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The Australian bee bulletin. Vol. 4, no. 44 November 24, 1895

West Maitland, N.S.W.: E. Tipper, November 24, 1895

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THE AUSTRALIAN

BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

No. 44.

NOVEMBER 24, 1895.

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Per Annum 5s, booked 6s 6d; in Australasia, outside N.S.W., add 6d. postage.

NEW CATALOGUE NOW READY.

POSTED FREE ON APPLICATION.

PRICES THE CHEAPEST IN AUSTRALIA.

BEY EXTRACTORS.—Novice 2-frame, made of strongest tin, with cast iron bevel gearing, neatly japanned and well finished. Price 35/- each; with 100lb capacity under basket, 37/6.

2-frame Cowan Reversible, 50/- each.

2-frame Cowan Reversible, 130lb capacity under basket, 54/- each

TAILED HIVES from 4/9 each (single story); 6/9 each (double story)

These Hives are fitted with Root-Hoffman self-spacing frames.

Other lines have been reduced so be sure to have our catalogue before ordering elsewhere.

PENDER BROS. (Late R. L. Pender),

MANUFACTURERS OF BEEKEEPERS' SUPPLIES

WEST MAITLAND, N.S.W.

R. K. ALLPORT,

ter St., off Union St., NORTH SYDNEY.

re ordering any Bee Goods, write for my Catalogue, 1895-1896.

es Reduced, in many cases as much as 25 per cent.

umber my hives are made of Californian Redwood, which not rot, warp or shrink, and have no Chinese dovetails to split des when putting together. They are cheaper and better than thers.

WAX AND HONEY TAKEN IN EXCHANGE FOR BEE SUPPLIES.

giving for good wax **1/1** cash or **1/2** if goods taken in exchange

G M B FOUNDATION.

Carriage paid on 5lb. lots and over at Cheapest Prices.



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HEBBLEWHITE'S

The OLDEST, CHEAPEST, BEST for

ALL BEEKEEPERS' SUPPLIES

Get our Price List and see.

Hebblewhite & Co

377 GEORGE-ST., Opp. Sydney Arcade & Strand, SYDNEY

The Beekeepers' Supply Co

FRANKLIN STREET, MELBOURNE, VICTORIA.

Catalogue for this Season Now Ready, with Revised Price

CONTAINING THE FOLLOWING RECENT ADDITIONS—

THE LONGITUDINAL HIVE of 20 frames, with contracting boards, is specially saver. It may be readily expanded or contracted to meet the necessity of the Two or more queens may be kept in one hive, and the stock amalgamated under one queen time, or the reverse proceeding be instituted for queen rearing. This hive will be found suitable for the production of wax, supplying as it does ample clustering room.

THE REISCHE FOUNDATION PRESS.—This is without doubt one of the best additions to apianian appliances. Foundation may be made at very slight cost of labour. 3 to 4lbs. per hour. No other appliance necessary. Foundation made by this process, which is what thicker than roller-made, is lighter in texture and more readily accepted by bees.

V-EDGE HOFFMANN FRAMES.—Having put in requisite machinery, we now have these at slight advance upon ordinary 7/8 Frames.

THE "COLONIAL BEEKEEPER," a handy Primer for Beginners. Price, 1/6

SEND FOR ILLUSTRATED CATALOGUE.

The Bee-keepers' Supply Co

FRANKLIN-ST., MELBOURNE.

10lbs

Italian Queen

had the following

My Sir,

You asked
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OF HONEY.
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SATISFACT
in AUSTRAL

Address all

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100lbs of Honey from One Colony.

Spring count in the Season of 1895.

Italian Queens bred from our celebrated strain of **Honey Gatherers** had the following and be convinced that I breed for **HONEY GATHERING QUALITIES** as well as **PURITY** :—

Loyalstone, Lyndhurst, April 1, 1895.

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You asked me to let you know at the close of the season how I got on with the colony I got from you in October. Well I artificially increased colony to 35 COLONIES, always giving the queenless half a laying queen. I extracted the 35 colonies 3,000LBS. OF HONEY. ONE OF THE COLONIES GAVE ME 100LBS. OF HONEY. I reared 25 young queens from the colony I got from you and got them all mated in my apiary. Of the 14 queens I got from you . . . they are as good as you may wish to have. Two of them are **EXTRA GOOD HONEY GATHERERS**. The hive I have covers slightly more than 5 frames and the strongest covers 19 frames. The honey was very fair though not as good as some years. Though my bees are still gathering bare of honey I will let them winter up from now. Trusting you will have a good surplus, thanking you for your punctuality in sending queens, etc.,
I am, yours etc.,

CHAS. U. T. BURKE.

—My letter to the "A.B. Bulletin" regarding long idea hive I put that the 100lbs of honey in one week was procured from Italian stock got from W. S. Pender, but for some Mr. Editor omitted your name.

I think the above is **THE WORLD'S RECORD**, and will claim it till one can show a better.

I am still breeding from the same strain of **LIGURIAN** (leather-d Italian) **BEES** and am supplying similar queens during this season.

During 1895 over 90 o/o of all my **UNTESTED QUEENS PURELY MATED**. I know this from having watched my nuclei.

PRICES OF QUEENS.

	One	Three	Five	Ten
Untested Queens	.. 5/-	.. 13/-	.. 20/-	.. 39/-
Tested Queens	.. 8/-	.. 22/6	.. 35/-	.. 67/6
Select Tested Queens	.. 12/6	.. 36/-	.. 60/-	

I will warrant all untested Queens as purely mated at one shilling extra each queen—i.e., if a warranted queen is not purely mated I will replace.

SATISFACTION GUARANTEED and **SAFE ARRIVAL** to any Post in **AUSTRALIA, TASMANIA** and **NEW ZEALAND**.

Address all orders to

W. S. PENDER,
Drumfin Apiary,
WEST MAITLAND,
PENDER BROS.,
Manufacturers,
West Maitland.

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IF you are interested in Farm, Garden, Orchard Work; in Horses, Cattle, Sheep, or Pigs; if you keep Poultry, Dogs, or Bees; if you want a good home journal, devoted to all the interests of country and rural life, take the "Agriculturist."

We ask you to see sample copy, which we will send on application.

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Then Try one

GENTLE GOLDEN

Carefully bred from Mothers

TESTED
10s.

On all orders for £1 and over 10 per

R. Patten, Binni Apiary,

WEST MAITLAND. N.S.W.

For Ligur

RED direct from I

or for Golden

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Prices are,

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Delays are Dangerous

And I regret that I have been compelled to delay the orders of so many of my customers the past month. Orders from all parts of Australasia have poured in at such a rate that it has been utterly impossible to keep pace with them—consequently I am behind. For my bees, queens there has been a particularly strong demand, and although I have already despatched a good many, I have still so many orders booked that I cannot stipulate to forward any more till 1st December. I am now testing for breeding purposes a number of extra fine queens, and the best of these I will be prepared to despatch after above date. In need of an especially fine breeding queen, that will do you good service for several years, book your order now, and you can send cash on receipt of queen. I will guarantee my queens to be equal in all respects to any obtainable.

My stock of Tested Italian Queens is also exhausted, and I have so many of this strain that I cannot supply any more till 15th Nov., after which date I can guarantee promptly any number.

Untested Italians and Carni-Italians I am shipping daily; still I have so many orders booked that I cannot guarantee dispatch of any further orders until after 10th Nov.

One gratifying feature about this rush of orders is the fact that the bulk of them are from apiarists who have given my strain a thorough trial, which I think speaks for itself.

"I have seen some of your queens, and consider them about the best that can be produced for the purpose. I have several queens from different breeders, but the best I have is a descendant of your breed.—T.S.R. River, N.S.W.

"The queens that I got from you last season have pleased me so much that I now enclose cheque for £10.—R.S.H., Nyngan, N.S.W.

"All the queens I have raised from the breeding queen you sent me have given splendid results. They proved themselves to be practically non-swarmers. Please send the queens ordered from a non-swarmers.—S.A.L., Cundletown, N.S.W.

"I received from you two years ago two Carni-Italians, which gave good satisfaction—splendid honey-gatherers. Enclosed find P.O.O. for £4, for which please send me value in queens as usual.—Williamstown, South Australia.

For Prices, &c., see my 1895 Catalogue. If you have not a copy send me your address and I will send you one post free.

H. L. JONES

Goodna, Queensland

Queensland Agent for the "Australian Bee Bulletin"



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YOU WANT

EMBER 24, 1895

The Australian Bee Bulletin

Then Try on

THE GOLDEN

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Bulletin

For Ligurian Queens

RED direct from Imported Italian mothers or for Golden Americans, bred from t importations.

d me your orders. I am supplying splen-
neens of both strains; I do not in-breed
isease is unknown here. Last year I go
of Queens purely mated. Will show
monials or answer any questions. So write!

Prices are,

Untested, by taking 5 .. 4s each.

Tested, by taking 5 .. 7s each.

A. J. BROWN,

wner of 11 Prizes in Apiculture at
Singleton Show,
PARKVILLE.

—TO—

Advertisers.

We have secured a
few very nice

COMIC
ADVERTISING
BLOCKS

Which we shall be
pleased to utilise for
the benefit of our
Advertising friends.



FOR
NEW LABELS,

AND
DESCRIPTION OF PRINTING

SEND TO

"Bulletin" Office.

Oh What Beautiful Bees!
And What Fine Queens!
I never Saw Anything Like it!

THOSE are the expressions used by bee-keepers who visit my apiary with a view of comparing my bees and queens with those of other places, when I show them my bees.

"Yes, they are as pure as they can be, and that is exactly what you want to stock your apiary with."

The breeding season is on again. I have drones flying since the 2nd of September, in spite of the unfavourable weather, and I solicit your favors for queens, &c. On large orders specially low quotations.

W. ABRAM,

ITALIAN BEE FARM,

Beecroft, near Sydney.

Where did you get that Queen?

Apiarist,—“I got her from ROBERTS’
He has just imported from Doolittle, Root and Manum, and you can have your choice? He always sends out fine large prolific Queens, give him your order, and he will please you with his Golden or Leather Coloured Queens.”

Untested 1 for 5/-, 3 for 13/-, 5 for 20/-
Tested 1 for 8/-, 3 for 22/6, 5 for 35/-.
Breeder 1 for 15/-, 3 for 42/-,

Honey or Beeswax will be taken in payment for Queens, if preferred, for all orders of £1 and upwards. Write for Circular giving full particulars.

A. A. ROBERTS,
ROSEBUD APIARY,
MUSWELLBROOK.

CONSULT US.

SHOULD you have a doubt on any matter in your apiary, or wish for any information, do not hesitate to write us, enclosing a 2d stamp. We will reply to our best per return, and give questions and answers in the following numbers of A.B.B.

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PROPOSED BEEKEEPERS' Co-operative Honey Supply Co.

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ARANTEED

Over 440 Shares have now been applied for in the above Company, and on receipt of applications for Sixty more shares as will be made. Application forms and all information from

JAMES TRAHAIR,

c/o Hebblewhite & Co.,
377 George-street, Sydney.

Hon. Sec

I attribute my s
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character.

JAMES M

The South Coast & West Camden Co-operative Coy.,

FARM & DAIRY PRODUCE EMPORIUM,

Sussex and Liverpool Streets, SYDNEY

TO BEEKEEPERS.

not the best Honey
y submit more read
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5/-

We are prepared to receive consignments of Honey for sale. Having the support of 90 per cent. of the Grocers and Storekeepers of Sydney and Suburbs, we claim to be the best outlet of any agents in N.S.W.

JUST

CAR

W BLOOD for

A TRIAL SOLICITED. CORRESPONDENCE INVITED.

REFERENCE: CITY BANK, WESTERN BRANCH.

N. T. SEABROOK A
Gentlemen,
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honey gathering.
lbs. of honey from
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DO YOU WANT A REALLY GOOD, CHEAP & USEFUL PAPER?

THEN TRY THIS ONE! YOU CAN'T DO BETTER

Its Articles are Short, Sharp and Practical.
100 ordinary pages condensed
in 24.

Martin's Home & Farm

For the Busy Practical Working
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Only
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12 Issues.

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ly Keeping Friends,—I can supply you with **QUEENS**
CAT ARE UNSURPASSED FOR QUALITY, and
ARANTEED SAFE ARRIVAL and satisfaction to
ANY OF THE COLONIES.

n the al I attribute my success to the fact that I have o-ined the past seven or eight years fresh
 shares as ng queens every season from different places and m- noted breeders in Italy and America,
 om ave just landed a very select breeding queen from Mr. Atchley, Texas, who gives her a very
 IR, character.

Hon. Se FOR CIRCULAR AND PRICE WRITE TO
MES McFARLANE, LYNDHURST, VIC

Coy., **Who will Deny?**

UM, **CARNI-ITALIANS**

N E not the best Honey Gatherers and Comb Builders. Their sealed comb are of snowy whiteness.
 y submit more readily than other bees upon the application of a small amount of smoke; they
 ter very compactly and quietly, and winter remarkably well; are vigorous defenders of their
 s, and gather very little propolis, if procured from the first and best breeders in Australasia.

1	3	5	1
5/-	13/-	20/-	39/-

Per letter post, safe arrival guaranteed up to 21 days.

of H JUST ARRIVED FROM EUROPE IN GRAND CONDITION

the Gr **CARNIOLANS. CARNIOLANS.**

aim to W BLOOD for our Celebrated Carni-Italian strain. Change your breed and avoid Bee
 Paralysis, by purchasing Queens from our Select Stock.

"LOYALSTONE, LYNDHURST, Western Line,
 September, 2nd, 1895.

V. T. SEABROOK AND Co., Gordon.

INVIV Gentlemen,—Doubtless you would like to hear how I got on with the Carni-Italian Queen
 ANCH. ot from you, the 15th November, last year. Well, she put down both my Italians and Black
 honey gathering. Notwithstanding that she swarmed twice during the season. I extracted
 10 lbs. of honey from her hive, which record, I think would take a lot of wiping out. I intend
 ing in for Carni-Italians this season, in preference to Italians, for some of which I paid a high
 ure. Believe me, Yours faithfully,
 "CHAS. U. T. BURKE."

