and often bad judging little dependence can be placed on the efficacy of prize winners. For general purpose we must select from result and give appearance a second place. The colour of the queen should not be the one particular aim, though she should not be too dark, she should be strongly built, and well developed prolific and throw healthy workers showing three bands, not particularly light, and which are endowed with as little of the swarming mania as possible, being strong built and having plenty of energy in honey gathering but not with their stings, and exceed the average of honey yield for the season. This is what should be called a tested queen. A select tested would be one that throws these qualities to her young queens. As for the price of queens, 2s 6d should be the minimum, but 5s is not a bit too much to pay for an untested queen to a breeder who has gained his reputation from the quality and productiveness of his queens, while some queens would be dear at a gift, whereas if being in a favourable locality a person's honey crop depends on the productiveness of those tiny insects.

C. U. T. B., Loyalstone, March 29th.—We are just having a good downpour of rain, the first of any consequence since October last. The drought has affected this part severely. I will winter up about 70 colonies of bees, having to double up a few. I sent a couple of blocks of wax to Sydney Show, and see

that I have been beaten for the first time in my career I had to fall back on well-water for refining, as we were out of rain water, and the mineral in the water was detrimental to the refinement of wax. And then the silly idea of making the conditions of over 10lbs. and under 12lbs. It looked to me as if the prize was made up for some one who had blocks of wax between these weights, and which were of the best quality. I trust that you will have a successful meeting, and add to the number of members. I note the N.B.K.A. is also holding a conference. I will send you a budget of notes for the "A.B.B." for next issue later on. What kind of a honey display was there at the Sydney Show? Who makes out the prize lists? The entrance is much too high for amount of prize money. Fancy going to expense and trouble of exhibiting, and paying an entrance fee of 5s for the chance of winning £1. I suppose they consider the honour worth a pound or two more. Re marketing honey, as long as the inferior honey is placed on the market good honey will not bring its value. If I was in a district where I could produce tons of inferior honey, I would run my apiary for wax alone, and make a better profit from it. Beekeepers are not plentiful enough to form local associations through the country. The destruction of timber will still go on, until a proper forestry department is formed, with officers who have a thorough knowledge of timber. Again wishing you success.

L. J. J., Waverley, N. Z., April 5th.—I notice by your last two issues of the A. B. B. that our Australian brother bee-keepers are complaining bitterly about the dry weather spoiling their honey crops. I am very sorry to hear this, as I always thought Australia was a fine honey producing country. It has been very dry in New Zealand this season, which seems to have done my bees a lot of good. This year I have taken 70lbs. of honey per hive, and then have left them about 30lb. each to winter on. The chief trouble and drawback here is bad attacks

of foul brood in the spring. Can any of your readers give me a sure cure for that dread disease. I will have some more to say at some other time on the subject. I congratulate you on the splendid editions of the "A.B.B." which have come very regular.

[Like typhoid fever foul brood receives encouragement from its surroundings. A hive not sufficiently warm, or in which damp can have full access is a great feeder of it. Put all bees in a fresh hive with starters only. Close the entrance or they will swarm out. Melt down the comb in the original hive, and disinfect the hive by painting with kerosene and then setting alight. If the interior of a hive is washed with lime damp will be absorbed.]

Mr. G. Kelly, Dungog, writes:—I had a very good trip to New Zealand. I first went to Auckland. I had a chat with Mr. J. Hopkins; he has not any bees now only an interest in some for Queen Rearing on the Great Barrier. He says they are all dead about Auckland with foul brood. I did not visit any bee farms. I next went to Rotorua to see the wonderful hot lakes; had three weeks there and enjoyed it, came back to Auckland and had another week there. I then went by steamer to New Plymouth, where I met an old Dungog boy, Mr. Gordon, whose father used to be C.P.S. here. He was a good friend to me; showing me round and giving information, and he presented me with a gold-mounted green stone for old acquaintance. I might say he is in the Lands Department there, and is very clever with the pen. I had 10 days there, then went by rail 250 miles to Wellington and from there back to Sydney, and had a look at the Sydney Show on Good Friday and Easter Monday. I was looking to see you, but did not, I think I must have left about the time you got there. Easter Monday night I left Sydney, having been five days there. Had a terrible hot dry time here while I was away. Bees got some honey; the wonder is, how or where they got any. I scored about 300 tins and have 250 yet, holding for a big price. I think it may be worth 4d soon in Sussex-street. What do you think?

