



LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

The Australian bee bulletin. Vol. 5, no. 4 July 20, 1896

West Maitland, N.S.W.: E. Tipper, July 20, 1896

<https://digital.library.wisc.edu/1711.dl/VECNQOG43FDOL8H>

<http://rightsstatements.org/vocab/NKC/1.0/>

For information on re-use see:

<http://digital.library.wisc.edu/1711.dl/Copyright>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

VOL. 5. No. 4.

JULY 20, 1896.

PER COPY, 6d

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

Every Beekeeper, to save money and moths, should melt up all waste pieces of wax and old combs unfit for use and send it along to us, and we will convert it into our usual high grade,

Comb Foundation, 6d. per lb.

(You pay carriage both ways.) Remember that all the wax will be carefully refined with steam under high pressure, so there is no danger of disease germs being left therein. Perhaps you do not require foundation, then we will take your wax in exchange for any goods we supply, or will give you cash if preferred, or you may prefer to try your hand at making comb foundation, we can then supply you with a COMB FOUNDATION MILL, dipping tank, dipping boards, etc., either new or second-hand appliances. We have several second-hand mills on hand, one of which we can do for £4 5s., or a new machine for £6 each.

PENDER BROS. (Late R. L. Pender)

MANUFACTURERS OF BEEKEEPERS' SUPPLIES,
WEST MAITLAND, N.S.W.

83 CASES

AMERICAN * DOVE-TAILED * BEEHIVES.

Ex "SINTRAM," FROM NEW YORK.

I have just landed above, on which no duty has been paid, and as I wish to clear at once, quote cheaper rates than have ever before been offered, especially on original cases of 10 hives ($1\frac{1}{2}$ or 2 story.)

LISTS OF PRICES ON APPLICATION.

NOTE.—These hives are of the FINEST AMERICAN MAKE AND WOODS, and are cheaper than similar dovetailed hives made of unsuitable colonial timber.

R. K. ALLPORT,

CHURCH STREET NORTH SYDNEY.

Telephone No. 67, North Sydney

HONEY TINS.

1lb. Patent Lever Tops ..	1/3 doz ; 12/- gross	60lb. 1½in. (bung hole)	10/- doz. ; 110/- gross
2lb. " " ..	1/9 " ; 17/6 "	60lb. 2in. (lever tops) ..	10/- " ; 110/- "
4lb. " " ..	2/6 " ; 27/6 "	60lb. 1½in. (screw tops)	11/6 " ; 120/- "
7lb. " " ..	3/- " ; 32/6 "	60lb. 3in. " "	12/6 " ; 130/- "
14lb. " " ..	7/- " ; 75/- "	60lb. 4in. " "	13/- " ; 135/- "
28lb. 1½in. (bung hole) ..	7/- " ; 75/- "	HONEY JARS.	
28lb. 2in. (lever tops) ..	7/- " ; 75/- "	1lb. (screw caps) ..	2/6 doz ; 27/6 gross
28lb. 1½in. (screw tops) ..	8/6 " ; 95/- "	2lb. " " ..	4/- " ; 45/- "
28lb. 3in. (screw tops) ..	9/6 " ; 105/- "	2½lb. " " ..	4/6 " ; 48/- "
		1lb. (tie over) with parchment	2/3, ; 24/- "

Hebblewhite & Co.,**377 GEORGE-ST., Opp. Sydney Arcade & Strand, SYDNEY****Price Lists Posted Free on Application.****The Beekeepers' Supply Co.****FRANKLIN STREET, MELBOURNE, VICTORIA.****Catalogue for this Season Now Ready, with Revised Price List,****CONTAINING THE FOLLOWING RECENT ADDITIONS—**

THE LONGITUDINAL HIVE of 20 frames, with contracting boards, is specially a labor saver. It may be readily expanded or contracted to meet the necessity of the season. Two or more queens may be kept in one hive, and the stock amalgamated under one queen at any time, or the reverse proceeding be instituted for queen rearing. This hive will be found most 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 recent additions to apianian appliances. Foundation may be made at very slight cost of labour. Capacity 3 to 4lbs. per hour. No other appliance necessary. Foundation made by this process, while somewhat 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 supply these at slight advance upon ordinary 7/8 Frames.

THE "COLONIAL BEEKEEPER," a handy Primer for Beginners. Price, 1/2 posted

SEND FOR ILLUSTRATED CATALOGUE.

The Bee-keepers' Supply Co.,**FRANKLIN-ST., MELBOURNE.**

Queens for 1896-1897.

BOOK YOUR ORDERS NOW for early delivery in rotation for

Golden Queens AND LEATHER COLOURED ITALIAN QUEENS, BRED IN SEPARATE APIARIES.

Imported Queens to arrive in Sept.
FULL COLONIES OF BEES.

Bees by the Pound, in Nuclei, or any way desired.

PRICES OF QUEENS.

		One.	Three.	Five.	Ten.
Untested	.. ..	5/-	13/6	20/-	39/-
Tested..	.. ..	8/-	22/6	35/-	69/-
Select Tested	.. ..	15/-	42/6		

Having put down the most modern machinery for the manufacture of Beekeepers' Supplies, to meet the keenest competition, and being desirous of extending our business to all parts of Australia, and as Sydney is the chief distributing centre, we have decided to deliver all our goods at catalogue prices and

SYDNEY FREIGHTS

To all Railway Stations in the colony, i.e., you will be only charged the actual carriage from Sydney to your Railway Station, when it is cheaper than from Maitland. All goods to go by steamer we deliver free on board at Newcastle.

PENDER BROS.,
Manufacturers of Beekeepers' Supplies,
WEST MAITLAND.

EARLY QUEENS FROM QUEENSLAND

ONE of the prime essentials in the successful production of honey is the possession of prolific queens, and the beekeeper who ignores this fact by allowing old and unprolific queens to do duty in any of his colonies will not be in it with the wide awake apiarist who sees that each colony is presided over by a vigorous queen only. If you require queens of this latter class (the fruits of thirteen years careful breeding from the best stock obtainable from the world's most noted breeders) kindly send along your orders, and whilst thus having an eye to your own interests, also afford me an opportunity of illustrating the degree of proficiency to which I have attained in the breeding and mailing of queens. I am so situated that I can forward queens any day throughout the year, and if you wish to commence the coming season with vigorous young queens let me book your orders now, for delivery after 1st August. My home yard is stocked exclusively with Italian bees, and I have now available as fine a lot of young queens as were ever raised. Carniolan Queens are bred in my out-apiary from imported mothers, and are mated to Italian drones. All queens are sent post free and safe arrival guaranteed to all parts of Australasia. We have no foul brood in Queensland, and my apiaries are entirely free from disease of any type.

	One	Three	Five	Ten
Untested Italian Queens ..	5/-	13/-	20/-	39/-
Tested ..	8/-	22/-	35/-	65/-
Select Tested "Breeding" Queens	15/-	42/-	65/-	—
Carni-Italian Queens ..	5/-	13/-	20/-	39/-

"The Italian Queen you sent me last Autumn is really a gem. Her bees are excellent honey gatherers and would please the most fastidious as to appearance, and what is better no signs of disease. I can quite coincide with the many flattering tributes paid you in the many testimonials you publish as thoroughly deserved."

—G.S.H., Cootamundra, N.S.W.

"The five untested queens that I received from you have turned out splendidly and are doing real good work. Their progeny are now flying and they look among the black bees as a gleam of sunshine on a cloudy day, and they are all pure Italians."—R.T.S., Port Macquarie, N.S.W.

I received the bees safe and sound, every bee alive and lively as could be. The breeder you sent is a beauty, her working bees are nice and her drones the best I have ever seen."—W.N.W., South Australia.

"The two queens you sent arrived in first-class order, all nice and lively, and not a dead bee among the lot."—W.L.A., Nelson, N.Z.

"Re Tested Italian Queen, no one could wish for a better. I have some 80 queens raised from her and to say I am pleased with them would be putting it too mildly."—J.C.F., Gympie

"Queens arrived safe and were in splendid order; no wonder you get great praise for the way you sent your queens.—S.B., Binnaway, N.S.W.

H. L. JONES,

Goodna, Queensland.

Queensland Agent for the "Australian Bee Bulletin."

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 Farmers of Australasia.