BETTER **W. T. SEABROOK & CO.**

Orange Blossom Bee Farm, St. Ives, Gordon, N.S.W

or Honey Labels and every description of
PRINTING send your Orders to

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15s. and 8d. worth for 4s.

Post Free, N.S.W.

Norton's Pumice Industry

165 Liverpool Street, Sydney, N.S.W., supply a **WATER BOILER**, which boils a billy or kettle of water without wood or coals, a box of **TORCO ABSORBENTS**, enough for a year, a tablet of "**FERRET BRAND**," and a block of "**VOLCANO BRAND**" **SOAPS**, which lathers in salt, brackish, or any water. 5lb. tin of **VOLCANIC VASELINE** for general Cleaning, Scrubbing, Washing, Scouring, and as a healer and cleanser of wounds or man and beast, also a beautiful Work of Art, 3 1/2 x 20, entitled "**The Young Colonial who Knows a Good Thing**," all for 4/- simply an advertisement; or particulars, 3d stamps.

Exchange Column.

A FEW SECOND HAND HIVES FOR SWARMS OF BEES, X.Y., A.B.B. Office.

CONNELLY & CO

MANUFACTURERS OF

Honey Tins, Honey Tanks & other Beekeepers Requisites.

BENDIGO, VICTORIA.

Having put down special plant for the production of Honey Pans are in a position to supply the **VERY BEST** **BOTTOM PRICES**, and will be pleased to receive correspondence from beekeepers, in response to which full particulars as to sizes, qualities and prices will be furnished.

Goods to the value of £2 and upward delivered **carriage paid** to any railway station within 100 miles of Bendigo, or intercolonial steamers at Melbourne, boxed ready for export if required.

Now is your time to make

while the Sun shines

This is what you will all

Just look at the

BEAUTIFUL QUEENS

And only **FIVE SHILLINGS**; 5

7 for 30s and so on.

J. M. WALLACE

Mount Meryla, Australia

MOSS VALE.

P.S.—Having had nine years' experience in beekeeping I am now prepared to supply you Queens equal to any in the colony. Now is your time to send along your order and see what splendid value I will send you for your money.

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A MONTHLY

No. 43.

Per Annum 5s, books

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The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—NOV. 24, 1895.

DURING this month, attention should be given to the division boards where used. When the space enclosed by them is getting rather crowded, draw the boards apart a little, sufficient to allow another frame to be inserted, and put a clean comb in the centre of the brood nest. Sometimes a frame of emerging brood may very well be spared from an extra strong colony, and given to a weaker one. Take notice of any queens that are rather backward in breeding with the view of superseding them during the swarming season. Take one of the best stocks, and compare the others with it, and those that do not appear as strong as they should be, mark them for new queens from one of your best stocks. Those who rear queens early should now be stimulating two or three of their best colonies. Some drone comb should be placed in the centre of the brood chamber of one of the strongest, and about fifteen days after the first drone eggs are laid, put a clean empty worker-comb for eggs in the brood nest of the colony you wish to raise queens from. It pays to at once supersede poor queens if you want a good crop of honey, and a laying queen obtained from a good breeder put in place of an inferior queen, will pay for herself in the extra honey returns.

We are compelled to hold over a lot of very valuable correspondence till our next issue.

A lot of money owing to us and we really want it. Those whose subscriptions are in arrears please send along.

The Port Macquarie Beekeepers Association meet at 7.30. p.m. on the Wednesday on or before the full moon in each month.

We will be very glad to receive samples of supposed adulterated honey, together with names of stores whence it was procured. This latter will be strictly confidential.

CATALOGUES.—We have to hand catalogues of Messrs R. K. Allport, Sydney, also Mr. H. L. Jones, Queensland, Hebblewhite and Co., Sydney, and Pender Bros, West Maitland—the latter printed at our office. They are very complete, and the prices in all considerably lower than last year.

Mr. Helms says: "The Carniolan or Corinthian bee is slightly larger than the brown bee, with whitish hairs fringing the abdominal segments on their lower margins which gives them when young a bright appearance. It is famous as being the mildest tempered among all the domesticated bees.

We acknowledge receipt from G. G. Turrie, F.M.T.P.A., a copy of pamphlet "The Patent Acts of Victoria and New South Wales, and the official rules and regulations and forms thereunder, with index and notes." Many persons will doubtless find the work of great value to them, and let us hope that a return of general prosperity will cause more of the spirit of invention than the present depressed times.

A GOOD WAY OF MAKING HONEY BEER.—To about 30 gallons of water put about as many pounds of honey and half a pound of hops in a bag. Then one pound of raisins. Boil for about an hour and place in a cask. Leave the bung loose to allow it to ferment. As it does so and the liquid decreases fill up with boiled water. The fermentation will cease in about a week, and then it may be bottled or drawn off and drank as wanted.

We owe an apology to Mr. A. J. Brown of Parkville. We omitted in a previous number to acknowledge the

receipt of an excellent photograph of his exhibits at the Singleton Show. Considering that he won eleven apicultural prizes; including the champion one at that exhibition, that his honey returns tot up something like an average of a ton for every ten hives, and that he gets sale for all of it, Mr. Brown is an apiarist whose acquaintance is well worth cultivating.

OFFICIAL LETTER.

New South Wales,
Department of Mines and Agriculture,
Sydney, 16th November, 1895.

Sir,—Adverting to your letter of the 6th inst., relative to a deputation from your Association to urge the appointment of an expert to take up the investigation of bee diseases, I have the honour to inform you that the Secretary for Mines and Agriculture cannot at present fix a date on which to receive the deputation.

I may add that approval has been given for the purchase of special appliances to examine into bacteriological diseases, and when these arrive from Europe the Pathologist will be in a position to investigate the more obscure bee diseases. I have the honor to be, Sir, Your obedient servant,

H. WOOD,
Under Secretary,

H. Rawes Whittell, Esq.,
Secretary, The Nat. Beekeepers Assoc.
70 Hunter Street, Sydney.

LACHLAN B. K. A.

W. NIVEN.

The monthly meeting of the Lachlan Beekeepers' Association was held in the School of Arts, Eugowra, Oct., 30th, 1895. The President, N. E. Osberg, presided. Minutes of previous meeting were read and adopted on the motion of Mr. Wright, seconded by Mr. Niven.

Accounts from Messrs Brooken and Smith for advertising meeting at Forbes, were passed for payment, on the motion of Mr. Wright, seconded by Mr. Niven.

The attendance of members being small, a paper written on the management of bees, by Mr. Wright, was held

over to be read at a future time. A conversation took place as to the quantity of honey taken and the condition bees are in this season. In and around Eugowra no honey has been taken up to the present time. During the past winter many colonies have dwindled and died out, others were in a weak condition. With rain things pertaining to bees were likely to take a change for the better, as there are a large number of Eucalyptus trees coming into bloom. Mr. Wright stated that at his apiary, 22 miles distant, bees were doing much better, from 62 colonies he had taken 50 60lb. tins of honey and 20 swarms of bees. Also at his out apiary bees were storing surplus honey. He intended extracting next day.

MUSWELLBROOK BEE-KEEPERS' ASSOCIATION.

The 2nd annual meeting of this association was held in the School of Arts on Saturday night. There were present: Messrs Hazelwood (President), in the chair, A. Weidmann, A. A. Roberts, T. Ellerton, C. C. Paul and D. G. Grant, Hon. Secretary. The following report was read and adopted, as also the balance sheet.

"In presenting the second annual report your committee find cause to be pleased with the progress the association has made during the past twelve months. The members' roll shows an increase of four during the year. The number of colonies owned by the association has also increased, but owing to the exceptionally bad season and other causes this increase is only small. The Association has held thirteen general meetings during the year, and a number of interesting papers, written by members, formed the subject of discussion at these meetings. The collection of bee products at the local show, the greater part of which consisted of members' exhibits, divides with the Welling-ton exhibit the distinction of being the greatest display of the kind ever seen in the colony. The Committee wish to congratulate the Association on the results of their labours on that occasion, and on success of their efforts, in the face of the many obstacles. The committee take this opportunity of thanking the Upper Hunter P. and A. Association for placing at the disposal of the Beekeepers Association the large

space in the centre of the building and for the facilities offered to the members for the display of their exhibits, also those members who donated special prizes. The committee are glad to be able to say that the funds of the Association are in a very fair condition, and hope that the support accorded to the Association in the past will be continued in the future.

The Treasurer then read the statement of accounts, also, according to rule, the list of members.

Mr. Weidmann moved that the report and balance sheet as read, be adopted. Seconded by Mr. Roberts and carried.

The Ven. Archdeacon White wrote asking that his name be removed from the list of members, which was agreed to.

ELECTION OF OFFICERS.

The President stated that he did not desire to take office of any kind this year. Mr. Paul, however, proposed that he still occupy the position of President. In the best interests of the Association, he would wish to see Mr. Hazelwood their President. Mr. Weidman seconded, and Mr. Grant supported the proposition, which was carried.

Mr. Paul proposed that Messrs Weidman and Roberts be elected vice-presidents. Carried.

Mr. Weidman had much pleasure in proposing that their present secretary (Mr. Grant) be again elected. Seconded by Mr. Roberts and carried.

Mr. Grant proposed and Mr. Paul seconded that Mr. Ellerton be re-elected treasurer. Carried.

The following committee were then elected: Messrs Paul, Budden, H. J. Clarke, W. Thomas and Hornery.

THANKS.

Mr. Weidman said before proceeding any further he wished to return his heartfelt thanks for the letter of sympathy sent to him by the Association, after he had met with his late accident. The President: "We are glad to have you back again Mr. Weidmann."
—*Muswellbrook Chronicle.*

THE HONEY SUPPLY CO.

We received the following just as we were going to press:—

Sydney, Nov. 20th, 1895.

Mr. E. Tipper,

Dear Sir.—Since my last letter Re Honey Supply Co., which I hoped would have been in your special edition, a meeting of the Prov. Directors has been held, and it was decided to point out again to the beekeepers that one more chance would be offered them to start the company, and as only sixty shares are now required, hope that those who have not already taken some will do so at once; and others that only took one or two, and can possibly spare the money, will increase to five or ten. If this does not result in the balance of sixty shares being applied for by the 1st January next, another meeting will be called, and as this should prove that beekeepers do not want their product put on the market only in the present manner I am fully convinced that my friends who have endeavoured with me to try and improve the value of honey, and increase its sale, will go no further with the matter. In going through my list of promises given at Bathurst, I find that ten of our beekeepers who were present at the Conference have not fulfilled them; and among the number are some of our very fluent members, who evidently think that words cost nothing, and can be used at random; but I feel convinced that in this case, those promises have blocked up to the present the formation of this company; which should and would now have been ready to receive the honey which is now coming into the market. We trust there are others ready to fill their places; and that by the first day in next year, we shall be at work. Yours truly,

JAMES TRAHAIR,
Hon. Sec. Proposed Honey Supply Co.,
c/o Hebblewhite & Co.,
377 George St., Sydney.

H. I., Butler's Falls.—I miss the little paper very much when it don't come. It is very useful to me.

contribute neither time or money to the association reap just the same advantage as those that do. Of course in line with that we all know that it rains on the just as well as the unjust. But what I have to say is just this—don't go too fast, because the turtle ran just as good a race as the hare. Turn back to 1894, and up to March, 1895, and ask the Railway Department what were the rates on bees in hives? However, to cut it short, the highest, or 3rd class rates, were charged, sender of course to load and unload. In March this year I and another were making a move to Wyagdon, and I made special enquiries re the rates, and I got an answer that they should go as second class, but on arrival at Kelso the usual 3rd class was charged, and to back up the charge there was an extra special memo from the Goods Superintendent to say that 3rd class was the rate to be charged. Well, we felt a little annoyed at this after having the 2nd class quoted. To this I immediately addressed the Commissioners on the subject of making rates for bees in hives. To this we re-received a post card that the matter would be dealt with and a decision given, which we received the following week, and had the satisfaction of knowing that bees in future would be carried at the 2nd class rate, and we received a refund of the amount paid as between the 2nd and 3rd class. Now, since that final decision was given by the railway department, I find that several have had a try for further reductions. In fact, if I am not mistaken, Mr. Editor, there were deputations appointed to have another cut at the Commissioners, well, I suppose to have bees carried free. Might as well say it as think it. Along at the time of my memo to the Department I sent a request that as beekeeping was classed as agriculture, would the Commissioners consider the matter of classing truckloads of honey under the agricultural produce, but I could not work the oracle. Well, you will say, what has the above got to do with the quotation from page 13?

Well, sir, just this. Of late there has been a terrible wail gone up that only a special few has had the beekeepers' cause at heart. A man's not a sardine because he lives in a tin house. And now, Mr. Editor, I have one more matter to deal with that I think you will admit concerns yourself, as well as your subscribers, more so you, being the cat-er. Of late it appears to be a special custom for all those writers to the A.B.B. who have anything smart to say to hide their mugs behind a *nom de plume*. It certainly shows that, whoever they are, and I don't care a straw if it is one of my best friends, they appear to be ashamed of the name that their dad favoured them with. Whew! now I have been and gone and done it. Never mind, fire away, I can stand it all. Seriously, Mr. Editor, you will eventually ruin your promising journal, as anyone can copy an article and stick a "Gum Sapling after it." Take the columns of *Gleanings in Bee Culture*, and you will find there is no room for anonymous contributions. I may stand alone on this matter, but I propose that you invite a post card from all subscribers giving their opinion as to whether anonymous contributions shall be received, or rather published, and then there shall be no room for saying you are running in the C.S. class interest.

[We put no article in without we have the name of the contributor. There are many reasons, and quite legitimate ones too, why some of our correspondents do not put their full names to their communications.]