**INFLUENCE OF BAD COMPANY.**

Mr. E. R. Raot said that when the matter was discussed in the journals years ago, about the only evidence offered to prove that the nurse bees influenced the young which they fed, was that when a gentle queen was put in the place of a cross one, her progeny seemed to be affected by the cross nurse bees, and was often cross and disagreeable to handle. He thought it only a case of bad company, but resolved to experiment some along that line, and here is the result.

**AN INTERESTING EXPERIMENT.**

Colony No 2 consisted of yellow Italians, and were the meanest, ugliest bees I ever saw.

No. 14 was one of my old black queens, putting the one from No. 2 in No. 14, and that from No. 14 in No. 2. From that time the brood from the cross queen was nursed by the gentle bees of No. 14; and as soon as there were enough of those yellow fellows to set up shop they were ready to defend it against man or beast; and, as time rolled on, the once gentle blacks were found following their example, and often stung me.

Colony No. 2 was the cross Italian to which had been given the gentle black queen. As her bees began to hatch and mingle with the yellow ones, they were inclined to fly up, and often stung when handled; and some might think it due to being nursed by the cross bees, they were stirred up nearly every day while caring for the brood, but, hold on now, I took out a frame of this brood just before it hatched, and put it in a colony of Albinos, the gentlest bees I ever saw, and when that brood hatched, the bees were very gentle and showed all the old time traits of their strain. Being nursed by those cross bees did not affect them *in the least*.

I am satisfied that the colour and general characteristics of a bee are not influenced by the nurse bees. I am also satisfied that the longevity and usefulness of a bee is greatly influenced by the nurse bees. I have made only a few experiments in this line, but I will give them, hoping others will try them next season.

**SOME COLONIES POOR NURSES.**

I have often noticed that some colonies always have an abundance of eggs, yet never seem to have much brood, nor to get along very well; so, last May I selected two such colonies, and took a comb containing such eggs from each, and put them in a good colony.

The eggs in one soon hatched, and, later, were sealed; while the others were nearly all worthless. In one case the queen seemed at fault, while in the other it was lack of proper care on the part of the nurse bees. Both of the colonies had plenty of honey and pollen, and plenty more in the fruit bloom which was open at that time.

The larvæ in some colonies will be literally swimming in food, while in others it is apparently in a starving condition.

Colony No. 28 is one where the larvæ is always well fed, while No. 11 is just the opposite, but are black bees.

Two frames of drawn comb were placed in No. 2 (Italians) on May 14, and as soon as about equally well filled with eggs, they were put, one in No. 28, the other in No. 11, and while I could not figure very closely on the time, I think I am safe in saying it was two weeks after the yellow ones had comparatively all disappeared from No. 11 before those of No. 28 were gone.—C. A. OLSTEAD, in *Beekeepers Review*.

**CAPPINGS.**

*From American and other Bee Journals.*

Fifty million pounds of comb honey and 100 millions of extracted, and from 400,000 to 500,000 beekeepers in the United States.

In going through my apiary when honey has not been gathered for a month, I have often been struck with the thought, "Are my bees degenerating?" they are seeming smaller in appearance than usual; but after a week's run of honey I am struck with the thought, "What fine, large, sleek-looking bees they are!"—*Exchange*.

Some might make the mistake of thinking that 20 colonies of 20,000 bees each would store just as much honey as 10 colonies of 40,000 each. Without thinking, he might say, "There will be just the same number of bees in either case, 400,000, why will they not gather the same amount of honey?" Let us figure. Schachinger's experiments showed that when

20,000 bees stored daily	$\frac{1}{2}$ pound honey,
30,000 "	$1\frac{1}{2}$ "
40,000 "	4 "

According to that, a colony of 40,000 bees will not merely store twice as much, but eight times as much! That does not mean that doubling the size of the colony will in all cases give eight times the stores, for a colony of 80,000 bees would not be likely to store eight times as much as a colony of 40,000, and the ratio would vary as the size of colonies would vary, but the general rule will hold good, that in all cases there is great economy in having a large number of bees in each colony rather than to have them divided up into a number of smaller colonies. This matter will appear less strange when it is remembered that a certain number of bees are needed at home to keep up the heat and take care of the brood, and the proportion of these will be less in a strong colony. It can easily be seen that it will not require twice as many bees to protect two frames of brood as it will to protect one.—*Exchange*.

I do not think bees select their future home before swarming, for the following reasons: First, 99 per cent. of all swarms cluster a certain or uncertain time before leaving. We have no definite information on the subject, as most observed swarms are hived as soon as possible by the bee-keeper; but in most cases it is from one hour up to 72. Bees fly very rapidly—I think I am within the limit when I say a mile in three minutes. There is ample time for a thousand scouts to explore and report every possible bee-tree within five miles of the cluster inside of an hour. Second, the uncertainty of the time in clustering indicates to my mind the

greater difficulty in one case over another, in finding the future home, and the greater probability that they, like some human beings, do not cross a bridge until they come to it, or do not select a home until there is strong need of it.—RIP VAN WINKLE IN *A. Bee Journal*.