Interesting & Instructive to the Wife and Children, as well as the Father.
 The Paper for every Home & Farm It claims your support.

Home & Farm Publishing Co. 161 Clarence St., Sydney

With Australian Bee Bulletin, 7s per annum.

D Only
 2/6
 a Year
 12 Issues

The Goulburn Conference.

The above came off at Goulburn on Wednesday and Thursday, July 1 and 2. Through a number of circumstances, the attendance was not near as good as on previous occasions. The failure of the honey crop, no free passes per rail, the less attractive nature of the trip, as compared with that where the wonderful Zig Zag was to be seen—all had an effect in reducing the numbers on this occasion. But, if numbers were not there, for those who did attend there was an amount of pleasure and comfort, not to say instruction, greater than at any previous Conference. We were mostly lodged in one place—Fry's Coffee Palace. Every one had a comfortable room to himself. Though the weather was very cold, yet those glorious log fires as we gathered round them in wide circles, in friendly chat or political and other discussions, were something enjoyable, and not to be soon forgotten. The terms too were very low, 4/- per diem. The Town Hall, in which the Conference was held, also possessed two large fire places, in which ample supplies of timber made things very much nicer than at the Bathurst School of Arts, last year. Goulburn is a well laid out Government township, with long wide streets, along which are planted hundreds of pine trees, giving a very pretty appearance, but beyond that, perfectly useless, except to cause expense in clearing the gutters from their fallings. The indigenous trees with all their wealth of flowers and honey, and their superior beauty under cultivation, which are so much valued in Europe and America, here in their native soil are despised and rooted out, hardly one to be seen in the vast space occupied by the town, or for some distance outside it. The public buildings are numerous and very handsome, and nearly all contiguous.

We visited the C.E. Cathedral, a splendid building, so perfectly equipped in every detail, where a large amount of loving wealth has been lavished, and inspected the Rossi tablet, which caused so much scandal, and made the cathedral so famous throughout the colonies. The Technological Museum, and the comfortable and well-appointed smoking and reading rooms of the School of Arts were both patronised by beemen.

As on previous occasions Messrs. Trahair, Whittell and Seabrook had preceded other visitors to the Conference, and they made every necessary arrangement, both as regards the hall to meet in and the beekeepers' accommodation during the stay. It is almost needless to say everything was most satisfactory.

The illustrated programme of the Conference was an excellent production, compiled by Messrs. Hebblewhite & Co.

The two local papers, the *Goulburn Herald* and the *Goulburn Evening Penny Post*, aided the cause well by giving full reports of each day's proceedings.

On the tables of the hall in which the conference was held, were placed a number of branches of different honey bearing trees, including boxes, gum, iron bark, ti tree, banksia, &c., contributed by Mr. Tipper. Also from Mr. C. U. T. Burke, of Loyalstone, Lyndhurst, jar of yellow box honey, drawn without any special straining from a bulk of two tons—a splendid sample; from the same gentleman, an uncapping knife manufactured by Mr. Baker, of Hunter Street, Sydney, the first of its kind made by an Australian cutler. It is called the "Baker Loyalstone uncapping knife," the idea of its make being Mr. Burke's of Loyalstone. The steel is of excellent quality, and we have no doubt this knife will become a great favourite among beekeepers.

Samples of native beeswax from Messrs Shumach, of Binnaway, New Zealand honey, and adulterated honey sold recently in Newcastle, contributed by Mr. E. Tipper, who also contributed samples of honey labels and a great number of photographs of apiaries, in all of which the various visitors took very great interest. The Messrs Pender Bros. had a large collection of apicultural appliances in the hall. Mr. Trahair, for Messrs Hebblewhite & Co., had engaged the sample room at Fry's Coffee Palace, which he filled with the various kinds of bee appliances. He had also samples of wax, including Jamaica, Spanish, Australian, yellow Calcutta, Mogadar, and pale Calcutta. These were examined with great curiosity and interest. In value the Jamaica stood highest, Australia among the next best.

A committee meeting was held on the Wednesday morning. Present: Messrs Gale (in the chair), Whittell (Hon. Sec.), Roberts, Seabrook, Trahair, Abram, Bloxham and Tipper.

The minutes of previous meeting were read and confirmed.

Mr. Whittell read the report prepared for the Conference

On the motion of Mr. Bloxham, seconded by Mr. Seabrook, it was adopted.

A letter was received from the Secretary of the Goulburn Mechanics Institute, that the reading and smoking rooms of that institution were free to the visitors for one week.

Letter from Mr. Grunsell apologising for his absence through illness. From Mr. Henry Lord apologising for absence on account of attending lectures, and offering to contribute £1 towards expenses. From Mr. J. E. Taylor, on account of the illness of his wife and the recent death of his son, a bright lad of 13 years. From Rev. Mr. Ayling apologising for absence through ill health.

Suitable replies were ordered to be sent in each case.

Mr. Tipper submitted a letter from Mr. Gaggin, which the latter gentleman desired should be read at the Conference. It was decided as Mr. Gaggin was not a member of the N. B. K. Association, it

could not be read. (We publish it elsewhere.)

Mr. Tipper also submitted some correspondence he had received. In a certain district Foul Brood exists badly. One person has a number of affected hives, which he will neither cure himself or allow others to cure, and a number of which he had just placed in close proximity to a strong healthy apiary. The sender of the correspondence had also offered to purchase the bees, but met with a prompt denial.

Mr. Gale said he knew the place in question, and it was the second worst case in the colony.

Mr. Whittell spoke of the advantages that would accrue if the N.B.K.A. were affiliated with the Pomological Society. A joint Conference would be far more numerously attended. There could be a day for fruit growing and another for bee farming. The beekeeper could still control their own finances and if we did not get free passes granted by the Government, the Pomological Association would be able to send them, and we then might be able to invite good men from Melbourne and Queensland.

Mr. Gale could not see why bees should be separated from fruit. The one industry was absolutely dependent upon the other. No bees, no fruit, and no fruit, no bees.

Mr. Abrams said, at one time, a committee meeting was called for the purpose of considering this affiliation, when the President of the Pomological Society point blank said his Society would not have anything to do with the beekeepers. In the face of that he did not see his way clear to support any such proposal again, for fear of getting another point blank refusal.

Mr. Whittell said he had reason to believe Mr. Wilshire (the President of the Pomological Society) had now modified his views.

Mr. Gale gave an instance of different kinds of birds uniting when migrating, yet separating afterwards, as the kind of union recommended.

The following resolution was passed: "That the Conference recommend the incoming committee to do their best to carry out the resolution re affiliation

with the Pomological Association previously adopted."

The Conference opened at two o'clock in the afternoon. Mr. Gale in the unavoidable absence through ill health of the President (the Rev. Mr. Ayling), announced that the Mayor of Goulburn, Mr. Richardson, had consented to preside at the opening meeting. That gentleman having suitably addressed the meeting, and regretting the unavoidable absence of Dr. Hollis, M. P. for the city, through illness, declared the meeting opened.

Mr. Abram proposed a vote of thanks to the Mayor, which was seconded by Mr. Whittell, carried by acclamation, and suitably replied to by the Mayor.

Mr. Whittell read the annual report, as follows:—

The first action taken in the year that now closes, by your committee, was to urge on the Foul Brood Act, and we are just as far off it now as we were then. The reason is given in a very few words. Want of unanimity! Where persons are divided in opinion upon a subject of domestic legislation which affects only themselves no Government can be expected to take action; so the fruit growers and beekeepers can go on to their hearts content injuring themselves by the unchecked ravages and spread of disease owing solely to their being unable to agree upon remedial legislation.

These few remarks will fully explain that some of the beekeepers of N.S.W. have prevented your committee from doing any good in this respect, and it is a subject for grave regret that in cases like that under consideration a few individuals cannot so far broaden their minds as to defer to the opinions of the great majority who are in at least an equally good position to judge.

The next matter taken in hand was one which is of great importance, viz., the removal of honey from Class B to Class A in the Railway Freight Schedules. This has been brought under the notice of the Commissioners for Railways twice by deputation, and also by numerous letters: but so far we have not been successful because the volume of the honey trade is insignificant when compared with such industries as the Dairying and Pastoral. The substance of what the Commissioners say to us is "increase your output to something respectable; then come to us and talk about reduction of freights;" because what we are asking, if granted, would carry with it a reduction of freight to the extent of half the present rates. So the remedy for high freights is in your own hands. Increase the volume of your trade; raise the importance of your industry, and you can rest assured that the Railway Commissioners of New South Wales will meet you with that fairness and even liberality which has characterised their dealings with

you on all previous occasions.