J. R. H. GAGGIN.

Your special edition of the A.B.B., which is mainly occupied by Mr. H. R. Whittell, to hand with many thanks. I hope the entire community of beekeepers appreciate Mr Whittell's indefatigable labours on their behalf, though I must say that in the matter of foul brood legislation he is, to put it mildly, working in the wrong direction. Mr Whittell has at last obtained from the Department of Agriculture (see note from Under-Secretary of Agriculture in *Bulletin's* special edition) a positive promise that beekeepers will not be specially taxed in order to carry out the provisions of the proposed Foul Brood Act. Till such officially authoritative statement was made, however, I maintain that beekeepers were justified in fearing that such a tax might be imposed, seeing that it was quite within the option of the Government to do so—the Bill not providing one iota against taxation. As far as it goes, the non-taxation of beekeepers, exclusively, on account of this measure, is satisfactory, but there can be little doubt but that if the Bill be allowed to pass through Parliament, it will immediately result in the appointment of a Government Foul Brood Inspector or Inspectors. Mr Whittell tries to parry this point by saying that Clause 1 of the Bill does not mean the appointment of "an army of inspectors," who are to waste their time in looking for diseases. Perhaps so, but the committee of the National Beekeepers' Association have evidently determined that one or two inspectors, at all events, will be appointed, provided that they can manage to sneak the Bill through Parliament. And are even one or two inspectors wanted, and is it just that the long-suffering, bleeding public should be forced to pay even £300 or £600 per annum to one or two money loafers in Government offices? "Loafers," for Mr Whittell has corrected objectors by informing us that the new inspectors are not going to scour through the country overhauling every hive, box or bar-frame in New South Wales in eager search for the presence of foul brood. Some critics (Mr Grant notably) who thought this was to be their programme, very properly ridiculed the idea of two men being physically capable of examining every hive in the colony within a season or year. But how extraordinary it was of beekeepers to imagine that any Government officials would go through work in this fashion. Have they ever known of any Civil Service employee doing so? No, no, Mr Grant, these Government Foul Brood Inspectors will be dignified individuals, wearing top hats, and drawing comfortable salaries, and no one should possibly for one moment think that they could be flying through the country all the year round, investigating each his 80 hives *per diem*, wet or dry, as eager as bloodhounds after their victim in their chase after foul brood. Well, granted that these inspectors are to be both dignified and ornamental, the prosaic and utilitarian beekeeper might actually want to enquire what good they would to him. In my candid opinion they would

not be at all so desirable as, though costing perhaps 20 times more than, the bee expert and microscopist provided by the New Zealand Foul Brood Act. I contend that that is the only just Foul Brood Act or Bill which has been yet published in your columns, Mr Editor, seeing that neither the fortunate beekeepers whose bees are free from disease, nor the country, is required to pay for its administration. The persons who alone pay are the persons who ought to pay, viz.: the owners of diseased colonies of bees. It is surely but just that a person should pay for the cure or the diagnosis of disease in either himself, his cattle, or his other animals, including his bees—if he lets other people pay he is no better than a pauper—a parasite of society. The New Zealand Act provides no “fat billets” for loafing gentry, such as our proposed Bill allows, but simply authorises beekeepers to send suspected brood to a Government microscopical expert, who will examine it under the microscope, and so definitely decide whether there be foul brood or no. He is paid for services actually rendered, and his charges are specified, viz., 5/- for examination of one portion of comb, and 1/- for each additional sample from same apiary—very moderate charges, I am sure. Mr Whittell objects to this Act of New Zealand, mainly, he says, because he fears it would be indifferently carried out, “depending as it does on the action of the individual beekeepers only,” but Mr Whittell allows that under his own Foul Brood Bill that the Inspectors would not tour round the country much—certainly could not be expected to examine every hive—so that inspectors being absent that objection of Mr. Whittell’s would be wiped out, as his own bill would necessitate action by individual beekeepers, almost as much as the New Zealand Act does.

Now to conclude the whole question of the Foul Brood Act, let me state the following propositions I believe sincerely:—

Proposition 1.—That an immense majority of beekeepers are tooth and nail against the Foul Brood Bill proposed by the Committee of the National Beekeepers’ Association. This has already been partly proved, for every letter on the subject in your journal from independent writers (with one exception) condemn this Bill as the draft of it at present stands. The letters in its favour are all, with one exception, from members of the Committee which is urging forward the Bill, and therefore the writers cannot be regarded as independent witnesses on this point, being naturally biased in its favour, and I may say the same in regard to your editorials, Mr Editor, however fair you may strive to make them, for you too, my dear Sir, are a member of this terribly conspiring committee.

Proposition 2.—That a large proportion (9-10ths of the northern beekeepers perhaps) think legislation on the subject not required.

Proposition 3.—Another large proportion are in favour of a Bill on the lines of the New

Zealand Foul Brood Act, which would create no comfortable vacancies for aspirants to fat governmental billets, and impose no tax whatever, either on beekeepers in general or the long-suffering taxpayer.

Therefore I propose that as the Committee of National Beekeepers’ Association is professedly acting in the interests of and in accord with the wishes of beekeepers generally, that it proceed no further with this piece of legislation till the Committee ascertain the feeling of beekeepers on the subject. This could be easily done by issuing a circular to all the subscribers to your journal asking them

1. Whether they will vote for the New South Wales Foul Brood Bill as it now stands.

2. If not, whether they would approve of a Bill on same principles as the New Zealand Bill, or

3. Whether they would prefer no legislation whatsoever on the matter.

The result of such a “referendum” should satisfy everybody and put an end to this controversy which is getting too acrimonious for “brother beekeepers” to longer indulge in, and if the National Beekeepers’ Association show themselves anxious to carry out the wishes of the fraternity they are supposed to represent, by either abandoning this proposed Bill at once, or else, referring it to the voices of the great body of beekeepers in some such way as outlined above, I know it will mean a large accession to the roll-call of their membership, amongst which I will be glad to have my name inscribed.

P.S.—In your issue of October 24th, Mr. J. D. H. Cadden—a member of the National Beekeepers’ Association Committee—be it remarked—rejoices over the “good work” done by Messrs. Abram and Whittell in demolishing my letter in August No. of the “Bee Bulletin,” concluding his remarks on me personally by declaring he “fancied” I was only a “budder.” Now I must request Mr. Cadden to confine himself to grammatical English if he wishes to be understood. I for one am at a loss to comprehend his “fancy” term. What in heaven or earth does he mean by such an outlandish word as “budder”? I have diligently ransacked Webster’s Dictionary—latest and largest edition—and fail to discover the phrase, which I can only translate by hard guess-work. I am sure, however, that Mr. Cadden has not unintentionally slipped an “r” and meant the word for “brudder,” as his feelings towards myself are evidently anything but “bruddery.” If he intends by this singular expression to insinuate that I am a beginner in beekeeping then I can assure him that this idea exists only in his luxuriously fertile “fancy,” and that I am no more a “budder” than I am a Buddhist, having fairly successfully managed bees for some ten (10) years.

W. ABRAM, BEECROFT.

Although I have had no foul brood amongst my bees for over twelve years, without taking any special precaution against it, and although I have not come across any bees anywhere affected by the disease, there is still foul brood existing in the colony, as the reports in the B.B. and inquiries to me for advice clearly show; and for the information of those whose hives are affected, and who know of no cure or failed with other cures, I will shortly mention how I cured foul brood. I have cured it amongst my bees three times, once in Germany, once in Hungary, and lastly in Australia. Here I got it by buying about 30 swarms, all of which were foul-broody when I got them, but of course I did not know

it, because it is not noticeable on the bees in a swarm, and very shortly I had 80 stocks diseased out of 105. But I cured them in a little over two months, and in this way. I took out all the combs of a hive, and hung them on a frameholder; then I sprayed the bees in the hive and the inside of the hive thoroughly with a solution of salicylic acid, and put new frames with starters in the hive, and then took comb after comb from the frameholder, sprayed the bees well, and then brushed them back into the hive. All the combs were then cut out of the frames and melted down. Then I sprayed each hive, bees and new combs over again once every week from the day of first spray for four weeks. In only two or three instances showed the new brood a couple of diseased cells, which I cut out at once and repeated the spray for two weeks more. The salicylic acid is a white crystal, almost odorless, and not heavy, and not poison. I dissolve it thus: I fill a bottle, or more, with water and place it or them in a saucepan, which is then filled with water, and put it over a fire. When the water in the pot begins to boil, the water in the bottle is warm enough to dissolve the salicyl, and I put about three teaspoons into the three-pint bottle. It is now shaken up and down a few times, and very soon nothing is seen of the crystals, they are dissolved. When yet quite lukewarm it is ready for use with a sprayer. So soon as it gets cold crystals appear again in the fluid, and it requires warming again to be effective.

Carbolic acid was used in Germany more than twenty years ago, but when salicil became appreciated it replaced carbol or phenol entirely. To be effective it is necessary that every bit of comb be removed from the hive, even the youngest comb. As the bees have to make an entirely new start it is also necessary that fresh honey can be gathered, or else the bees must be fed. Never use a comb from a diseased hive in a healthy one.

I have boiled the honey from diseased stocks, and added half oz. salicil and about 60lb of honey, and fed the bees, with no bad result. That a spore of any bacilli can stand boiling for hours without impunity, as some Americans say, is a thing I cannot accept. A bullock would not only be dead but tender at the same time, but a spore shall come to live again!

Foul brood, as its name indicates, affects the brood. Here it grows and multiplies. Remove the combs and you remove the seed bed of the bacillis. Now disinfect the bees and hive to destroy any spores that may be attached to them, and a cure is the result. As I know that I can cure foul brood I have repeatedly secured diseased stocks, with the view of trying for myself various other recommended remedies; but I found none better than mine, and I may say that some are absolutely no cures at all.

I have refrained from going into a detailed description of the pest and other matters in connection therewith, because descriptions have

already been given, and a cure is all that is needed for those in trouble. But is foul brood the only trouble? There has been great loss of bee life during the last few years in many parts of the colony, and I think foul brood has nothing to do with that. What is the cause? In some cases what is now termed paralysis seemed to be the cause. Others say indiscriminate breeding for color is the cause. Again, others attribute it to various other causes. Paralysis is new to me, and I do not know whether it is caused by microbes or bacillus, or what else, or whether it is a disease or not. Is it not deplorable, that with all the Government aid in teaching beekeeping there is no one to investigate diseases such as this? The hypothesis regarding breeding for color tumbles to pieces on the fact alone that black and hybrid bees succumbed to a greater extent than pure Italian. I will here mention that the advice as given by some to desist breeding for color and to breed for honey-gathering instead, is simply ridiculous—the effect of the one is as bad as the other. Bees are designed for certain purposes. To fulfil these they must possess more qualities than one. And there are other points to be considered as well, which make a certain kind of bees possessing the desired points more useful to the beekeeper than others. The expert queen breeder considers all that for the breeding of good queens; the amateur breeds for a certain quality—none at all perhaps—and the result follows right enough. Then again, it is idle to say (after a good season)—So and so got so and so much honey last year, because he bred his bees up to it, &c., &c. What would the result be in a bad season, though?

Coming back to diseases, it appears to me that we must take climatic influences into consideration, as upon these influences depends success or failure in bee culture; and I am strongly of opinion that climatic influences have had much to do with the loss of bee life referred to. It is at least remarkable that with the appearance of a series of wet seasons the loss of bee life begun. Influenza appeared at the same time. During these wet seasons the honey crop was small in many districts, and the quality inferior; inferior to the palate of mankind, how much more so to the bees perhaps. These facts allow of the assumption that the moist atmosphere, together with inferior food, acted detrimentally upon the organism of the bee, and caused death at an early age, with the result that the stocks get weaker and weaker. The wet weather may also have caused a scarcity of other insects, and insect eaters caught bees instead, the yellow bee being an attraction on account of her distinguishing colour. Another thing is, that of the many remedies tried none seemed to effect a permanent cure, and, I think, because these remedies could or did not alter the natural conditions under which the bees lived. Then, again, I take into consideration that our country is in general so well adapted for bees that if no re-action of

nature took place, in a measurable short time the country would be stocked, overrun with bees, but nature, so splendidly grand at one time, is equally severe on the other hand. Last year my bees were starving; this year they live in plenty, and they look nearly double the size of those last year. What a difference! And the difference is caused by favourable weather, which suits the secretions of nectar in plenty, and the plentifulness of nectar makes all the difference upon the bees. Besides, the honey is of really first-class quality! Splendid aroma! Some stocks have thrown off three and four swarms this season, and division swarms are doing equally well, while last year only a few stocks swarmed once. The first swarms filled the brood chamber in less than three weeks. And as yet there are only a small proportion of trees in bloom, but nearly every tree being in bud. Such prospects make beekeeping again worth while attending to with all energy. Better times have come for those who waited; but nearly every beekeeper from around Sydney has gone somewhere else to seek fresh fields and pastures new. I think it will be all along the coast as good as here—at least I hope so, in which case it is easy to replenish the number of stocks and take honey from them, and maybe that the extraordinary loss of bee life is at an end, with the advent of a good honey flow, which would almost prove the above-mentioned assumption of mine to be correct.

R. PATTEN.

Mr. H. R. Whittell's statement at the end of the questions asked by him, in his very interesting paper, published by you in your recent "Special Edition," will be a source of worry not only "between this and next month, but between this and the crack of doom." I very much doubt whether two men could be got together to answer the theory questions in the same way. However, as it may help to throw some light on the matter, I will say that between 1886 and 91, I assisted to fall hundreds of bee-trees. I never saw one that had foul brood in; nothing more serious than bee moth. As foul brood can only be introduced by direct contamination, I am of opinion that disease will originate among bees kept in domestication and that the wild bees contract it from them.