Probably the majority of bee-keepers discourage the presence of much drone-comb. Just as probably the majority have a good deal more drone-comb than is profitable. The bee-keeper who has supplied his bees with full sheets of worker foundation is not safe for all future time. Here and there a mouse will nibble a hole in a comb in winter, and by one means and another there will be holes that the bees must fill in, which holes will almost invariably be filled with drone-comb. If no attention is paid to the matter this will increase from year to year, but the beekeeper perhaps gives it little thought. If his attention is called to it, he will say, "Yes, there is some drone-comb in most of my hives that have comb of any age; but it doesn't amount to much. There isn't an average in each hive of more than enough to fill a pound section." Let us figure up the cost of a piece of drone-comb of that size—4 inches square, or 16 square inches. Counting 18 cells to the square inch, or 36 for the two sides, 16 square inches will contain 576 drone-cells. Suppose only one brood of drones is reared, and that each drone lives 60 days; what will be the cost of those 576 drones? Taking the estimate that it costs .0141 ounce of honey to rear a drone, and that it consumes .00635 ounce of honey daily, it will consume in 60 days .381 ounce of honey, which added to the cost of rearing, makes .3951 ounce of honey that each drone costs. Multiply this by 576, and you have 227.5776 ounces, or 14.2236 pounds of honey that it has cost to rear and support the drones from that piece of comb the size of a pound section. "But," you say, "I don't stand all that expense, for I slice off the heads of the sealed brood every time I go over them, so I stand only the

trifle that it costs to rear them." Suppose we figure on that. Multiply .0141 by 576, and you have 8.1216 ounces of honey that each slicing has cost you. Remember that this cost has occurred before the cells are sealed; and as fast as you slice off the heads of the brood a fresh lot will be started so long as there is a moderate degree of storing. Suppose you begin slicing June 1, and slice every two weeks, making the last slicing July 13. That will make four times, costing you a trifle more than two pounds. Don't you believe you could go over 25 colonies in a day, cutting out the drone comb and putting patches of worker-comb in place thereof? That would give you a payment of 50 pounds of honey for the day's work, to say nothing of the saving in future years. *Cut out the drone comb.*—*Gleanings in Bee Culture.*

Practical beekeeping has reached a point of development beyond which it can make but little progress without the aid that can only be rendered by science. Mere guessing must give way to regular and careful research. Observations must be repeated over and over again, fully and accurately recorded, and deductions made only by trained minds. The practical beekeeper can make the observations; and, in some respects, is better fitted to do so than the trained naturalist; because the former is familiar, through the constant handling of many colonies, with habits and traits which are not apparent to the latter.—*Be-keepers' Review.*

Professor Frank Benton holds the position of Apicultural Investigator in the U.S.A. Department of Agriculture.

In refining wax one per cent of sulphuric acid is the usual quantity used. In old dark combs a little more, perhaps 2 per cent.

If we all would follow the simple easy way of allowing the honey to candy, as nature intended it to do, nearly everybody would, after a certain amount of education, prefer it candied, and that would save a world of trouble and expense. A few days ago a neighbour asked me, "Can I get another ten pounds of your

dark fall honey?" I said, "Yes. Do you want it liquefied?" The answer was a decided: "Oh, no! we like it better solid. It doesn't have any strong taste when it is candied."—S. T. Pettitt, in *Gleanings*.

#### INTRODUCING QUEENS BY TOBACCO SMOKE.

—Introduce queen just at dark, by first going around and smoking the colonies to which they were introduced, with a few puffs of tobacco smoke in the entrance; the cover removed, another puff given, and the queen run down on the combs followed with a puff of smoke, and the hive closed. Fifteen to 20 minutes later I go around and gave each colony two or three more puffs of tobacco smoke in at the entrance. This is the Henry Alley method, and has been in use 30 years. I used it fully 15 years ago. Mr. Alley uses a tin tube smoker especially adapted for the business. I use a common Birmingham smoker, starting fire with dry rotten wood, filling the box well up, and then drop in about a tablespoonful of Bull Durham smoking tobacco, and shake it down among the wood well. If there are many queens to introduce, add more tobacco when the odour of the first gets weak.—FRANCIS BROWN, in *American Bee Journal*.

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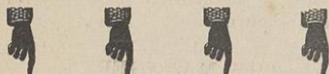
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