Again on the creation of the new portfolio of Minister for Trade and Commerce and the establishment of the Board of Advice an effort was made to have our industries represented, but the cause mentioned before operated again here, and the larger industries claimed and obtained precedence. It may be mentioned here that all through the efforts made by your Committee have been furthered by the powerful assistance of a Minister of the Crown, the Hon. Sydney Smith, Minister for Agriculture.

We are now advanced in the year to a point where our labours in your behalf have been more successful. The representations we have made with regard to the necessity for legislation upon and investigation of bee diseases has led to a bill being adopted by the Government and special appliances to examine into bacteriological diseases have been purchased in Europe, and doubtless our very able government pathologist, Dr. Cobb, will soon be in a position to go to work in this direction.

The question of adulteration of honey as well as other things have been so strongly brought under the notice of the Government that as you are aware an Amended Adulteration of Foods Act is now before the House, in which ample provision will be made to remedy the evils we have brought under notice. A matter which is of the most vital importance to beekeepers has after years of complaining been brought within the grasp of the National Beekeepers Association. I refer to the great question of ringbarking. During the whole time I have held office as Honorary Secretary I have been fully alive to the great evil to the colony generally of the wholesale and indiscriminate destruction of our timber resources, but it is only recently that circumstances have arisen that gave me the opportunity of directing the Committee's attention to the fact that an opportune time for action has arrived. What that action has been you are all well aware, as the case of *Marsden v. Taylor* is familiar to you all in detail, and I believe that efforts will now be made by the Government to place ringbarking under proper supervision and control.

I think that as the officers and committee of our Association took such an active interest in the promotion of the Honey Supply Co., that some reference to it here may not be out of place although of course it does not come under our jurisdiction. I will only say that it is with great regret that the committee, after 18 months spent in vain efforts to get the beekeepers to co-operate, have been compelled to relinquish the task.

The question of uniting together the various kindred associations has occupied the attention of the committee for a considerable time, and has progressed so far that ere the Conference terminates it is hoped that the necessary machinery will be completed for the accomplishment of this most desirable end. The impotency of scattered and divided authority is exemplified by an analysis of the attendances at committee meetings, and notwithstanding all that is sometimes

said about everything being controlled in Sydney it is easily seen that a committee who live so remotely from one another as to be unable to meet is certainly a useless body. It will be seen no doubt during the discussion on the proposed new rules that there is a way of getting over this difficulty. Any deputations to Ministers carry more weight if composed of representatives from different centres, and considerably more weight if representing more than one industry.

ATTENDANCES OF COMMITTEE.—Rev. J. Ayling, Pitt Town, 3. J. T. Wilshire, F.L.S., Sydney, 5. A. Gale, Sydney, 5. R. Patten, Bolwarra, 3. J. E. Taylor, Cowra, 3. J. Trahair (Hon. Treas. (Sydney), 7. H. R. Whittell (Hon. Sec.), Sydney, 7. E. Tipper, West Maitland, 7. W. S. Pender, West Maitland, 0. W. Abram, Beecroft, 6. W. T. Seabrook, Bathurst, 5. H. Nancarrow, Wellington, 1. J. D. Caddan, Windsor, 2. H. Lord, Sydney, 0. G. Bloxham, Sydney, 7. G. Streatfield, Benerea, 0. J. D. Richards, Sydney, 5. J. D. Ward, Sydney, 5. G. Gordon, Sydney, 3.

Mr. Whittell explained to the strangers present the particulars of the ringbarking case.

The report was adopted.

Mr. Gale then read his paper on

INFLUENCE OF BEES ON CROPS.

My object in this paper is to show that a bee-keeper is a public benefactor and that when he squats down in the midst of orchardists, horticulturists, and others engaged in the cultivation of the soil, the fruit crops are heavier, seeds are more certain to be fertile and improved varieties of the vegetable kingdom follow as truly as sunshine follows rain. Nothing is more interesting to a lover of nature, never mind in what branch of the science his enthusiasm may be directed, than that of the re-production and the development of members of animal or vegetable kingdom that has become his hobby. It is this love of re-production and the development of varieties (not species), that was the prime motive power in the establishing of our agricultural and horticultural societies, and other societies for the improvement of both the useful and the ornamental members of the vegetable and animal kingdom. The love of re-production and the development of varieties is the great incentive for those magnificent displays of domestic animals, of roots and cereals we see at our agricultural exhibitions; of our picturesque flower shows, our poultry shows, our canary shows, and the interesting exhibition of apiculture we now meet with at most of our shows, where there is a desire for instruction and interest to the general public. It is this love of re-production and also development of varieties that is the chief factor in the construction and the perpetuating of our beautiful country and suburban flower gardens, this love of the unfolding and of the maturing of the beautiful. With what intense interest does the amateur florist or orchardist (and the professional too, as to that), watch for the development of the flower bud of some new variety of one of his pet flowers or the result of cross pollenization, or expense and trouble to procure. But, where is the ripening of some new fruit he has been at

there one out of the thousands, or shall I say tens of thousands, of those who attend our shows and admire the magnificent display of fruits and vegetables, and gaze on our beautiful gardens, who give one passing thought to the fact, that we are indebted to the bee for the great varieties of form, to the multiplicity of colors, and the delicious flavour of the exhibits they are so admiring.

To show you how some members of the vegetable kingdom, and indeed by far the greater number are produced, I propose to let you have a look into one of nature's workshops, and see her in her every-day dress, and let you watch the wonderful fertility of the resources and her adaptation to outer circumstances and foreign agencies for the perpetuation of her species and the development of her varieties.

Some years ago we should have been laughed at if we had spoken of the sexuality of plants. The reproductive organs and the reproduction of plant life is now better understood than is the case in many divisions of the animal kingdom.

In looking at a perfect flower or blossom the most casual observer cannot fail to observe the different forms of its various parts—the calyx, corolla, stamens, pistil. All these are not to be met with in all blossoms.

I have nothing to do in this paper with the attractive parts of flowers. They are outside the scope of my intention, but with the stamens (male), pistils (female) or carpels.

When but one of these organs (the stamens) are preserved in a flower, it is said to be stamiferous (male), and pistiliferous (female), but when both these organs are present in the same blossom it is said to be *hermaphrodite*.

(ANTHERS).—Pollen is the most highly organized part of a plant. In different classes of plants it has different forms. The number of grains of pollen in a blossom is something enormous. A single bloom of the wisteria is said to contain 6,750,000 grains, the pæony 3,654,000, and a rhododendron 72,620,000. It is this enormous quantity of pollen from anemophilous plants that has given rise to the idea of coloured rain. Sulphur showers are frequently met with near pine forests, and is the pollen wafted by the wind from male seeds. These pollen grains are the germs of vegetable life. They are produced in the anther or male organ of the blossom, and is the starting point of re-production.

The pistil contains none of them. It, nay she, is the organ of reception. The anther is active, the pistil is passive; the anther is the giver, the pistil is the receiver; the anther contains the germ of life, the pistil contains the germ of matter. It is upon the success of the union of these germs that our lives depend, and a total failure in the distribution of these pollen grains by the anthers, or the reception of them by the pistils, would cause all the dire consequences of a famine.

The methods adopted by nature for the distribution of these pollen grains are four-fold, and when the command was given to the vege-

table world for every herb to bring forth seed after its kind, there were four laws established by which this command was to be carried out.

Self Fertilisation; Parthenogenesis; Anemophilous or fertilisation by the wind—the pollen grains in these are very great, and fertilization in them is generally haphazard; Entomophilous or fertilization by insects.

It is in these latter we find the most gaudy coloured corollas. And now I am going to tread on very dangerous ground (colour and perfume—dahlia and rose.)

Now, let us enter one of nature's workshops and see how her workmen go about their labor. Let us take an orchard in spring for our workshop. The workmen are insects (bees). Sometimes a stray butterfly or other insect will stop and do an odd job, but they are only casual labourers—grassing hands. The work these bees are engaged in is the preparation (fertilization) of luscious and delicious fruits for man's summer use; the production of new varieties for future seasons; the perpetuation of the variety of trees they are engaged upon, and the continuation of their own species. Blossoms are not more essential for bees, than bees are for blossoms. Bees are one of the missing links that half educated tillers of the soil know nothing about. The blossoms, the workmen are engaged upon are hermaphrodite, yet not truly so, for the anthers are distributive before the stigmas are receptive.