Passing on to the efforts of the National Association, as one of the Vice-presidents, I wish to add my appeal to beekeepers at large, to what has been so ably said by the Hon. Sec.: If we are to be a power in the land, it must be by force of numbers, and if we all lay hold of the same rope and pull together, the load must come the way we want it. Isolated action in these years of rings and trusts, will make as much impression as throwing butter at a jail door would. Our only hope of gaining even common recognition, let alone arresting the attention of the markets of the world, lies in

the banding together for the common good of a common cause. And this brings me to my last point. As the originator of the Co-operative Supply proposition, at least, as regards our industry here, I must express my disappointment at the way the scheme has been taken up. I am not in the least disheartened, only disappointed. That the Co-operative Supply Co. will be an established fact in the future I have no doubt whatever. I do not look upon its present struggling wriggles as hopelessly as my friend Whittell apparently does. Prejudice *always* dies hard. Reforms that are worth a red cent *always* take some time to mature. I go even farther than that, and assert my belief that it is only that temporary inconvenience, called poverty, that has withheld the majority of beemen from coming in and making the concern go. Several correspondents lately have been fearful at the number of individuals embarking in the enterprise, *under existing arrangements*. I admit it is a bold act. Honey is at a discount in the market, not that the consumption is swamped, *because we do not know what the consumption is*. Things will go on getting worse, if let alone, until I should not be at all surprised to see our honey refused at $\frac{1}{2}$ d per lb. Then we shall all rise and find what I have so very often remarked that we have not even touched the *outer fringe of our own market*. Things will hum then you bet. We shall make them, because we shall go forth to conquer. Why, if we could only induce every third person to eat 2 ounces of honey a week, what would be required to supply that demand do you think? Only 1456 tons per year, or *ten times more* than is at present produced. It would be a case of "the harvest is plentiful but the labourers few." Then there is the unbounded field of foreign markets! Writing on the English markets, a Mr. John Plummer in the *Sydney Morning Herald* of Nov. 9th, says: "Why should not the Lancashire and Yorkshire Co-operators become familiar with the products of Australia? During last year the business done by the wholesale societies reached the almost incredible sum of £25,502,889. The British Co-operators are capable, if so inclined, of absorbing every shipment of food produced from Australia. Why should not the Lancashire and Yorkshire factory operatives and artisans, not be more largely supplied with Australian honey, &c."

And I also ask Mr. Editor, why should they not? Well, Sir, because we are waiting for some catastrophe to come and bind us together. My friends, have we not waited long enough? Are there not signs of an awakening in other places, and are we not running the risk of seeing the other fellows get there first? Let us arise and co-operate, start this concern going: Don't wait until some slice of luck allows you to take up the maximum number of shares. Send

along for one, two, three, whatever you can, *but do it now ! Now !* and let us see by the end of next year, whether 1½d per pound is *the value* of our product, or whether it is not, what I believe a fictitious *price*, put on it by those interested in keeping our industry in the dust.

E. C. CUSACK.

This subject has been so often discussed in the columns of the A.B.B. that it is getting rather hackneyed, and your readers are probably about tired of the matter, but owing to its importance is worthy of repetition.

Many apiarists hold that it is unnecessary to seek outside markets for our honey ; in support of their view, they quote statistics showing the very small quantity of honey consumed per head of population, and state that if the public are properly educated to eat honey, the supply will not equal the demand. Now this is all very well in theory, but unfortunately we have to deal with things as they practically exist, not as they theoretically might be. Whilst fully admitting that much may undoubtedly be done to increase the local consumption of honey, still, if beekeeping is to become a large and important industry in these colonies, and get beyond its present infantile stage, we must find an outside market for our surplus honey.

Within the past few years a considerable quantity of honey has been exported from the colonies to England, with greatly varying results as to price. Recent cablegrams state that Australian honey is a drug in the market, being difficult to sell at about £20 per ton. They also state that many of the tins were leaking—this in itself being sufficient to at once condemn the honey.

Shippers of honey must always remember that John Bull is a very particular person, and has on his breakfast table the choicest products from every clime under the sun. He is willing to give a high price for a good article, but, the article *must* be good and of the best quality, otherwise he will turn up his nose at it. Many persons seem to think that anything is good enough for the old country, and are quite indignant because the rubbish they send home is unsaleable. It would matter very little if they were the only ones to suffer from their gross stupidity and ignorance, but unfortunately others suffer as well. The old saying proves true in this case : "Once give a dog a bad name, and everyone has a fling at him."

It must be remembered, that as well as the prejudice of the general public, we have to fight the natural jealousy of the English beekeepers, who, in fear of their own market being lowered, are only too glad for any pretext by which they can disparage the imported honeys that are likely to compete with their own. Unfortunately, many foolish exporters in these colonies, by sending home an inferior article, has given them

the very pretext they require.

Several of the southern colonies are wisely taking precautions, by the appointment of inspectors, to stop the exportation of an inferior article. It is to be hoped that they will rigidly insist on the honey being of the best quality before allowing it to pass.

When shipping honey in bulk the most convenient packages are cases holding two 56lb tins. The tins should of course be new, and strongly soldered. The cases should have a divisional board between the two tins, the same as are used in fruit cases. The case ought to fit the tins closely all round, so as to prevent them moving about inside the case, and care should be taken to see that there are no points of nails projecting inside the case. If these precautions are taken, there will be no complaints of leaking tins. The contents, &c., of the case should be neatly stenciled on the outside. Many shipers do not do this, they seem ashamed of the stuff they send, as well they may. The honey should be light, clear and of good quality. It is of no use exporting dark honey. The greater part of the honey produced in Australia is of light color and mild flavour, but there is also a good deal of dark strong-flavoured honey. It is no use attempting to export the latter. Many exporters make the mistake of sending the honey home at the wrong time of the year. It should be sent so as to reach the English winter markets, as by that time their own local supply has been consumed.

With regard to the improvement of our local markets, it is to be feared that many apiarists hold too hopeful views. The price of honey being fixed, like all other products, by demand and supply ; we cannot expect our markets to improve until times generally improve, and the great mass of the people have more money to spend on luxuries. Honey is purely a luxury in spite of apiarists' specious arguments to the contrary.

One reason why the price of honey keeps so low in these colonies is that a great part of the honey is produced at practically no expense. There are hundreds of people who keep a few hives, which practically cost them nothing, the product of which they will sell for whatever is offered, looking upon it as mere pocket money. Much of this honey is unfortunately of poor quality, and is offered for sale in anything but inviting receptacles, the owner of a few hives not having the necessary conveniences to store and market it.

It is with considerable interest that apiarists will watch the operations of the Sydney Honey Supply Co. If properly organised, and worked on practical business principles, it should eventually prove a success. But the promoters must not feel disheartened if at first it does not do so, as it will probably take a considerable time to work up a trade.

JAMES TRAHAIR.

Hon. Sec. Proposed Beekeepers' Co-operative
Honey Supply Co., c/o Hebblewhite & Co.,
377 George-street, Sydney.

Dear Mr. Editor,—My first few lines to your paper have been written with some feelings of mistrust in myself; as it is well known to you my reasons (right or wrong) for not writing to your paper occasionally, and is briefly that I am a SUPPLY DEALER (see A.B.B. page 167, Oct. 24th), or at least interested; and would not care for correspondence to be taken as advertisements, as it often does a firm, who really try to do business on the merits or quality of their goods, more harm than most people anticipate, but considering that my subject is of much more importance to the producer than to me, trust that it will be considered in the same spirit as written.

Re Honey Supply Co. This matter has been before the producers for the past eighteen months, with very little results, although the number of shares required to be taken up were promised by the beekeepers present at the last conference, and am sorry to say that some eight or ten who agreed to take shares have not kept their words. These few I feel sure do not know or think of the injustice they have done to all who are anxious that this company should try to improve our markets. Most of those present knew that there were beekeepers at the meeting who had the industry at heart, and were not afraid to spend a pound or two to try and do themselves and others good, and would have increased the number they held if the required quantity to make a start had not been applied for, so that the few who neglected their faithful promises also stopped others from increasing who were willing to do so. It is not my intention to go into details of what the Company can or cannot do, but will ask those beekeepers who have not taken some shares or thought the matter out to carefully read the following, and say, if it is not feasible that the Company must be able to do some good.

1st. Supposing that the Company makes no profit to divide among shareholders and has to call up the full amount of £1 per share during the first two years, and get no advance on the present price of good honey, 2½d to 3d per lb delivered in Sydney, but simply get a ready sale at the above prices, by pushing and creating a demand for pure honey. If properly worked it should do this. Surely no one will deny that this small advantage alone if obtaining sure and quick returns is well worth the interest on £5, the value of five shares fully paid up, at say 10 per cent per annum, which is only 10 shillings per year for the advantage named.

2nd. Think what you are now agreeable to pay a commission agent to sell your honey at any price he can obtain. Now if he is a good man and knows the honey trade, and can obtain for you 3d per lb, and you only produce one

ton per year for the Sydney market (say £28), and he is agreeable to do your selling for 2½ per cent commission, it amounts to 14/- not including cartage, storage and other expenses which are always charged, and oftener want 5 per cent than 2½ per cent, so that the producer who has only this small quantity to send gains 4/- per year by sending to the Company (or nearly 15 per cent interest on his money) even if only charged 2½ per cent commission by his late agent and no cartage or expenses.

3rd. Now as regards the cost of working, take an extreme view, and say it will cost in wages, stores, horse feed, &c., &c., £1000 per annum. or about £80 per month, and an average price of 3d per lb nett, is paid for all honey received, and is retailed at an average of 4d per lb, which is about £9 per ton profit, it would only be necessary to sell nine tons per month or a little over two tons per week to pay the above amount in working expenses. Therefore, taking the extreme costs, and allowing that the producer gets 3d per lb for his honey, but from which he has to pay no commission, no cartage, storage, &c., and he only sends the one ton for sale, he is in pocket, the difference between what he now receives and 3d per lb and all commission and charges, less the 10 per cent interest on the £5 he has paid for shares in the company. With careful management, and some good pushing, I cannot believe but what two tons per week could be sold. The advantage taken at the very lowest seem so apparent that it is strange so few of our honey producers have not sufficient energy or foresight to at least give it a trial, and if it should prove financially a complete failure, which if supported properly by the beekeepers cannot possibly be the case, it only means that you have spent £1, £5 or £10 as the case may be in advertising your product, and Mr. Editor, you will be in a position to support me when I state that many firms with a less turnover than the N. S. W. Honey Co., spends hundreds of pounds each year in advertising their goods.

A meeting of Provisional Directors is to be held to decide what further steps shall be taken, and from past experience I think that this company will be worked by the few. This will not be as beneficial to the producer or shareholder as if it had at least the greater portion of the beekeepers interested, if only to the extent of 5 shares each; but as this seems to be beyond reach, we must accept what will be a trading company and not a co-operative company; or give it up altogether and let the beekeepers continue in their present unpleasant and unsatisfactory lines—of big commissions, bigger charges, and very small returns.

Mr. Keeler, N. Z. recommends a bottom board of wire in order to induce bees to build combs right to the bottom.

HOW TO MAKE A START IN BEES.

LOYALSTONE.

1. *Introduction.*—This is the first of a series of papers on the above through the medium of the *Australian Bee Bulletin*. It is written for the benefit of beginners, though I trust some of the papers will be useful and interesting to beekeepers of a few years' experience. The author of these papers has had considerable experience, and invites criticism on his papers from time to time from beekeepers of experience; but let their criticism be short and to the point, as the answer of the author will be to those who criticise on any of his papers. I begin at the very start, and finish up so that anyone who wishes to enter into the business, and reads the articles all through, will have "clear sailing" before him, and make a comfortable living by looking well after his busy bees.

2. *Site, Situation, Locality.*—In the first place let me remind you that unless you think you have a liking for the business don't touch it, because the honey bee is an insect that requires all your devotion and care to make a profit from. Anyhow, you think you would like the business, and wish to know the way to go about it. You want a good locality, so that the bees will bring in honey nearly all the year round; where the winter is not too cold and severe, and the summer is not scorching hot and dry. There are plenty such places in the different colonies, but I will treat on a locality in New South Wales. You must know where the bees derive most honey from, and which honey is the best for market. By giving you a list of the best kind of honey-producing trees, by casting your eyes around and making enquiries, you won't have much trouble about getting in a good locality. The following is the list of trees in order named. I put yellow box at the head of the list, then follow white box, iron bark, white gum, red gum, stringy bark, apple tree, red box. This is the principal lot. Now for herbage. Nothing beats white clover, after which comes dandelion, lucerne, horehound, and a host of others too numerous to mention. In pollen it is hard to get a herb to beat sorrell (the farmer's curse and the beekeeper's blessing). Where you find or know of a locality where there is a percentage of the best honey-producing trees and herbs, make up your mind to open up an apiary there, that is if you are not forestalled by someone else. I reckon that 200 colonies is quite enough within a radius of five miles. Your next plan is to choose a site. You want if possible to get a block of ground sloping south and east, with a good drainage. Of course an acre of ground would be enough, but I would prefer a 10-acre block, cut up into little paddocks, say $1\frac{1}{2}$ acres for homestead and apiary, $5\frac{1}{2}$ acres for vegetable garden and orchard, and the balance, 3 acres, to keep a horse and cow. You would require to

grow some feed for a horse and cow in the winter time. If you get good land the three acres would keep them spring, summer and autumn. Round the fence I would plant a hedge of white hawthorn, which bears an abundance of bloom every spring from third year of planting, and yields a deliciously-flavoured honey, which would top the market anywhere. There is another kind of hedge plant, Cape broom, which you might mix with the hawthorn. It has a pretty yellow pea-shaped flower, from which the bees gather an abundance of pollen. This plant is very handsome, coming into bloom the middle of August, and lasting till beginning of December, and is one mass of yellow flowers. Another plant is the Tree Lucerne, which requires to be planted where there is no danger of water laying at the root. This is a splendid shrub, standing frost and dry weather, and grows from ten to eighteen feet high, in the short space of three years. Cattle and all stock eat it readily, and fatten on it. It flowers through the winter, and well into the spring, and when fine weather, swarms with bees sucking the nectar from the blossoms. To return to the site for apiary (I will give a paper later on, solely on shrubs and plants, useful to man, stock and bees), pick the highest part of your block of land, where you will catch the morning sun, and be also in the position that you will have the rays of the setting sun on your hives in the winter time, as the bees want as much sun as possible in winter. Be sure you do not pick a site without shelter from winds. Nothing knocks bees about more than winds, especially in the early spring when there are very few young bees to take the place of the old ones that have lived through the winter. Now, for the situation. The best situation is among the hills, mountains or slopes surrounded by farmers and plenty of timber not likely to be destroyed for years to come. It would be all the better if you had your site near the foot of a mountain, with plenty of good water not more than half a mile away, the closer the better. Bees do not like climbing a hill with a full stomach or load any more than you do, hence my reason for saying, situate your apiary near the foot of a hill or mountain, and don't go too far from the railway lines, not more than ten or fifteen miles. Next paper, preparing site, hives, stands, and bees.

To be continued.

MR. HALLORAN.

We have received a copy of the *Wagga Wagga Express*, in an article in which, headed "Our Surroundings," is a very interesting biography of that well known beekeeper, Mr. Thomas Halloran. We are sorry space will not allow us to

give the full column and a half of small type, but a few items from it will no doubt be of interest to many of our readers:—

Born at Tumut in New South Wales, in 1845, after a very desultory education he delved on a farm owned by his father, Stephen Halloran, and as a lad of 16 won the prize for a ploughing match, and followed up that achievement by annexing the prize in the men's section at the age of 20. Working on the farm till 1880, he elected to strike out for himself, and in consequence came to Wagga, where he joined issue with Mr. Hann, and commenced dealing in stock. From a comparatively small beginning, the business inaugurated by these two gentlemen reached such proportions that from 50,000 to 90,000 sheep were annually drafted to Queensland, and very often the number reached 100,000. Cattle were not largely affected, though once 1100 and on another occasion 700 head were picked up by them.

In 1886, finding himself in a tolerably comfortable position, Mr. Halloran purchased the property known as Fernleigh, consisting of 48 acres, about two miles from Wagga on the Albury road. When the property was purchased an apology for a house stood upon the grounds, but Mr. Halloran being something of a Sybarite, added to that building by putting up an addition in the modern style and now owns a house which is more than comfortable, and more than ordinarily furnished.

An interesting description of the farm is here given.

It then goes on to say: On taking up the place, Mr. Halloran, who is an enthusiast in the bee line, got together some of those industrious flies, but, "How doth the little busy bee" proved a failure through what is known as foul brood, and he was left with just one swarm.

Nothing daunted, Mr. Halloran procured an Italian queen, and renewed his enterprise, doing fairly well for two or three years. Last year he had great difficulty in keeping his bee family pure,

and that antagonist to bee-culture—foul brood—had to be fought with manfully. But getting a fair start with four Italian queens he commenced operations at Red Bank, a place of his at the Lake, and began to breed queens from half and drones from the others, so as to get a desirable cross.

Four hives were set down at Red Bank, whilst 9 stood in the garden at Fernleigh, and from these 13 hives a pure strain was commenced to be bred.

The virtue of the swarms can be imagined from the fact that out of 9 last year at Fernleigh, Mr. Halloran collected 2200 lbs of honey.

At present Mr. Halloran has at Fernleigh 26 swarms or colonies, and eight nuclei, the latter being simply for breeding queens, and 12 swarms at Red Bank.

The extracting season with Mr. Halloran commences on the 1st October, and every ten days a raid is made on the hives. When about to extract, a solution of 2ozs carbolic acid, 2ozs glycerine, and 2 pints of water is prepared. Into this solution, baggings, the size of the top of the hives, are steeped, and then placed on top of the hives. In about twenty minutes the top of the hives are lifted with impunity and carried to a place where the capping can and the extractor are handily placed. A heater, with three knives shaped like trowels, which serve to clean off all exudings, is necessary. After the frames have been uncapped, they are placed two at a time in the extractor, which is then as it were churned. The honey drops to the bottom, and when a sufficient quantity has been drawn, it is filtered off and carried to the refining tank, a galvanised iron one, four feet in diameter and two feet deep. Here it is allowed to remain for about ten days, whilst the process of sweating, or the evaporation of water is taking place. When the honey is ripe, it is taken from the refining tank and stored in two tin receivers, whence it is drawn off into 60lb. tins (if ordered) and 7lb. ones. For local trade the honey is put into 1 and 2lb. glass jars with screw tops,

and in this guise it looked very enticing. Handsomely got up labels add to the attraction of the jars. Amongst the bees possessed by Mr. Halloran are some very handsome queens known as "Golden Beauties," a cross between the Cyprus and the Ligurian, and they do not belie the name given them.

When taking stock to commence the season, Mr. Halloran found that he had a credit balance of £65 4s 5d. This, considering that bee-culture is only a hobby and not a business with the gentleman I am writing of, speaks volumes for the desirability of the industry as an industry.

In addition to the beekeeping and orcharding, Mr. Halloran grows about an acre of Algerian wheat for a number of fowls and turkeys that he is breeding, and the crop looks very healthy.

Some 600 acres of land about a mile from Fernleigh are leased by him for the depasturing of 450 crossbred sheep. He purchased 10 pure bred rams at the New Zealand sales, choosing the breed of Mr. Russell, of Southland. In the coming season his fat lambs will be strenuously competed for.

At Red Bank, Lake Albert, in 1891, finding the stock dealing business retrograde, Mr. Halloran started a boiling down business. The establishment is situated in a 260 acre paddock on the Gregadoo Road, the buildings standing about half a mile off the thoroughfare. Consisting of some 10 or 11 sheds it conveys the impression of a thriving place, and this is verified by the following figures: In 1892, 54,000 sheep were put through, and this was followed by 124,000 being operated on in 1893. In 1894 only 65,000 sheep were dealt with.

When in full swing no fewer than 40 men find employment in these works.

Near the boiling shed is the skin shed, which is a marvel in its way. 132 feet long by 20 feet wide, it has two rows of posts fitted up with wires, having a ring at the end, which admits of the skins placed on each wire being slid along

to its place, and then of the wire being effectively tautened. Experts have acknowledged that, exclusive of the fact that 4000 skins can be hung thereon at one time, the shed is the best of its kind in the district.

The pig yard consist of 8 acres, fenced in by an 8 barbed wire fence, and are a source of a very decent income to Mr. Halloran. For the sustenance of the young porkers, and 600 fowls and ducks on the farm, 2 acres of the land are put under rape, sorghum, turnips and barley.

The bone mill, with the usual disintegrator and crusher, turns out about 80 tons of dust, and here I may state that it seems somewhat peculiar, that farmers and others, having manure (and that as proved by the best authorities and analysis) at their very doors, should pay 50 per cent. more for it, and draw their supplies from hundreds of miles away. In order to ratify his opinion of the bone dust produced at Lake Albert, Mr. Halloran recently arranged with a farmer to manure his land for payment in kind of a bag of wheat to every acre manured, and is positive that next year that farmer "will shake hands with himself" for the compact made. It is no reason that, because the Lake Albert manure is cheaper than the imported, it is not quite as good, if not better, but then this is only another verification of the truism that—"A prophet hath no honor in his own country."

DEATH OF REV. L. L. LANGSTROTH.

At the recent North American Convention at Toronto special interest was given to the occasion by the presence of Rev. L. L. Langstroth, the father of beekeeping in North America. Through the thoughtful generosity of a few friends, who judged that a northern trip would do him good, now that, happily, his health is in a measure recuperated, and his attendance at the meeting would add

a pleasing feature to it, the means were furnished to enable him to come, and to make him comfortable while here. He was received with every mark of respect, the Convention rising to receive him, and remaining standing while he was conducted to a seat of honor. Owing to deafness, he could not take part in the proceedings farther than to address the meeting several times, which he did with surprising strength of voice and clearness of intellect, considering that he was in his 85th year. All joined in hearty greetings and best wishes for continued long life, prosperity and happiness to the G. O. M. of American beekeeping. News has since been received that he died of apoplexy on October 6, while preaching to a large audience at his home in Dayton, Ohio.

CAPPINGS.

(From American and other Bee Journals.)

Miss Emma Wilson, says:—For myself I feel pretty sure I want the frames all in one story. Two stories make too much lifting. I don't know that Dr. Miller agrees with me in this.

J. B. W. Ga.—The longest comb that has ever been made in bee-trees, that I remember to have seen reported, was 9 feet. We have had frequent reports of where they have been 6 and 7 feet long; but even these lengths have been rather extreme.

Professor Ward,—Most of the higher flowering plants would speedily perish were insect aid withdrawn, and that but for such aid in the past we would now be without most of our gorgeous flora, and insects have actually paved the way for man's existence by the part they have played in the development of fruit and nut bearing plants.

Dr. C. C. Miller, says:—If all other conditions are precisely the same, and if the sun is allowed to shine on the entrances of the hives, I should expect those facing south (north in Australia) to be the most inclined to swarm. Simply from the fact that they get more

heat in the course of the day, and it is generally conceded that heat is one of the things that helps to incline bees to swarm.

G. W. Demaree.—The present season I have been deeply interested in the search after a cheaper and better way to preserve empty combs through the heated part of the season, than the old sulphur fume plan. I find that if treated before the combs become infested with worms, fine dry salt sifted into the cells will generally protect the combs. After the worms have got into the combs gasoline (the same as used for cooking stoves) if sprayed in upon the combs will kill the worms like a flame of fire, and after it evaporates it leaves no smell on the combs.

L'APICULTURE.—Test for ceresin in wax, given by Abbe Butet: Melt a very small piece of suspected wax in one vessel, and dissolve some soda in another in a little hot water, which pour boiling on the wax; if pure, the wax will be completely saponified after cooling, and will all run into soap on being pressed between the thumb and finger. If it contains ceresin, the wax alone will be saponified, and the ceresin will remain in the form of a much firmer paste. Wax of known purity should be treated first, to make the test conclusive. This will not show the presence of vegetable wax, as that saponifies.

J. A. Golden's method of caring for empty combs.—Make, say one quart of brine, putting in all the salt the water will dissolve. Take an empty brood-frame, cover one side with wire screen, by tacking it on with small tacks. Spread on a table an oil-cloth, take a brood-comb, lay it on the table, and pour the cells, on one side, full of brine (I use a gum sprinkler). Then lay on top the frames with wire screen. Lay on the table another brood comb, lift up the comb full of brine and turn over and hold it over the empty comb, and give the frame a quick upward jerk, and the brine will quickly pass into the cells of the empty comb. Drop the screen-frame on the comb just lifted, and lay the comb

just emptied down on the table, the other side up; pick up the one now with the screen on top, turn it over the one just emptied, and with a quick upward motion you will complete the comb. Thus you continue the work, refilling and emptying until all are treated. The brine should be quite warm, and will adhere to the cells better. The wire screen prevents the combs from breaking when throwing the brine out with the sudden upward motion or jerk. When the combs are dry, they will look frosty; thus they can be laid away, and, when wanted for use, give them a good rinsing in a boiler of tepid, clean water, when purer combs cannot be given to the bees. This is the experience of the writer.

J. L. Bowdish:—A short time ago as I was watching my honey-bees carry in to their hives pollen and honey, a large humble bee, attracted by the fragrant smell of new honey, came buzzing around the hives; it buzzed from entrance to entrance of different hives, but as each was well guarded by the honey-bees, they would dart at it whenever it attempted to alight. It was loth apparently to make the attempt. However the smell of the gathered sweets was too much for it, and its appetite got the better of its fears, and it alighted at the entrance of one of the hives. No sooner done than two bees were on its back and wings—one on each side; and as it raised to throw them off, a third bee attacked it squarely in the breast, and over all went to the ground. I watched the struggle as they fought, the bees hanging on to it and thrusting their stings into it the best they could, while it, with comparatively giant strength, tore them away. The contest lasted perhaps one quarter of a minute, when it cleared itself from the honey-bees, leaving the three adversaries exhausted and wounded on the ground; it flew perhaps six feet and rested on a stone. I watched it as it panted and dressed its wounds and wings. It rested for a minute or two, and started to fly, then rested again. Maddened as it was by its

defeat, it started again and went direct to the entrance of the hive. It tried to enter without stopping, but its reception was very warm and pointed! It was attacked from all sides at once, and they all rolled to the ground in a bunch. The struggle lasted two or three seconds, when the humble bee tore the bees from it (like the giant it was), and took its departure at once, a wiser if not a more humble bumble-bee.

Albert Gale, in the *Agricultural Gazette*:—The cappings of drone-cells are more convex than those of workers, and as in the case of both queen and worker, are porous. They contain not nearly so many pores as those of the former, but far more than that of the latter. When the inmates of these cells have completed their larval stage and are entered upon that of the chrysalides, they are sealed or capped over with a mixture of wax and pollen. The shape and texture of the cappings are such that they are easily thrust off by the mature inmate. The inmates of the cells spin the cocoon by which they are enclosed but the construction of the cappings is the work of nurse bees. The cappings of brood cells differ greatly from those of honey cells; these latter are not nearly so convex,—in fact, are in the centre slightly concave, so as to more easily resist the pressure of the honey within; they are, moreover, formed entirely of wax, and are therefore airtight.

Albert Gale, in the *Agricultural Gazette*:—For high-class drones, select an old queen, one that has a record of good traits, perhaps the older the better. If she has produced workers of your ideal standard of usefulness, there is a moral certainty that her drones will be of equal merit. To a certain extent in this way good drones can be selected. "It is not fully true that the drone is beyond control," says Cheshire. With care, selected drones can be so secured for the purpose of mating with selected queens. When a queen is 5 or 6 days old, and unmated, close the hive she occupies at night, and remove it to a

cool dark room, and keep it there till the afternoon of the second day; return the hive to its original stand. A nucleus hive is the most handy for the purpose. Before returning it to its place, feed all within with heated honey diluted with warm water. Before liberating the queen and other inmates of the hive, be satisfied that there are no drones on the wing. This may be done by listening for their deep bass hum and noticing the entrances of the surrounding hives. It is better to have two nucleus hives for the purpose. One should contain the virgin queen and the other the drones, wherein there is a fertile mother-bee. When the nucleus hives are placed on the stand in the sunlight, it will cause great excitement in both hives. The queen and drones will at once rush out, and there is a moral certainty that the object sought will be attained.

Rev. Emmerson T. Abbott.—Many beekeepers have gone to considerable trouble to provide solar evaporating tanks and other means to ripen their honey, and while it may be necessary in certain localities, and with some kinds of honey, the average beekeeper will find that if he will provide plenty of combs, the bees will ripen and seal the honey under the cheapest and best possible conditions, and if extracted and run into vessels that can be covered tightly so that it cannot absorb moisture from the atmosphere, it will retain the flavour and aroma that is so highly prized in comb honey. Honey procured under these conditions will create a market for itself, if properly put up and brought to the notice of the consumer.