The little workmen are tumbling head over heels, and heels over head in the dust of these anthers. There are children at home longing for food and they are very eager to supply it.

Has the owner of the workshop, the orchardist been so foolish as to plant his trees in the bush one or two miles from any other orchard, and selected for his trees stone pippins and cleopatra apples and duchess pears and no other varieties. Let the workmen labour as they may there will be no crop because the pollen is ripe and distributed before the stigmas are ripe to receive it. But had he planted Bartlett or Anjon pears and apples whose pollen is ripe while the stigmas of his pippins are receptive, his crop is certain if he has not been so foolish as to run the beekeepers out of the district.

Various parts of the body of a bee are used for the purpose of carrying pollen from the discharging anthers to the receiving pollen and different species of plants need different parts of the bees' body to convey the life giving pollen to ensure contact between the two essential organs.

Remember this, "no bees, no fruit," or at the best but a scanty crop. Let us beautify the surroundings of homes with flowers and fruit trees, and make heaven burst up from the earth. Beauty brings enjoyment, and plenty contentment. The men who objects to beekeepers settling down in their midst are enemies to society and if I had my way I would banish all such to eternal bachelorhood.

Several questions were asked, in reply to which Mr. Gale said, bees were not attracted to the flowers so much by the

colour as by the honey in them. In some double flowers, very attractive, the male organs or pollen bearers might be absent, or there might be no nectarys. A bee will not touch one flower after getting honey or pollen from another, except it be of the same species or closely allied—it would rather go home with its little load and then come back to any other flower that might be there.

Mr Abram then gave his paper—

NOTES AND OBSERVATIONS ON BEE CULTURE.

Mr Abram said it was the great interest he took in bee culture which induced him to make reference to a few matters he had prepared. He had once an experience with some very ill-tempered bees. When he had finished his term of apprenticeship, he engaged at a bee-farm in Hungary. He arrived there in early spring. He very soon noticed a number of stocks exceedingly spiteful. No matter what kind of day or weather they would always rush at him and sting furiously. He intended to get rid of these vicious bees as soon as he could, as he was quite certain it was neglect in breeding this spitefulness had come about. He went about it in this way: He removed the queen from these stocks and introduced fertile young queens from bees that he had observed to be very gentle. The result was, as soon as he had got rid of the old bees, working them was a pleasure. He had come to the conclusion that drones inherit temper. It had been proved over and over again. It did not pay to obstruct the natural habits of bees. If they felt inclined to swarm, let them swarm once, and you will find you will benefit from it better than not letting them swarm altogether. Recently he had noticed in the *Australian Bee Bulletin* an expression of doubt that there were several cures known for foul brood. It was only right to correct such doubts. Foul brood was curable and he could cure it, but whether the same directions may have the same effect in the hands of every man that was questionable. Some seemingly unimportant points in the directions would be overlooked, and the result would be the cure would fail. If the directions were carried out to the full extent there was no reason why a cure should not be in the hands of anyone.

Wax production was now in greater demand than it used to be a few years ago, and an endeavour was being made to raise the production of wax. In his humble opinion it would not pay to raise the production of wax at the cost of the production of honey, because the amount of honey required for the proportion of wax was of far more value than the wax product. It was possible to raise the production of wax without interfering with the production of honey. It has been noticed that the bees have a great fancy to build burr combs, especially when they are doing well, so much so that he had read in one paper that some

one intended to prevent the bees from building burr combs. Make use of their burr combs as much as you can, scrape it off, as it was the purest wax. The bees could gather honey all the same whether you removed the burr-combs or no.

The Best District for bees. He had been looking for the best district as long as he had kept bees. When he read "Loyalston's" description in the *A.B.B.* as to the best locality, he at once agreed with him. That exactly agreed with his. Where that was there he would go and keep bees, but where was that place to be found?

Not very long ago I noticed an advertisement in the *A.B.B.*, 3000lbs per hive in a season. Now, he said to himself when he read that, if any place is suitable for bees, that is. He admitted he had not bees that could carry that amount, but they would get it if it was to be got. Recently another boasting stated that he gets 30 tons or 450lbs a hive. If he went to 300 lbs per hive it would satisfy him.

Italian queens at 2s each.—You will observe that the queen-breeders lot is not a happy one at a price like that. He had raised 2000 queens in some seasons and 500 in others, so he knew what queen rearing was. Deducting expenses, packing and various other things he must say it was not a very lucrative occupation. If bees could be reared cheaply at all, surely no place was better adopted for it than Italy. There they could rear the queens as easily as here black queens, and the Italians could rear queens under very similar conditions, yet bees in Italy are dearer than they are here in Australia. To rear a good article at 2s. was an impossibility. He reared a lot of queens, and found that there were a great number deficient in some quality or other. As soon as he found that out he destroyed them and reared others with the qualities required. Nothing debarred him from selling those queens instead of killing them, except his interest in bee culture.

Renewal of Blood.—Everything in nature varies, and you will find that there are no two hives alike in any places. In some better qualities predominate, in others inferior, and if the offspring of one quality get fertilised with the same strain, there was a possibility of improvement to those qualities that are already superior. On the other hand, a male of one kind mates with the female of the other there will be a medium between the inferior and the superior except in very few cases, when either the one or the other predominates. If the male and the female from the inferior strains meet, then the progeny will be still more inferior. Therefore the superior qualities are of great importance for practical beekeepers. With the Italian bees the Italian always selected the best qualities for breeding, with the result that the Italian bee was considered the most superior in the world. Let us lose sight of this fact and breed indiscriminately, and we would soon bring them down to the very same level as the inferior bee, and such he was afraid had been done in some places in America. As some

queens from America that had come under his observation, of energy there was none—they showed a beautiful color else. but nothing Honey production was what we wanted more than colour. Suppose you have the Italian strain, on account of continual breeding from the same stocks you find certain qualities begin to diminish, and you want to improve your blood, and you import a queen of inferior quality, what result can you expect? You may improve colour if such is present, but you cannot improve quality, for there is none. If you want to improve quality you must introduce blood that is superior to the blood that is in your hive already. For refreshing the blood of black bees you must introduce bees from some districts quite entirely new, whether it be Italian or black. Many beekeepers keep black bees but wish to improve that strain. This can be done by introducing the Italian and mixing the blood. The progeny of the cross will be in colour some black, some as good as any of the purest Italian. The energy of the cross will be far superior. Refreshing of blood was as necessary in bee culture as in any other industry. At the same time it required a thorough knowledge of the subject to know in what respects their bees were deficient, and a knowledge of the nature of the laws under which such improvements are possible.

Paralysis or what is known as paralysis, most beekeepers knew was caused by a bacilli. To his inducement the Department of Agriculture some four years ago took the matter up and carried on a thorough investigation to find out the cause of that disease. Everything went on smoothly until changes in the department took place, and everything when pretty well completed, had been checked since then. When he saw that, not feeling satisfied, he undertook to collect material, pack it in spirits and send it to a scientist in Germany, to at least see if they could tell him what was the cause of the bees being ill. Previous to this there were assumptions that bacilli was the cause, but there was no positive proof. At the present time he was afraid the Agricultural Department was greatly neglectful of the bee-keeping industry. We had as much right to consideration as any other industry. Now, when three parts of the bees are dead, they seem willing to make investigations, but the great loss beekeepers had sustained must not be again.

Poisoned Honey.—In the *Government Gazette* for May there was a report from a forester named Rutten, advising sprinkling poisoned honey on trees to prevent birds from eating fruit. Such a recommendation should not have appeared in a Government paper, which also aims to protect bee culture, unless the Department wished to do away with beekeepers as much as possible. Mr. Abram concluded by saying that all the remarks he had made arose out of his love for the industry and he had no desire whatever for any personal aims in view.

Mr. Gale said concerning bees eating

fruit? they will when a hole has been made by the little silver-eye, they did not make it a rule to injure fruit. He spoke of an instance in California where bees had been considered as injurious to fruit. They were destroyed. The following year there was no crops, and it continued so till bees were reintroduced to the district.

Mr. Whittell asked if the paper in the *Government Gazette* alluded to was a voluntary contribution or under the Department. It was a very silly thing to put in a Government publication, and Mr. Abrams had done a very good thing in calling attention to it.

In reply to Mr. Roberts, Mr. Abram said the bees would consume no more honey in building burr comb than in building foundation.

In reply to Mr. Trahair, as to whether there was any way of telling a good honey gathering queen. Mr. Abram said that in untested queens there was no guarantee. A good breeder tested his queens before he sent them out. Within six weeks after a queen was hatched he could see whether she was good or bad. She might be the best looking in shape and form, yet no good in a queen-breeders point of view. The male exercised the greatest influence over the progeny.

Mr. Gale said there was a lot of truth in that, and one of the greatest mistakes made has been the destruction of drones. If we looked out for the sire as we did for the queens we should get better results. It was the rams, the bulls, the stallions that sheep and cattle breeders advertised.

Mr. Maxwell wanted to know what time the young bees came out of the hives to work.

Mr. Abram: At five days they came out to become acquainted with the outside world. They would fly and describe circles round and round. At the sixth, ninth and tenth days they only carry water and nurse the younger bees outside. On the 11th day they would go to the fields.

Mr. Whittell alluded to wax, said a shipment of half-a-ton in 4lb blocks to London had fetched £150 per ton. In a good season our wax supply should be augmented very much.

Mr. Trahair asked if it was possible for imported bees mated to good drones to throw back an inferior or dark strain.

Mr. Abram said if the parents were all pure the progeny would be all pure blood. When there was no other there was no possibility of throwing back.

Mr. Gale: In nature there is always a tendency to go back.

The Conference then adjourned.

The evening session commenced with the reading of Mr. Tipper's paper.

MARKETING OF HONEY AND ADULTERATION.

The marketing of honey is a heading which has been prominent in every Conference for the past few years, both in America and in Australia. I purpose dealing with it, not as regards the package or the way honey is placed on the market, but from the other end of the affair, the "market itself."

In these times, very few people engage in any industry for the love of that alone, and in the matter of beekeeping simply to have a little pure honey for their own table. Such being so, the honey-raiser generally and naturally wishes to get as high a price as he can for what honey he raises.

Now, what are the hindrances to his getting a fair and satisfactory price? We know that honey is now scarce. It has been a bad season throughout not only this, but the neighbouring colonies. Yet, *has* the price of honey advanced in proportion to what it ought to have done under such circumstances? And if not, why? Let us look at some of the causes why honey retains its low price, spite of its scarcity; and what are its competitors in the public market.

We cannot deny that honey is a luxury. These are hard times, and the man with pinched income will always get butter for his table if he can—that is the old stand-by—when times are easier a little honey (a luxury) is indulged in.

The *price of honey* and the quantity of honey consumed has an item that affects is in the *price of butter*. If grass is scarce and cattle are poor, so that milk cannot be gotten from them, the price of butter will go up. That will cause more attention to be paid to honey—it will get more show on our tables. Should the efforts now being made by the various colonial governments to export our butter to England, be successful, so that the price of butter here will be permanently improved, that will be a factor in keeping up the price of honey.

Should better times come round a bettering of the prospects of the people will increase its consumption,

Treacle is another competitor on the poor man's table with honey. Though not to be compared with it as a comestible, yet, its cheapness and sweetness causes it to be a very common adjunct on the table of the poorer classes.

Jams are another enemy to the sale of honey. Jams made by good housewives are good and

very nice—made of good fruit, and prepared as is the pride of many of our good mothers to prepare it—what is nicer or more wholesome? But, made for market, of no one knows what, is there not much of so-called jams that, if analysed, would prove to be very inferior, perhaps, unfit for human food?

Another enemy to the proper pricing of honey, is to be found among *beekeepers themselves*. Greedy men, seeing someone else is apparently doing well in a certain town or district, will cut things so fine in order to secure that market, they will make things neither profitable for themselves or others. There is plenty of market for all, and the man who does his best to secure a good price, helps his fellow beekeeper, as well as *his own pocket*, while the man who sneakingly cuts under injures both himself and his fellow men.

The greatest enemy, however, the honey raiser has to contend with is the adulterator. When honey is scarce, and ought to rise in price accordingly, then is the adulterator's opportunity. Instead of the honey raiser getting the advantage of small stocks in the market, and a better price on that account, the adulterated stuff is made up—it is pushed round to the warehouses. In some towns you see it in every shop. And you try to sell your good honey, and the answer you get is, as I have had, "You see we can buy this cheaper than what you are asking, and it suits our customers as well. We do not care to change."

The masses of the people look on honey as a luxury. If they step a little out of their regular groove of a Saturday night to get a little treat by way of a pot of honey for Sunday, so long as there is something of the honey taste about it they are satisfied. It is a sweetie, no matter how vile the compound may be. They are not Show judges—they do not get it often, and the belief that it is honey, with a smattering of the taste, is sufficient.

To protect honey raisers against this enemy, and the masses of the people from being cruelly duped, we must invoke the aid of the Legislature. As far as I can read we have no adequate protection against the adulterator in this colony. All that is necessary for the man who sells the adulterated stuff is for him to swear *he bought it for honey*. He gets off scot free. No other country or government gives such a loophole. One of the first cares of every good government is to see that the people have good and wholesome food, and know really what it is they are eating and drinking. In England coffee used to be adulterated with chicory. The law stepped in and said, "*you may call it coffee, if it is coffee, but you must put coffee and chicory on it if it is coffee and chicory.*" What we want are laws that will compel the adulterator to label his stuff, "*honey and glucose,*" or *honey and dirt if he likes,*" as the latter may be a very good name for much of what is sold as honey. Laws that will throw the responsibility on to the retailer, who in that case will be very careful whom he buys from, instead of as now being able to put it on to the other chap.

At different times I have come across people who have told me that honey did not agree with them, and so they never took it. I have advised them to try again, as what I was offering them was pure honey, and I had no doubt what had set them against honey was vile compounds called by the name of honey. The stoppage of adulteration would, by allowing only pure honey to be sold as honey, increase the consumption of honey.

Not only do we want laws to secure the purity of honey but also the purity of jams and other articles that come into competition with honey. When the public mind is awakened, and made suspicious of the various compounds they now innocently swallow as wholesome food, and effective laws are made to punish those who offend, then may we expect a fair price for the product of the apiary.

I conclude by urging that the incoming committee of the N.B.K.A., in the interests of the beekeeping industry, carefully watch the Pure Food Legislation, now promised by the present government, and used their best endeavour to get it rendered effective.

A discussion ensued on the paper which elicited the facts that middlemen preferred dark honey to light because the former could be more easily mixed with glucose; that honey is an excellent sweetener for jams and preserves.

Mr. Abram spoke of how he had been undersold in his own market by people to whom he had given his knowledge.

Mr. Whittell stated that a large confectionery firm in Hamburg was prepared to take honey in large quantities for their manufactory, but the cost of the freight interfered. He had had a friend of his to take bottles of Australian honey with him on a journey to England and to get it tasted at the tables of the vessels on which he travelled and at hotels, with the result that the majority of those who tasted it said without hesitation that it was an excellent sample. He (the secretary) believed that if they had a large supply there would not be much difficulty in obtaining a market abroad for it. It was useless to look for a market until they had a supply for it. When they had that he believed it would pay to send quantities home to be given away at street-corners and thus create a sale for the pure article. He said that at present no honey was produced for export. Referring to jams Mr. Whittell said that in an establishment at Hobart he saw four tons of apples—windfalls—thrown into the vat

—seeds, stalks and everything being boiled down, after which it was strained, and the product made the body of all jams.

Mr. Gale said the fruitgrowers living between Parramatta and Gordon were given 1/- per bag for what fell from the trees, the fruit being full of the codling moth larvæ. "What the eye did not see;" it was a combination of animal and vegetable jam.

The evening was now open for questions. The first was: What is the best wood to make hives from?

Mr. Roberts: Whatever you happen to have in stock.

Mr. Gale: Light and soft wood, Clear Pine, Cedar.

A gentleman recommended sugar pine as less liable to shrink.

Mr. Seabrook: Redwood. It was not more expensive than ordinary pine.