Canadian Beedom, speaking of curing Foul Brood says:—The drug is known to chemists by the name of "phenol" which is a refined preparation of carbolic acid. To succeed with this remedy it is necessary that the bees should consume a portion of it. They are tempted to do this by its being mixed with sugar syrup in certain prescribed proportions. To induce the bees to partake of it, it must be greatly attenuated and fed to them when there is no honey to be gathered. Fed in a

time of scarcity of nectar, they will take it, if given one-fivehundredth to one seven-hundred and fiftieth, that is to say 500 to 750 parts of sugar syrup to one part of phenol. Taken by the bees anywhere in these proportions the drug will kill both the microbe and the spore. This fact, which Mr. Clarke believes has been demonstrated, is of the greatest importance to beekeepers. Autumn is the most favourable time for trying the remedy. The bees are hungry for food, and, like a starving man who is not particular for luxuries, like quail on toast, the bees are glad to get a plain article of food. The remedy is cheap and of easy application. Mr. Clarke is anxious that beekeepers should put this remedy to the test. It is of no use merely to place the phenolated syrup in the hive—the bees must consume it in a curative quantity. They will do this if they have no honey to gather from outside. Let it be distinctly understood that two conditions are absolutely essential to success in the use of this remedy: First, that the bees have no other resources, and second, that the phenol be diluted so that the bees will accept it. This will be somewhere between the 500th and the 750th. Mr. Clarke gives this wide margin because he is not sure whether phenol is always of the same strength. Phenol may be obtained of any good druggist. Syrup, medicated with phenol as described, is a preventative as well as a cure. Owing to this having been an exceptionally bad honey season, a great many colonies of bees will require feeding before winter, and Mr. Clarke earnestly advises all who have any feeding to do to do it with phenolated syrup. About five cents' worth of phenol is sufficient for 10 or 12 pounds of sugar syrup. It is a cheap and easy experiment for bee-keepers to try. Bees that do not require feeding, but are suspected to be tainted with foul brood, should have a small quantity of the phenolated syrup daubed over the brood-combs and run into the cells adjacent to the brood. If this be done the bees will assimilate a curative quantity of the drug.

QUESTIONS.

44.—What system do you adopt in taking your honey from the hive during a good season?

45.—Does "Foul Brood" affect any but immature bees?

46.—Why do the bees always make the colour of the cappings of brood agree in colour with the comb? New comb light cappings, old comb dark cappings.

47.—Which is the most profitable to put in frames, starters or full foundation?

H. JERVIS.

45. Years ago my bees suffered a lot with Foul Brood. I could not see that it affected matured bees.

47. Full sheets of foundation, if a rapid or moderate increase is desired. If we had some way of getting bees to build over wires, so the combs would be straight and well wired, I would say starters only.

(Touch the wires with wax.)

JOHN GALE.

45. Have never seen it, except in the larval or pupa stages.

46. There is the fact, but who is able to furnish a satisfactory answer? The bee is a skilled architect; he evidently understands and observes the æsthetical and harmonious, as well as the mechanical principles of his vocation.

47. I have used both, and considering the drawback to full sheets, I prefer starters of not more than 1/4 inch in depth.

D. GRANT.

45.—I hardly think so. I fancy that when once a bee hatches, it is beyond danger from *Bacillus Alevis*, even if it has spores in or on its body.

46.—Probably because the bees use a good deal of the thick rim of the cell in forming the capping and if dark it colours the latter.

47.—Full sheets every time, with one exception, viz: when hiving a swarm under queen excluder in a shallow body, to force bees to store honey in supers above. Another possible exception might be when in a good district and working for wax production, but even then I think I would prefer full sheets to start on and when uncapping shave the comb back nearly to the midrib. Drone comb is a nuisance in a hive unless kept above a queen excluder and then the excluder is a nuisance.

R. HELMS.

45.—The cause of the disease known as "Foul Brood" *Bacillus Alevis*, Cheshire, attacks all the different members of the hive and consequently must affect them. Whether the disease is absolutely fatal to the adults as is mostly the case with the larvæ is another question. It is now generally believed by investigators that a number of the workers succumb at times. Least is

known about drones but the queen resists the disease best. Cheshire I think quotes a case of a queen dying from, what he reasonably concluded to have been the effects of *bacillus alevis*.

On application to the Department of Agriculture my pamphlet on Foul Brood may be obtained gratis. In it can be found what is known about Foul Brood up to the present time.

W. S. PENDER.

44.—What system do I adopt? I think I can safely say almost every system and according to circumstances. It may here be necessary for me to explain how I became fixed in such circumstances. When I became familiar with frame hives before knowing of any standard size of frames, I fixed on a frame about 11 in. square and on the long idea system. This was afterwards entirely discarded for the loose simplicity frame, and tiering system, this frame being the most generally adopted and being the best then in use. I had in use about 800 of them all built out on comb foundation. Then came the thick top frame as an anti-burr-comber. These were tried, and then the Hoffman came out, which I did not adopt until it was modified into the Root-Hoffman, I then tried a few, and was so satisfied with the advantages that I adopted it in all new frames and now I have loose simplicity, thick top, Hoffman, closed end standing half-depth frames, shallow extracting, loose and Hoffman frames. Such a mixture require some variety in taking off the honey. With the full depth loose frames each frame requires to be removed singly from the supers, burr combs are broken and honey drips so in order to prevent robbing each colony has to be handled as quickly as possible. A quick jerk removes most of the bees and a Cogshall brush the rest, each comb the same is put into a comb bucket as quickly as possible. As soon as the super is emptied it is quickly filled with combs from a comb bucket that were removed and extracted from a previous hive and the hive closed. The combs are taken to the extractor, and put in a hive body to be extracted by the assistant filling the comb buckets with empty combs to replace those taken from the next full depth super hive. When I gain time on my assistant I give a hand until he has caught up. After all full depth frames are extracted, shallow combs are taken off. The easiest and quickest way is lift off the supers, there generally being two or more, place one or two cases of empty combs, replace the full supers and pour volume of smoke on top and between the combs and place on a thick mat. Repeat on the next hive, when on returning to the previous hive the supers will be almost empty of bees. A smart thump of one end on the ground while holding the super horizontally will dislodge the rest of the bees. This wrinkle I learnt from Mr. G. R. Humble. The assistant carries these supers to the extractor, and other cases are taken off as long as spare crates

of comb last. As combs are extracted they are returned to their crates to be exchanged for filled supers on other hives. The bee-escape can be made use of and for work I find the Laresse the best, but as I do not make it a rule to visit my out-apiary the evening previous to extracting to put them on, I do not use them often. If put under supers the evening previous to removal, with an extra set of frames under the escape, there will not be many bees to bother in the supers in the morning. Anyone who extracts from his home apiary (mine being entirely for queen rearing I do not) will find their use a great saving of time and labour. I find the supers standing the manipulation of combs by the case best are the closed end standing or Heddon frames.

W. RUSSELL, DEEP LEAD.

44. In reply to your circular re Method of extracting honey, I enclose in this, a short description of my method. But far and away more important is the question, "What am I going to do with my honey after I have extracted it." You will remember my former letters on the subject. Well since then, I have been endeavouring to press the importance of our having a special agent in England devoted entirely to selling honey wholesale and retail, or in any way that may be possible, only sell it and that for a fair figure. I need not repeat any of the reports received both by wire and post, which have appeared from time to time in the papers. Every beekeeper knows to his sorrow, the messages sent, which summed up, read, "Honey unsaleable." Now, sir, I am heartily sick of trying to stir up Victorian beekeepers, and am of opinion that it is utterly impossible to do so. Yet for their information, I would say, that from reliable sources in London, I learn that honey is retailed at 1/- per lb. there, and not to be bought cheaper. There is no question about it, one more good honey season, and Australian beekeeping is "up a tree." Its no use attempting any co-operation among beemen, for they won't have any of it. Each one must have his own road, and (as far as doing any good to the honey trade of Australia), that means failure. For my own part, I intend to go to England as soon as this season is over, and apply myself to selling what honey I may have, and arranging for the selling of my crop of future seasons. If anyone who would like to communicate with me on the subject, will address a letter to me at the above address I shall be very glad to reply, and to try and arrange for the sale of other honey, as well as my own. Our season here (for the off year) promises to be very good. Bees just starting to swarm. Foul brood far less than previous season. You will see by my address I have moved. My reason for moving was to get to a district clear of F.B. which this part is.

QUESTIONS NEXT MONTH.

48.—J. B. S.—What do you find the best and simplest method of storing the crop as it comes in?

49.—Are hives best painted or unpainted.

THE DRONE QUESTION.

RICHD. HELMS.

When I saw question No. 42:—"Are drones raised by a drone laying queen, &c., as good as those raised from a fertilized queen?" in the September number of the *A.B.B.*, I intended to answer it but refrained from doing so on noticing the reply of "Anonymus." I anticipated more such quaint information and have not been disappointed in my surmise.

It is not my intention to prove seriatim the fallacy of most of the answers given as this would be unsatisfactory labour. It is sufficient to say that the more explicit the answers pretend to be the less value do they possess.

Practically the question is unanswerable, because no one can prove the fertilisation by any particular drone. Moreover, if coition could be proved between a queen and a drone which emanated from an unfertilized queen it would not serve us much to generalise upon.

An answer deduced from logical theory must therefore take the place of one derived from experience. This answer in my opinion is in the affirmative.

The answer given by H. Jervis, in my opinion, is really the correct one, although no reason is given for the reply. The cell *per se* has little to do with the quality of the drone, as it merely influences his size to some extent. Mr. H. Russell also argues rationally.

The egg has also no influence upon the future virility of the drone except to the extent of an inherited tendency in greater or lesser degree in that direction. The proper development of the sexual organs depends entirely upon the early nutrition of the larva.

If therefore an egg is deposited in a drone cell it is at once recognised as a male and receives the proper attention from the bees. Provided that there are a sufficient number of bees still left in the hive, and food is consequently not stinted, the drone raised in a drone-cell will become perfectly developed no matter whether his mother is fertilised or not.

With drones raised in worker-cells the case is different. Sometimes the bees do not recognise the sex, and treat the brood like workers. More generally they recognise the larvae, but it is a question whether they do so at an early age. In neither case would I consider the drones of much use.

A large percentage of the drones raised in flat sealed cells would probably be almost natural eunuchs; standing in the same position to the drone as the aborted female, the worker, stands to the queen.

"Bucklebrut" drones would probably be virile, but, it may be, in a lesser degree than those raised in drone cells. This would depend upon the early recognition of the sex by the nurses.

It is fair to surmise that such drones would, in most cases, not be so bulky as those properly raised, and this may influence their buoyancy and swiftness. There is little chance of their successfully competing in the fight for a mate. The offspring of workers are most likely frequently impotent, or only virile to a limited extent. A laying worker is generally the last futile attempt of the colony to recuperate itself, and this desire perverts the instinct of the bees to such a degree that they will consider the eggs as those of workers, and treat the larvae accordingly. The laying worker attempts what she cannot do, but she is often recognised like a proper mother, which makes it difficult to supersede her without removal. Her offspring will have still less chance in the competition for a marital embrace than the other abnormally-reared drones, and probably does not even possess a sexual desire in many instances. Under favorable conditions the worker drones may be able to fertilise a queen. Von Siebold found spermatozoa whenever he dissected such drones, and one experiment at least is on record which seems to prove the possibility of fertilization. Vogel (*Bienenzeitung* 1855) introduced a comb with brood which he knew to have emanated from an Italian worker (he saw her laying himself) into a queenless hive of brown bees, over half an hour distant from the stand. The Italian drones developed, and two young queens later became fertilised, and produced partly brown and partly Italian workers.

Sexual selection is a remarkably powerful factor to bee life. It is nowhere else so strongly developed. Only about one drone in every thousand attains the purpose of its existence, and is favored to enjoy the luxury of a marital embrace. The most virile, which, according to the general law of nature, will also be the most energetic and powerful, always wins the bride.

The importance of the drone, in my opinion, has never been sufficiently recognised. He is considered the prototype of all that is lazy and useless, and his name is colloquially a despicable term. Do not the majority of the drones deserve pity rather than contempt, on account of their aimless destiny? They eat and drink, it is true, but they are condemned to celibacy, much against their natural impulses.

G. C., Southland, N. Z.—I am very pleased with the *Bulletin* and would not like to be without it.

PARALYSIS.

R. HELMS.

On page 188—October—I notice the letter from Mr A. E. Kendall. The disease he speaks of seems to me paralysis. This only by the way. What attracted my attention is the remark that someone has recognised the disease as Gayton's "Foul Brood." I hope this absurd name will not become an adopted term, but immediately be relegated into oblivion.

If the disease spoken of is due to *Bacillus Gaytoni*, the term "Foul Brood" as a name of it is inexcusably out of place, because as far as known the bacillus does not attack the brood; and if it does attack the brood, which may be quite probable, it does certainly not reduce it to a "foul," or rotten pulp. Cheshire named the bacillus which he found in bees sent to him by Miss Gayton, but beyond describing it, and assuming it to be the cause of a certain disease, nothing has since been done to throw further light upon its life history. I am sure it has never yet been correctly identified in Australia, although I strongly suspect it to be the same as that which is causing the depilating disease. This I have stated some time ago. Such surmises must, however, go for what they are worth. The fact is that, with the exception of the disease caused by *B. alvei*, nothing whatever is known about the cause or causes of any disease found among bees in Australia. I notice in your "Visiting" someone thinks that an easy method of getting rid of the dead bees is to scratch them under in the sandy soil about the hives. Considering that the diseases are most probably of bacterial origin, this method is most likely to keep the contagion about the place. Burning is the only safe method to get rid of them. It is easier also to shovel the dead bees away and burn them than to dig them under.

W. S. G., Mildura, Victoria.—Am well pleased with your journal and always look forward to it every month.

ON THE EFFECT OF FORMIC ACID UPON THE HUMAN CONSTITUTION.

RICHD. HELMS.