Mr. Whittell asked, How long does it take to learn to keep bees?

Mr. Maxwell: It was not the time it took to learn to keep bees. It took a longer time to learn to master them.

Mr. Tipper: Two years at the very least.

Mr. Abram: It was a very difficult question to answer. Like every other industry, beekeeping was a trade and had to be learnt. If one wishes to manage a bee farm profitably and successfully he must take two, three, or four seasons. He had managed bees since his eleventh year, and read every book he could lay his hands on. The more he learnt the more he still wanted to learn. One is never finished learning.

Mr. Roberts moved and Mr. Whittell seconded, "That in the opinion of this Conference it is desirable for the National Beekeepers' Association to take up the question of appointing a board of examiners to issue certificates of competency to any desiring same."

In the course of discussion on this, it was stated that in England, candidates presented themselves at the annual Conferences, to answer the various questions and get certificates of competency.

Mr. Tipper asked why it was that in Italy where there would not have been any great intermixture of breeds for cen-

turies, yet the very best bees came from there?

Mr. Sams said: Fondness for new faces, that people who sold queens wished to keep up their name.

In reply to a remark of Mr. Gale that he did not think much of Goulbourn for a honey raising district, Mr. Trahair mentioned that he had been informed that a beekeeper living near Goulbourn had made £60 profit in a good season with about 25 hives.

Mr. Trahair asked is there any chemical change in candied honey from its liquid state (?) as people often thought that candied honey was better than when in its liquid form.

Mr. Whittell thought the chemical composition of honey would be hardly likely to change, but whether it did or no would require a chemist, and it showed the want of Mr. Guthrie's presence at the Conference.

Mr. Gale said most honeys improved by keeping, the older the more palatable it was.

Mr. Tipper called attention to Mr. Davey's "suggestion" in last *A. B. B.* about making a strong favourable point of Eucalyptus honey, instead of allowing it to be an term of disfavour.

Mr. Seabrook asked if anyone had seen a fertile worker.

Mr. Gale said he had.

Mr. Gale: Can any beekeeper answer if a drone from a fertile worker was fertile or otherwise?

Mr. Tipper said no one in America or elsewhere had taken the trouble to ascertain it.

The question was asked: Is there no crop that could be grown, that could take the place of the gum trees?

Mr. Gale: A crop could not be grown that would give the same class of honey, but it might of quantity.

Mr. Maxwell: Prickly Pomfret.

Mr. Whittell: Scarlet Clover.

Mr. Gale: It would not pay to grow any crop exclusively for honey but you could grow a crop that you could get fodder for your cattle from. There was no chance of keeping other-people's bees out from what you cultivated.

A person called attention to bananas. Mr. Gale said they all produced honey and kept in bloom for weeks, but you could not grow bananas in Goulburn.

A question was asked if there was any cure for foul brood.

Mr. Abram said he found the removal of the bees to a new hive and spraying them with a solution of boiled water and salicylic acid in the proportion of one pint of water to a tablespoonful of acid was more effective than starving the bees as recommended by some experts.

The question of the length of life of a working bee.—It was generally held that a worker lived from two to twelve months in accordance with the season of the year, the inactivity of winter adding to the longevity, and that the greater number of workers died from their wings being worn out by use.

It was asked how a flow of honey in winter affected the bees, Mr Tipper said while it would shorten the lives of the workers it would on the other hand be favourable to brood rearing in the spring.

The Conference adjourned at nine till ten next day.

THURSDAY MORNING.

This was the annual meeting of the N.B.K.A. Mr Gale in the chair.

On the motion of Mr Bloxham, seconded by Mr Trahair, the minutes of the previous Conference were adopted. Mr Seabrook moved and Mr Tipper seconded the adoption of the annual report as read.

Mr Trahair, treasurer, read his report, which showed the receipts for two years to have been £27 3s 1d, and the expenditure £15 1s 9d, leaving a balance of £12 1s 4d. This was adopted, on the motion of Mr Whittell, seconded by Mr Tipper.

The election of officers and committee was next proceeded with, the rule limiting the number of vice-presidents having first been altered, the following being the result:—Rev J. Ayling, of Pitt Town, was unanimously re-elected president. The election of vice-presidents was contested, and Messrs A. Gale (Stanmore), W. Abram (Beecroft), J. T. Wilshire, F.L.S. (Sydney), and F. A. Maxwell (Albury) were elected. Mr G. Bloxham was appointed hon. treasurer, and Mr H.

Whittell hon. secretary. Committee—Messrs J. Trahair, Sydney; J. E. Taylor, Cowra; E. Tipper, Maitland; J. D. Ward, Sydney; W. T. Seabrook, Bathurst; H. Nancarrow, Wellington; R. Patten, Bollwarra; H. R. Roberts, Sydney; J. S. Dick, Port Macquarie; R. Pender, West Maitland; T. Halloran, Wagga; J. D. Richards, Sydney. For the first time since the establishment of the society honorary membership was conferred on Mr W. Abram, of the Italian Bee Farm, Beecroft, and Mr J. Trahair, of Hebblewhite & Co., Sydney.

Mr Abram expressed his deepest thanks for the honour conferred on him. It was certainly a great honour. He was unable to discover what he had done to deserve it. He thanked them very much for it.

Mr Trahair could only express his thanks for the honour conferred. It was quite unexpected. He had certainly endeavoured to do his best, but it had not been much; his energies would be increased by the honour done him, and certainly he would devote renewed efforts in the future to what he had done in the past.

Mr Gale returned thanks for the honor conferred on him. He had been vice-president of the Association from its conception, and had attended every conference, from the first held at Maitland. He had retired from the public service, but he would now be able to devote more time to beekeeping than when he was travelling the country. He would always be very glad to help, as he had done before.

Mr Abram and Mr Maxwell returned thanks for their election as vice-presidents.

An adjournment took place while the sub-committee appointed to revise the rules and bye-laws of the N.B.K.A., with the addition of Mr Seabrook, went through the rules, which were brought up and adopted.

The members then adjourned to the Photographic Studio, where they were photographed.

The evening was devoted to questions. The Mayor presided, and there was a good sprinkling of the general public present, including Mr Lansdowne, presi-

dent of the local Fruitgrowers' Association.

The first question was by Mr Tipper, "What kind of trees should municipal and other bodies plant for useful and ornamental purposes?" He said he put this question on account of seeing the great number of useless fir trees planted about the town, while the natural trees of the district, which were not only more ornamental, but as far as the production of honey was concerned, far more useful, were entirely lost sight of.

Mr Bloxham: Lauristina, Pittosporum.

Mr Gale: Acacia, Pynantha or the Golden Wattle, Jacaranda, which bears an abundance of pollen in early spring.

Mr Whittell said no tree in the world will stand what the eucalyptus trees will stand and live, and they could be made exceedingly ornamental. He had seen a sample of Tasmanian blue gum, which was a perfect picture. They will stand as much cutting as you like, and by trimming them you can make them as dense as you like for shade.

Mr Maxwell: Willows.

Mr Gale: English Sycamore would do well. He had got a lot of pollen from it.

Mr Whittell said public bodies would get these trees from the Gosford nursery.

Mr Maxwell asked if anyone had seen yellow box carefully trained.

Mr Gale had seen some carefully trained looking beautiful.

Mr Gale asked: "What low-growing herbage would you consider the greatest honey-producing, and the most benefit to bees?"

Mr Seabrook: The hawthorn.

Mr Gale: The indigenous native. How about the native roses?

Mr Whittell: Never saw bees working on them.

Herehound, couch-grass, in early spring; the banksia; and the wild honey-suckle, were also mentioned.

Mr Bloxham asked in regard to queens brought from Italy—Are they not inbred?

Mr Abram said the variety of Italian bees was sustained to such an extent it was constant, therefore all they needed to look for was other qualities, such as energy, gentleness, and bred accordingly.

It was now over 40 years ago that the Italian bee came to recognition in other countries. Since that continuous importation of queens from Italy has been going on, and the Italian breeder has been endeavouring to breed the qualities that were most desirable, with the result that these bees now possessed these qualities. Why do beekeepers import queens but to have fresh blood? There was only a very small number of bees imported to this country, and when a beekeeper gets a queen to improve his strain, it was frequently the same strain he got, the result being deterioration. We can only go breeding from one and the same strain for a certain number of generations. Ten or fifteen generations is the furthest we can go. Then we must introduce fresh blood. Only a few beekeepers in Italy are known here, so the beekeepers here import mostly the same strain from Italy. If our beekeepers select the best stocks and breed from them, they could go on a for number of years without importing fresh blood again.