It seems to be idle to speculate upon the quantity of formic acid which is required to be injected into the human system by means of the bee sting in order to confer immunity against the effect of such small doses. Different constitutions are quite differently affected. Some seem to enjoy naturally complete immunity from the effects of bee stings, and except for the momentary pain, suffer neither swelling nor any after effects. I have no doubt that the effect is found to vary in degree, according to the individual, from this immunity up to very unpleasant results. In many cases the poison seems to loose its virulence by frequent injections into the blood, but not so with everybody. With some the after swelling always follows the sting, as well as considerable itching. No doubt the after effects of the sting depends for the most part upon the quantity of poison injected. The greater or lesser sensitiveness of the part affected plays also an important part.

Generally when once a person has become immune against the effects of the poison and an occasional sting is suffered, as is likely to happen to every active beekeeper, the immunity is constant. Whether permanently when lengthy interruptions between stings occur, say for a season, is problematical. In my own case it is decidedly not so. Not having been stung for several months I get as badly affected as ever. But then I must say that I am perhaps extremely sensitive to stings; a swelling always follows the sting, and later an itching, which spreads far beyond the effected spot and may last for several days. Nevertheless, working continuously for a few weeks among bees makes me perfectly immune for some time. Even when very severely stung, as was once the case when a very vicious hybrid swarm fairly rushed me, and inflicted in no

time upwards of 50 stings upon my bared arms, I do not get affected. Still after a month or so my system becomes as sensitive to the poison as ever it was.

The weather also affects the nature of the effects. During warm weather the swelling is as a rule not so bad as in cold. The worst effect I ever experienced was from a sting under the eye. Riding afterwards on the box of a coach for several hours against a cold drizzling rain, the whole side of my face swelled up from it.

Most preventatives, such as ammonia, washing-blue, oatmeal pap, oil, marsh mallows grated, potatoes grated or bruised onions, grated horse-radish, bruised leaves of horse-radish, tobacco juice, brandy, the juice of the flowers of woodbines, &c., are useless, or imaginary only, for the simple reason that they are as a rule applied too late. The best plan is to suck the place when possible immediately after the removal of the sting, otherwise press the wound between the fingers until blood appears. This generally removes most of the poison. A great deal depends upon the prompt removal of the sting and on its being done in a proper manner. As in by far the greatest number of cases the poison glands are torn from the abdomen when the sting is fastened in the flesh, if they are squeezed an additional quantity of poison may be injected into the wound. The sting should therefore be removed by scraping either with a knife, or, what is always the readiest method, with the thumbnail.

The curative effect of formic acid in cases of rheumatism when injected by bees has frequently been ridiculed. But there is no doubt that in several instances it has proved beneficial. The stinging in itself seems to act as counter irritant or incentive in a manner similar to the action of the nettle which used to be employed for such purposes in cases of numbness and the weakness of limbs. But the formic acid may probably have a direct action on the blood by counteract-

ing the impunity which is supposed to be to some extent the cause of rheumatic afflictions. It seems to be a kind of homeopathic cure. It is a fact however that the cases known to be cured have been mild types; in chronic rheumatism it can scarcely be expected that homeopathic doses will act effectively. Such cases require more energetic treatment and in fact are often hopeless. It must also be remembered that the action of medicines varies according to different constitutions which is palpable from the different effects of stings upon individuals in the state of normal health.

THE HONEY TRADE IN ENGLAND.

The English correspondent of the *Sydney Daily Telegraph*, in an article on "Australian Produce in England," says:

THE HONEY TRADE.

It is somewhat unfortunate that the large arrivals in this country of Australian, and especially of Victorian, honey should be synchronous with a determined effort on the part of persons connected with the landed interest to obtain a market for the English article. Cottagers have been encouraged to keep bees, merely to find that when they had obtained a large stock of honey there was no market for it. The retail price for English honey is frequently as high as 1s 6d per lb., but the producer has to be contented with 10d less 5 per cent., and has to pay carriage and find packages which are not returnable. Much of the stuff sold as Californian or pure Narbonne honey is nothing more nor less than glucose; with a small quantity of honey added just to give it a flavor. The complaint the retailers of honey make is that the English article is not of uniform colour and flavor, and that when persons get accustomed to one particular brand, whether it be butter, cheese, dried fruits or honey, it is difficult to get them to take a different, even although it be a decidedly superior article. Hence the large grocer will scarcely look at the trade grower who comes with 50lb. or 100lb. of honey, and he prefers to purchase the Californian importation, even although it yields him a smaller profit. A successful attempt has been made by the Berkshire Beekeepers' Association to open a large trade, and the modus operandi was described as follows:—"We secured most of the best grocers, dairymen, etc., in Berkshire, and the Aylesbury

Dairy Company in London as agents, all of whom undertook to stock our members' honey, we on our part undertaking to supply guaranteed pure Berkshire honey as required. Now, in order to carry out our part of the agreement, the first step was to produce a label, which guarantees the article on which it is placed to be pure honey, and in order to protect ourselves we have these labels numbered consecutively in sets of 20,000, and sold to our members at a small profit to cover working expenses, a register being kept of those to whom these labels were supplied. There is a request on these labels that any complaint as to the quality of the article shall be addressed to the hon. secretary of the association, quoting the registered number. I may say that our scheme has been in work for several years, and we have scarcely received a single complaint, but to show how our plan operates, supposing we do receive one, and the number is given, we can at once ascertain to whom the label was supplied, and deal with him accordingly. We have, of course, given the members all the necessary information as to the best way to put up and pack their products in a cleanly and attractive form. I venture to say that owing largely to the efforts of our association and our label system, Berkshire honey has gained in reputation, not only within the county, but outside its borders, and practically we are able to dispose of all that our members produce, and we may claim to have substituted Berkshire honey in the place of foreign on the shelves of a large number of tradesmen, thus disposing locally and saving transit, of a large proportion of the produce of the apiaries of Berkshire. I cannot help thinking that with a little trouble a demand could be found for the honey of Victoria, which is pure, cheap, and fairly well flavoured.

BEES IN WESTERN AUSTRALIA.

REV. WM. HORSFALL, HAWAIIAN ISLANDS.

For the information of Mr John A Ayre, who writes in your August number, I would ask you to state that to my own personal knowledge, bees are kept in one of the warmest districts in the northern part of W. A., viz., at Beagle Bay. The Trappist Fathers of the R. C. Mission took four hives to that part of the country about three or four years ago. They secured them in Perth. They were hybrids. On the same vessel in which these bees were carried to Beagle Bay, I took with me a hive to

Roebourne in the Nor-west, lat. 20. From the experience I had there I can certify that bees do well in these regions and could be made very profitable. In attempting to take my bees from Roebourne to Singapore they died on the voyage, to my great distress. Whether my bees swarmed in Roebourne or not I cannot say, but I hope they did, and if so that they are spreading in that region.

I had prepared a few notes on bee forage, &c. At present I can only give you a few points:—

1.—Bees prefer blue flowers. Some flowers of this colour are especial favourites,—Eutoca, Borage, Echium, Anchusa, Lallamantia, and others.

2.—The Composite Family contain some of the greatest pollen producing flowers. *e.g.* Sunflower, Coreopsis, Cosmos, and others, principally autumn bloomers.

3.—The Mallow family is also rich in pollen, *e.g.* the Lavatera, Cotton, Okra, and Hollyhock.

4.—The Cucumber family is much frequented by bees for both nectar and pollen.

5.—The Sage family great honey producing flowers, giving a very distinct flavour.

R. G., Coolac.—Bees are all doing well, just started to swarm. Wishing you and your journal every success.

G. K., Dungog.—This has been a very bad season here, too dry, too much frost during winter, and too much westerly winds in spring.

J. A. H., Oaklands.—We have just had a weeks rain which has freshened things up. The (white and blue) gums flowered in great shape this season.

A. T. C., Fyan's Creek, Vic.—My bees are in excellent condition, brood and larvae in all stages. There are several apiarists within a radius of six miles of me, who complain of losing a number of colonies. I think it was for want of a little attention at the beginning of winter. Yellow box, stringy bark and several other kinds of trees are looking promising for a fair yield the coming season.

J. B. S., Pialbo.—I never saw the bees doing better than the last month, plenty of honey coming in and the quality splendid.

J. Le M. S., Tamworth.—I think honey will be a scarcity this year as there are only a few gums to bloom and the box will not blossom much before February.

Mrs. Atchley has succeeded in getting a number of queens from America to Australia during the past month. We saw a packet of five, all the queens alive and only dead bees in one compartment.

E. J. R., Richmond.—My bees are looking lively now, have come through the winter well. We have had Mr. Gale up here lecturing in the School of Arts, Richmond, on profitable bee-keeping.

Our exchange from America during the past month includes the *Kansas Bee Journal*, edited by Mrs Edith Miller. It is a bright and very readable production and ought to command a large circulation.

H. McN., Oakleigh.—I am not a bread and butter beekeeper, but bee-keeping is my hobby, and I derive much information from your journal, which is equal to anything I have read this side of America. I hope your paper is meeting with increased success, as you are fully deserving of it.

W. S., Bayswater, W. A.—We have had a change of luck since I wrote you last. I see Loyalstone in August number, advises beekeepers not to brag about good reefs but my head is not big enough to hold it all. We have not had a flow since December and this is October, and no swarms, and best of all I am feeding the bees. Beekeepers, come and peg out your claims in W. A.

J.T.A., Mooroopna, Vic.—Swarming over. Had another day Thursday with extractor, but hardly got half a ton yellow box. The weather is not the best, it is summer one day, winter at night; on next day blows everything off the face of the earth, but I suppose it will end some time.

W. B., Young.—My bees started to swarm last week. I have sown a little Jap. buck wheat to see how it answers and grows here. I also have got two neighbours to sow it.

J. P., Cooma.—We are having a very trying time here as there has been no rain to do any good since last Christmas, The farmers will be heavy losers as all their crops are a failure. It is three weeks since the fruit blossoms went off, and there has been nothing for bees since. I have twelve hives of Italians in good condition. But if it dont come rain soon I will have to feed them.

C. U. T. B., Lyndhurst,—Re my queen I told you had stopped laying, she was only a last year's queen, and was very prolific last season and the beginning of this season. But though the weather was warm, and other queens laying away, she stopped and appeared to get quite small, nearly as small as an ordinary bee. As I told you I gave bees eggs to supersede her, and on looking yesterday at the hive, what was my surprise to find the queen filled out quite large again and laying away briskly. I never knew or heard of such a case as this happening in the height of the breeding season run on. P.S.—The above colony, with eccentric queen is remarkably strong, covering 15 frames. The queen is the same one, as she has her wing clipped. We are having dry, windy season here, all against a good honey flow. I have been experimenting with different kinds of herbs—boiling them down and mixing honey with same and feeding to bees for some of their ailments. I have treated some cases very successfully. I cured one colony of foul brood in its first stage without destroying brood, bees or comb, and the disease shows not the slightest sign of returning, though it is three months since I treated it. My colonies are at the present time in the best of health, and bringing in plenty honey during the few good days we have now and again.

K.R.D., Cudgel Creek—I am having a terrible bad time of it. This year I have not extracted a pound of honey yet from my bees, and they haven't thrown out a swarm either. There are a few trees in bloom here, but the bees don't seem to work on them at all. I don't think there is any honey in the blossoms, as it has been so dry; we have had no rain for the last five weeks, and it has been terribly hot—everything is withering up.

G. M., Croki, Manning River—I am much pleased with the *Bee Bulletin*, and have received some useful hints from it. I have eleven hives of bees, all of which have wintered well, not having lost one. They are commencing to gather honey from white clover, which is growing splendidly since the rain. I averaged about 47lbs. per hive of honey last season, which would have been considerably more but for the disastrous flood destroying most of the flowers.

R. H. J., Moss Vale.—We are having a very late spring, so much cold winds. In looking over my bees I found one colony queenless and a laying worker. I caged a laying queen over hatching brood and now she is laying away alright. I use perforated zinc in preference to wire gauze for queen cages and cell protectors as it is less trouble to work, keeps nice bright and clean and less likely to get out of shape. In introducing queens I always cage queens over hatching brood in a cage about 5x5 with small tin pipe leading into same about 1½in long, filled with candy. There is no necessity for any honey to be under the cage; the young bees and queen can live on the candy in the pipe. I have introduced some hundreds as above and have only lost about two per cent. I take the one queen away and cage the other at the same time. It is a mistake to keep bees queenless a few days as it upsets them, and if things are favourable and they have started queen cells before introducing the strange queen they will make up their mind to swarm.

W.S.P.—If friend Bombus has received any wounds at my hands, I will apply the salve of an humble apology. I have recently seen by the papers that the best English honey is valued at 9d per lb, if so, I think our best should fetch more than 13/- per cwt. But the English beekeepers are banding themselves together to keep all foreign honey out. Human nature is selfish all the world over, so we can't blame them. Honey raised in the district of Armidale is of a superior quality, and last season a Sydney buyer gave 4d per lb for it and paid freight. If we produce a good honey it will fetch more than 1d per lb. I have seen honey offered in Sydney that looked as if it had come out of a blacks camp, and not fit for a dog to eat. Hence the reason people not wanting honey.

G. B.—Since reading Mr. M'Connel's address on the flowering of the eucalyptus, especially with reference to exceptionally wet weather, I cannot help sending a warning note to amateurs giving an unfortunate experience which befel several beekeepers during the disastrous floods which occurred in the early part of 1893. With scarcely any intermission it rained for six or seven weeks, during which time the bees had a very bad time of it. Two months later the full effect of this was keenly felt. In looking through one of my hives during the latter part of April I was astonished and greatly concerned to find that the bees were completely without stores, in fact on lifting up a frame it appeared as light as a sheet of paper. Previously the bees had absconded one colony after another, until I had lost seven. Seeing how matters stood I immediately procured a 70lb bag of sugar, and made a stimulating syrup, which I am happy to say saved the remainder of our colonies. On making enquiries I found I had come off considerably the best, one of my neighbours having lost over seventy colonies, another thirty and a third one twenty-five. The following year I did not get a single swarm. Amongst those I lost was a Doolittle queen, which I had purchased

at great expense, intending to requeen all my hives from her. I can vouch for the authenticity of the above, and I have often thought it would be interesting to know how others fared in various districts of Queensland.