Mr. Sams spoke of poultry, and horse and cattle breeders trying to improve their strain by getting high class sires and sometimes finding they had got deterioration.

Mr. Gale detailed his method in breeding for special colour in chickens and canaries, and said that in-and-in breeding, had produced the best strains of fowls that we have. All the best cattle have been produced by in and in breeding by careful selection.

Mr. Abram said Mr. Gale had got to the point where he had obtained a small amount of success, but had he gone to the 10th, 11th, or 14th generation he would have proved beyond doubt that in-breeding could go no further, no matter what outside strain he selects. He had experience with pigeons when a boy, that inbreeding with brother and sister is detrimental to all good qualities. Mr. Gale had said that certain qualities were gained, but he (Mr. Abram) said other qualities would soon have dissappeared if he had gone a little further.

To a question by Mr. Sams as to whether anyone knew anything about the value of sweet clover as a honey or

fodder plant. It was said to be highly recommended by the Americans for planting on dry plains, but that on wet land the roots rotted. A traveller in that country saw it growing on the roadside with the bees working it, and took the land up for an apiary and was very successful in obtaining honey.

Mr Bloxham alluded to the bumble bee and red clover.

Mr Gale said the bumble bee hibernates in winter, the bees dying off, and only the queen surviving. It was proved the red clover could be fertilized by some other insect than the bumble bee—one having a tongue as long.

Mr Rhodes asked if bees injured fruit or fruit trees.

Mr Maxwell said it depended on the kind of skin the fruit had whether the bees could puncture it; but skins of grapes he could not see how they could injure them. Bee nippers were something like blacksmith's nippers.

Some said they punctured the fruit for the sake of the honey, while others said the holes were made by birds and the bees afterwards took the honey.

Mr. Gale said orchardists were indebted in the first instance to the bee for every grape, peach, or other fruit they had and surely they ought not to object if it injured a little fruit in obtaining food.

Mr. Sams asked if the drone progeny of Italian queens mated with black drones were affected by the black drones?

Mr. Gale said the female progeny were affected, but not the drones.

Mr. Sams: There are trees that flower in the winter time. Is it an advantage to have the bees working on these flowers or have them taking it easy in the hives.

Mr. Tipper: They would not live as long, but it might induce early breeding.

Mr. Abram asked are there any birds known that eat bees.

Mr. Rhodes had seen butcher birds catch bees by the dozens.

Mr. Gale had seen the wood-swallow, a slaty blue bird, flying and catching the bees on the wing, and his impression was that the bird was eating the drones.

Mr. Lumsden had noticed a pet mag-

pie killing his bees in a wholesale manner as they came out of the hives.

Mr. Tipper had noticed the same with chickens.

Discussion ensued on the nature of the throats of birds in resisting the effects of the sting in swallowing bees.

Mr Whittel said all insectivorous birds that attack bees mostly hang them about and kill them first.

Mr. Gale said that the greatest offender in this way was the wood swallow or martin, but he held the opinion that they only ate drones.

Mr. Abrams had watched the birds catch the bees while on the wing, carry them to the nearest branch with the abdomen outward and rub the body off and eat the head. He had picked up the bodies of the bees afterwards. He said a good way to get rid of these birds was to wait till they were preparing to go to roost. It was their custom to roost in one great lump in the tree, and he had killed as many as 33 in one shot while the birds were thus roosting. It was said that magpies in their wild state killed and ate the bees. Fowls had also been known to acquire a taste for them.

It being now near ten o'clock, the Mayor thanked the public for their attendance, and hoped they had enjoyed the discussion as he had done.

Mr. Whittel rose with very great pleasure to move a vote of thanks to the Mayor for the kind and courteous manner in which he had conducted the business of the session, and hoped when the time came round again to visit Goulburn they would have a larger business paper.

Carried with acclamation.

The Mayor returned thanks.

Mr. Gale moved and Mr. Abram seconded a vote of thanks to the local press which was responded to by the representatives of the two papers.

On Saturday morning a committee meeting of the N.B.K.A., was held, at which a small amount of important business was transacted, an account of which we trust to give in our next.

The new rules of the N.B.K.A., as adopted at this Conference, will be found in another part of this publication.

The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—JULY 24, 1896.

THE most critical period of the year has now arrived. In most parts of Australia the worst of the winter has passed. An occasional warm sunshiny day, a few fruit buds here and there on the trees, indicate the near approach of spring. On such warm days look over your hives. Watch if they have food. If not, feed them. Be sure they have queens. If not, send to the breeder you have most confidence in at once. As the buds appear on the trees, so will the grubs develop among the bees—that is, if you let them. But you will make a big mistake if you do. Look out for their little web, and with pin or penknife poke underneath it and pull the little rascal out. Crush him at once. Stimulating for brood rearing is much practiced by some apiarists, that is, give an artificial pollen in the shape of say pea meal blended with honey. Dr. Langstroth's last idea was malted milk, as being the nearest to the natural food of the bee larvæ. We do not know whether such is to be had in Australia, but the name might suggest what the article is like. Perhaps a warm day may be followed by a cold spell, when bees could not fly and procure the natural pollen now coming on the trees. Then the artificial stimulant already in the hive hastens on the strengthening of the swarm for the coming honey flows. As changes of weather are so liable to happen in spring, still keep your bees snug and warm, the follower close up to the bees and brood, and the blanket well on top. Meddle no more with them than is absolutely necessary to see the above instructions carried out. Spring dwindling is an enemy that has been much talked of in years past. We may assign several causes for it. The old

bees that have lived through the winter begin to die off. Birds and other things that feed on insects are on the search for insects to rear their own brood, and bees are too often the victims; and much of the new pollen now procurable may possibly act on bees as fresh young grass does on cattle—giving the scours, &c. On a nice warm day in last week we went through our bees and at night we felt somewhat happy as we could say they all had food; most had brood, the hives were filled with worker comb, drone comb only in about two of the very best, the bottom boards were all clean, and we had cleaned out all grubs or signs of them we could see.

And now, as a precaution against foul brood, it is well to be known there are certain chemical substances which evaporate at the ordinary temperature of the hive, and whose vapours, while not actually killing the bacilli, arrest their increase or growth. Among such substances are eucalyptus, camphor, carbolic acid, lysol, phenol or creolin, and naphthalene. It would be as well to put some of either in hives if any doubt as to disease exists.

Gleanings looks very much improved in its new light colored wrapper.

Doolittle says when starters only are used in sections, separators are needed.

A lot of excellent correspondence unavoidably held over till our next, including articles by "Loyalstone" and Mr George James, Wyagden.

Mr. Abram gave a good way of killing the bee-eating Martin. Those birds roost in dense clusters. Find the cluster. He did so and killed 35 in one shot.

From Mr. A. A. Roberts of Muswellbrook we have a copy of circular which he is issuing re queens for the coming season. Mr. Roberts is evidently up to business and taking time by the forelock. Not only queen bees but poultry, are included in the circular, black Langshans being the breed he is giving special attention to.

We got a few ideas at the Conference, Mr. Maxwell said: Paste simply made of water and flour, not boiled, will stick labels on tin when other things fail.

Different kinds of honey may be blended by heating separately up to 150°, and then pouring together through a sieve into an extractor, working the extractor at the same time.

An American writer has discovered the cause of swarming and its cure. Bees swarm because there is a hole in the hive, abolish the hole and swarming is stopped! Is he not clever?

In chilled brood the dead larvæ turn first grey, and afterwards become nearly black (never brown as with foul brood.) The dead larvæ of chilled brood are generally removed by the bees.

In Reggio, Italy, the country people catch swarms by bruising the fresh foliage and tender shoots of the "*Cedro citrous medica*." It has the same effect on bees as the scent of a queen. Cannot someone in Australia discover a herb with similar qualities?

We beg to acknowledge receipt from Mr A. A. Roberts, of Musclebrook, of photograph of trophy and exhibits at the late Musclebrook Show. As we look at the excellent assortment of products so artistically and judiciously displayed it brings back strongly the feeling of regret we were not able to attend and see the reality itself.