A. C. P., Rous.—Could you or any of your correspondents let me know what to do to prevent the new swarms of bees from going away. I have had six new ones and only managed to save one. The other five settled and I put them in the box in the usual way and gave them a frame of brood comb in all stages also frame with honey, but it seems no use. They just stop for an hour or too till the next day and then they are off. Last year I had no trouble with them at all only losing one or two all the season. I was wondering how it would do to catch the queen and cage her for a day or two. They are not pure Italians, still very good bees.

Would it be a virgin queen coming out to be mated? Any way, we would not cage the queen, but put queen excluding zinc at the entrance. If the queen is caged, she will not lay. Having her liberty in the hive, laying, and not able to go out, the bees will settle to work in a few days, when they have her eggs and larvae to attend to. To cage the queen would only delay them settling down.

J. A. S., Elizabeth Town, Tas.—For the past few months I have been buried in the wilds of the west coast of Tasmania, driven to seek the "root of evil" by fire and by the death of my nearest relative. I always take up the *A.B.B.* with a strong interest and must compliment you not only on its improved appearance but also on the regularity with which it has always arrived, for while I have been away the little blue paper has always arrived to time, and on my arrival home quite a batch of *Bulletins* awaited me. In reference to bees, I have come through the winter better than I expected. My wife has had the care of the apiary. I have about 30 colonies all fairly strong to start this season. I lost nearly all the bees I had in '94 winter, and did not get much honey from last summer, as it was too thick to extract, I had to leave it to the bees. However, I hope to do better this season.

H. J., Moss Vale.—Enclosed are three queen cups which I gave to a queenless colony with royal jelly and larvæ. Next day I found eggs and larvæ in same. I gave the bees a sheet of eggs and larvæ, it could not have been a laying worker, as I would have found more eggs, in fact workers usually lay more eggs in a queen cell than one, so I think it is clear the bees removed them from other cells.

There are two eggs in one.

J. G., Queanbeyan.—There is something amiss with bees in this locality this year. They are only breeding just enough to make good the natural mortality, no queens and of course, no swarms. Moreover, though they bring home unusual quantities of pollen, they are gathering but very little honey. Some years ago we had a similar experience. I am satisfied from these facts that, unlike other animals, bees will not breed enough to increase by swarming when they foresee as they evidently do, that the honey harvest is to be a failure. I should like to hear some other beekeepers' expression and views on this subject.

H. S., Tatura.—Would you kindly inform your readers if you can, whether honey has any damaging effect upon the teeth, or, if it causes them to decay. The reason I ask is, I noticed one of my customers bought a great lot of treacle and golden syrup and I suggested as honey could be bought at the same price, would it not be better to use honey instead, and he appeared to think that if his children ate honey in the same way as they ate these (vile compounds) they would soon have no teeth at all, as he thought the honey would rot them. I shall feel obliged if you can give us some information on this subject in your next issue of the *Bulletin*.

Unripe honey might possibly do so, but not ripe honey.

What a Sell! Here's the morning's post. So many letters, so many newspapers, and what's this big parcel? It cannot be a choice queen some one has sent as a birthday present. Ah, we have it. It's some Foul Brood someone has found in their apiary, they don't know it,

suspect something wrong, and want us to tell them. We look at our healthy hives in the yard, and take the packet into a back room; prepare a quart of disinfecting fluid, and carefully remove the bandages. Why 'tisin't foul brood at all—but a pound of such delicious honey! Yes, yellow box or something better. Yes, just the honey that arriving in England about December or January, when their home-grown stocks are low, would command a tip-top price, and give Australian honey the tip-top name it is entitled to. For this agreeable little "sell" we are indebted to Mrs J E Conn, of Coonabarabran. May she have tons and tons more of the same.

P. A., Narre Warren.—As the swarming season is now advancing I would be thankful to you for any advice you might give on the same. I have about 30 hives at present, being more than I have had previous seasons, and therefore feel that I will not be able to control the swarming mania. It usually happening 4 or 5 swarms issuing out at once and forming into one large one, a case of affairs I would like to avoid. There are two plans that I am acquainted with but I do not approve them, viz: 1. To have all the queens' wings clipped when the swarm issues. 2nd. To artificially divide the hives, but as I mentioned before I don't approve of them. Trusting you may further enlighten me on this subject, or allow it to be a subject to comment on in your valuable paper.

[The only further advice we can give you as you do not like the two methods you have mentioned is, to go through your hives every 7 or 8 days, and when you see them crowded with brood, put a frame of foundation in centre of brood, and cutting out queen cells.]

J. H. C., Woolbrook.—I am still plodding along in the A B C class of beekeeping, and must thank the *A.B.B.* as a teacher therein. My yield of extracted honey for last season from 5 colonies (spring count) was nearly 1000lbs., also building about 200 combs in Monday full depth frames, the bees having wintered well, coming out with the full number, 16. Through the sudden stop-

page of the honey flow here, last March, nearly all the bees kept in the box hives died, not with foul brood but with the no food disease. The bees are storing honey from the yellow jacket trees at present, also a little from white clover. The soil being bad, with no cultivation, there is but very little clover here. I think the prospects for a steady flow of honey is good here this season, from white gum and peppermint trees. The red gum and stringy-bark I will find out later on. Here is an incident which came under my notice, which perhaps does not always happen. A main swarm issued from one of my hives, the day following I took away all of the brood, giving the bees new material to rear a queen, 4 days later an after swarm issued and went into the hive with a main swarm that was hived in the meantime. 8 days from the time the bees swarmed I found the queen cells destroyed and a young queen laying. I would like to mention that the main swarm from this hive did not issue until four o'clock in the evening. I see by the A.B.B. that the foul brood seems to be making short work with the bees in some districts. The only disease I hear of about this part of N. S. W., is the bee moth, and going into winter quarters with an empty hive, but I think if the A.B.B. was taken by them to read and study, these two diseases would be unknown, so wishing you every success in your endeavour to enlighten all beekeepers, &c.

J. J., Otago, N.Z.—I am always watching for the signs of winter, as I like to hear how other beekeepers are getting along with their bees. Things are not looking very bright for the poor bees here, as it has been a very dry spring and there is very little growth. After the fruit blossoms were gone the bees killed off all the drones and even took the white drone larvae out of the cells. Is that a common thing for bees to do as I have never noticed it before. Now I have some questions for you. I had a hive which was bad with foul brood, and as it got very weak I thought I would smoke it and make a sure thing of it.

Some of the combs had neither brood, honey or pollen in them, would it be safe to use them in other hives. I see a long of different ways of preventing the spreading of foul brood, such as naphthalene, carbolic acid and tar, and carbolic acid alone, which do you think is the best. If carbolic is used is it left the full absolute phenol strength, or is it diluted, and to what strength, and is it stockholm or coal tar that it is mixed with. Would it do to cut a hole in the bottom board like a hand hole and cover with wire cloth to put your disinfectant in or would that let it evaporate, too quick. Wishing you every success &c.

(Re your bees destroying both drones and larvae. Is there no food at all for them? Would it not be well for you to feed them, as they only do that when their stores are short? Re those combs. Phenol should be diluted to about 1 in 250 or 300. We have taken a great fancy to Little's Soluble Phenyle, which can be obtained at any chemists at 1/- per bottle. A teaspoonful will turn a quart of water like cream. Well pour this into frames from say a foot or two above them. Leave in for a day or two, and then hang them up for a few days, We fancy this ought to thoroughly disinfect them.

N. W., Numurkah,—Can you answer me the following in your next, is it a decided fact that Foul Brood does not exist in a queen? The reason I ask is this, some three seasons ago I purchased a valuable queen, price being (I think) 25/-. Some three months after to my surprise I found they had Foul Brood. Got it I presume from a neighbour (who I learnt after had the disease badly.) I tried several methods but without success, the last one was I transferred to new hive starters only. For that season all was right, following season it showed again but much worse than last. As I did not like to kill her, I destroyed all bees, frames, and nearly burnt the hive and introduced queen without any of her bees to another colony, and to my annoyance again F. B. was there, although no sign at all in the hive before introducing. I might say that the daughter of this queen also had Foul Brood after starting to lay last season. I am only a novice in the line, doing it as a hobby, but of course

to see returns. I have, or had last season 15 colonies, from which I took $\frac{3}{4}$ of a ton. I have been troubled with some disease in three colonies. Bees die in hundreds. I have tried sulphur several times. If no better this week will try a remedy I saw in your valuable paper, leave queen in the hive with frame, take all the others 50 yards away and shake them off to fly home. Is it a sign that having no swarms yet it will be a poor season, although colonies in some cases on 20 frames? Wishing you every success, &c. P.S.—I forgot to mention that I sent a quarter of a ton to England, six months ago, and no returns yet.

Several prominent men in beekeeping says queens do not carry it. On one occasion about two years ago, we had three hives bad with foul brood which we treated on the new and starter plan. It was successful, but the bees for some reason or other seemed to get diseased with the queens, and they disappeared shortly afterwards. Since then we have had different experience. We have one hive that was attacked twice, and cured, each time, and this season is full of healthy brood, the queen seemingly as good as any in the yard. A flow of bees coming in will cover the diseased nest and prevents its spreading, but it is bound to break out when the honey is removed. Re the other disease, how are your bees situated for swarms, or are they in an exposed position? Read "Visiting" in our last. Re will it be a poor season because the bees don't swarm, that will depend on the rainfall or the flowers in your neighbourhood.]

APIS TRIGONA.

R. A. PLEFFER.

I read the article on aborigines and bees. Now having had several swarms of native bees in boxes, up till about 12 months ago, I thought a few remarks on same might interest some of your readers. About May, 1888, I secured the first nest out of a tree that was blown down. I cut the limb off the tree, was in and carried it home and left the bees there one or two seasons. Then transferred them into a box, fitted with glass on top to observe the bees at work. In transferring them, I came across what I considered was the queen. She was

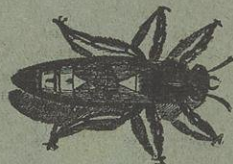
about three times the size of the workers, her abdomen appeared rather thick, not tapered like other queens. I notice Mr. J. J. Miller says that the queen was the first to come out of the tree when knocked. Now in removing the covers off the boxes to show numerous visitors the little bees, I never knew any of the queens to come out. The energy displayed by these little bees is remarkable. Take a peep at them in an hour or two after transferring them into a box, and you will find all hands at work, some removing bits of bark, and wood, others dragging out their dead comrades who have been killed in transferring, while others are repairing damages their nest has received. They build upwards in a curious spiral fashion, fastening it in places to the glass above. In fact, they seem to draw the wax out in all directions, forming a regular network, whilst here and there they form cup shaped cells or honey pockets. They use a vast amount of propolis, which they get chiefly from the turpentine tree. Have never known them to tier their brood combs. They are ranged side by side same as the brood of other bees. They don't seem inclined to drive away moving objects in front of their hives. It is amusing to stand in front of entrance and watch them. Soon as they see you they will back right away out of sight and while you stay there don't seem to care about venturing forth, yet in cutting the nests out of trees they will fight like tigers for their little homes and hard won stores, attacking you on all sides, buzzing into your ears and face and if they cannot sting can give you some sharp bites. Have had to give them a good smoking once or two occasions to teach them manners. Some bushmen reckon they would sooner tackle an English bees' nest than the little natives.

MARKETING HONEY.

At the late Toronto Convention, the members were invited to visit the beeyard of Mr. John McArthur, situated on

Toronto Island, a tract of land formed of sand washed up by rivers—Niagara, Humber and Don—situated in lake Ontario, directly opposite the city, and forming a spacious harbour. The island is about two miles from the main land, comprising 5,000 acres, and some two miles, or a little less, in width. Ten years ago it was a barren desert. Now part of this is laid out in a large park. Thousands of nectar-yielding trees have been planted, while clover grows luxuriantly, and there is a greatly varied flora. The city owns the island, and a permit is needed to put anything on it, even bees. Mr. McArthur has obtained a concession of a large portion of it on the condition of his seeding it down with plants fitted to keep the sand from shifting and drifting with the wind. He has already sown well nigh all the honey-producing plants that will flourish in this climate, and what was formerly a wilderness and a solitary place, now "blossoms as the rose." Its isolation from wild and other bees is complete, and it is the very ideal of a spot for breeding queen-bees "to a feather." *Canadian Beedom* says:—To this lovely seclusion we made our way on one of the ferry boats. Mr. McArthur claims to have laid the foundation here of a race of non-stinging bees. Not that but they have stings that are fully developed. His claim is that they are bred of such gentle parentage they have lost the disposition to sting. The exhibition made by him certainly goes far to establish his claim. On our arrival at the apartment, the first thing he did was to kick over a hive filled with bees. We naturally turned tail and fled to a respectful distance, expecting the bees would swarm out in angry thousands. But beyond the appearance of a few guards to see what was the matter, there was no demonstration whatever. Mr. McArthur set the hive right side up, and immediately kicked it over again from the other direction. Still there was no sign of resentment. Putting the hive in place again, he at once pro-

ceeded without use of veil or gloves to open the hive and take out the frames. The bees were quieter than flies. They seemed unconscious that anything out of the way had happened. We drew near and examined them at our leisure. The queen was easily found, and a beautiful one she was. Talk of five-banded queens! This queen was yellow all over, from head to tip. The shade of yellow was light, a kind of straw color, not bright golden. She somewhat resembled the lighter class of leather-colored Italians. The workers were of a similar hue, and, singly, reminded one of Dr. Miller and his stray straws. We inspected several hives, the queens and workers being wonderfully uniform in appearance, and all having the same characteristic of gentleness.



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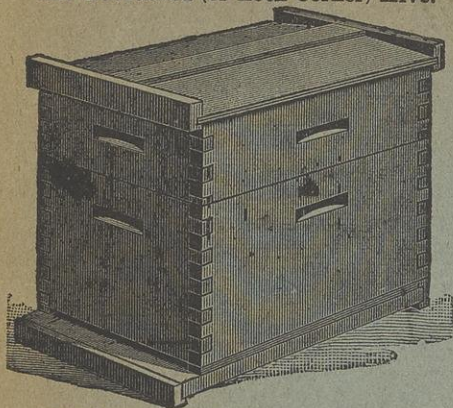
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