Our deepest sympathy has been with Mr. J. E. Taylor during his late troubles. While he was waiting in Sydney to attend the appeal case Mrs Taylor was seriously ill—a telegram of her death would not have been a surprise. On returning home, while finding Mrs Taylor better, his son, a lad of 13 years was stricken down with typhoid, and notwithstanding every care passed away. Troubles never come alone.

We got a good hint at Brother Packham's wedding. When the party were seated round the room after coming

from the Church, among the refreshments handed round were thin slices of bread, on which a spoonful of honey was dropped in the middle. The recipient doubled the bread up, making a delightful little sandwich. What a nice way of introducing honey at tea-meetings and similar gatherings!

A Mr. Forrester Rudden, in the May number of the *Agricultural Gazette*, urges fruit growers to smear poisoned honey on the branches of fruit trees, in order to destroy honey-eating birds. Surely he forgets that it will destroy the bees that fertilise the fruit at the same time. Not only will it destroy the bees, but prevent the fruit being fertilised, and so prevent any possible chance of a crop for the fruitgrower. What an unwise thing to have been published.

Mr. A. Gale, having now ceased travelling the country, is enabled to devote more time to some of his pet hobbies. Not only is he a student of the different forms of propagation of the vegetable kingdom, but he has invaded the realm of the finny tribes. We spent a very pleasant evening at his residence lately, inspecting his various tanks of fish and water vegetation. We could hardly believe, had we not seen, there were such beautiful and varied shapes and colours in the watery realm.

The *Agricultural Gazette* of June is to our thinking about the best number of that publication yet issued. It has an article occupying some 40 pages by Mr. J. H. Maiden, entitled, "Some New South Wales plants worth cultivating for shade, ornamental and other purposes." It appears most appropriately now at a time when Arbor Day is approaching, and those who contemplate tree planting should not neglect to read carefully the valuable information and hints contained in it. It is followed by "A List of the Insectivorous Birds of New South Wales, by Alfred J. North, O.M.Z.S., Ornithologist to the Australian Museum," beautifully illustrated.

On our way home from the Conference we stopped at the pretty mountain township of Moss Vale, where we were hospitably entertained by Mr. R. H. Jervis. After a good chat on queen rearing and his methods, we strolled to the hills above the town, and from the branches of the various trees, which had been broken off by the recent snow storm—a case of nature's pruning—for every tree was served alike, we procured sprays. Mr. Jervis has been a close observer of their habits, and from his store of knowledge we labelled each spray to the following purpose:—Yellow Gum; blooms from June to September every year, never fails in August. Blue Gum buds every 12 months, every December. White Gum, blooms about every three years, about March. Woolly Butt blooms about every three years, about March. Snappy Gum blooms every four years, plenty honey, but infested with beetles. Mr. Jervis and Mr. Naveau of Berry are placing about 100 hives apiece at a place 14 miles from Moss Vale. Mr. Naveau takes charge. They both think it is a good place. We sincerely trust their anticipations will be fully realised.

FOOD ADULTERATION.

Department of Justice,
Sydney, 19th June, 1896.

Sir,

I have the honor, by direction of the Minister of Justice, to acknowledge the receipt of your letter of the 13th instant, asking for a draft copy of proposed Food Adulteration Bill, and to inform you that a copy of the Bill will be forwarded to you upon its introduction in Parliament.

I have the honor to be,

Sir,

Your obedient servant,

ARCHD. C. FRASER,
Under Secretary.

Mr. E. Tipper,

Australian Bee Bulletin,
West Maitland.

Write for samples and prices of Honey Labels, and all Descriptions of Printing to E. TIPPER, *A. Bee Bulletin*, Office, West Maitland, New South Wales.

QUESTIONS THIS MONTH.

66.—Do you think it unsafe to get queens from a district known to have foul brood, that is, can it be spread through the queen?

67.—Will yellow box thrive in the coastal districts, and if so ought not beekeepers to advocate their being planted for Municipal, Public School or other purposes?

W. A. MC KERIHAN.

62.—I am leaving spare combs on hives, the bees can take care of them better than I can. In some of the hives my bees are storing a small quantity of very nice honey just now.

63.—It is not necessary at any time to make holes in top bar of frames. I had some top bars of frames that had small holes in them and the bees closed them up every time.

H. C. NIBLOCK, COOMA.

66.—Foul Brood was in this district before any Italian queens were introduced here, do not think that the queen has anything to do with it.

67.—I think that Yellow Box would grow in the coastal district, but it would want a lot of care to get it started on Manaro.

JAMES BENNETT, VICTORIA.

66.—Experience seems to me to indicate that the queen is at the bottom of the foul brood trouble, and that therefore it is unsafe to introduce possibly diseased queens, but practice demonstrates that the risk, if any, is but trifling.

67. I would expect yellow box to grow if planted in the coastal districts, but I would hardly expect it to yield an abundance of honey under these conditions. I have had no experience however.

JOHN THACKER, VICTORIA.

64.—Re feeding in winter, thus far we have not had to feed in winter. There are always some flowers for the bees, so that they gather more than they use in winter. Our worst time is during December, January and February, and then, when possible, we give them combs of honey.

65.—This part is heavily timbered with what we call black and grey box, so no need to plant them. They bloom as follows, varying of course with the seasons:—black box, March to May; grey box, September to November. Honey rather dark, but good. This year grey box did not bloom at all, but is full of buds at present for another season. Blue gums are in flower, and bees working on them every fine day.

"AUSTRALIAN YANKEE."

64.—First, by hanging in frames of sealed honey. 2nd, by filling empty combs with syrup and hanging them in the hive, 3rd, with the tin-can method given in this month's instalment of "Crumbs." With this difference, instead of using small cans, use one large enough to hold five or six pounds of syrup. My preference is in the order given, that is for winter stores, not to stimulate brood rearing.

65.—No, I have never tried. They grow naturally around here.

G. PACKHAM.

64.—I have not yet been so unfortunate as to find it necessary to feed in any way other than by removing a frame from a hive that can spare some. Several years since when inducing bees to fill a super for an exhibit, I fed from an empty box under the hive by placing therein a can containing the syrup, with a thin piece of board, cut round, and small holes bored through and let it float on the syrup. The bees took to the feed very readily, and not one got drowned.

65.—Have never tried. They grow in great numbers around here wild.

CHARLES U. T. BURKE.

66.—A queen cannot spread foul brood, as I have taken several from a diseased colony, and introduced them direct to a healthy colony without any evil effects. I experimented largely this way when I was troubled with foul brood last season, but if you introduce bees from diseased hive along with the queen, then foul brood will appear in the healthy colony. I have placed a young queen, healthy, in a diseased colony, and she laid away in a comb where young brood was rotting, and strange to say her brood was not affected, and the colony recovered from foul brood of its own accord, and did not show a trace before brood-rearing ceased this year.

67.—Yellow box trees only thrive in a cold district, where the ground is deep, rich and loamy. They would grow in coastal districts, but not flourish. Beekeepers should certainly advocate planting them in towns and public school grounds, as they are one of the handsomest trees Australia produces, both for shelter and shade, and what is more, yellow box timber does not hurt land for grazing purposes, as their roots get their nourishment from the under soil.

A. J. PANKHURST.

66.—I would not buy queens if I knew from any beekeeper that had foul brood in his apiary, as I think it would be unsafe; but having no experience with foul brood, as I have never seen it, I would not have much to say on it; but I would be afraid to buy queens from anybody that had it, or advise anybody else to do so that had never seen it.

67.—I believe yellow box would grow well in the coastal districts, as it grows well in sandy soil, such as river flats, or it will grow in poor

white ground. It does not grow so well in heavy black soil, and if you see a yellow box tree growing amongst white box it is generally stunted. I would like to see a few grown in parks and school grounds for a trial. If pruned well they make a fine shade; but I think they would grow too large for a street, for they are sometimes five or six feet in diameter. I think if they were kept for shade instead of apple trees it would be far better. I am ringbarking all my apple trees and pruning up the yellow box, as I believe it to be the coming tree.

QUESTION NEXT MONTH.

C. U. T. BURKE.

68.—What is the most durable timber for making hives—both painted and unpainted?

JOHN BURNS.

69.—As I don't want any more increase what is the best plan to adopt?

70.—How are you cleaning your kerosene and castor-oil tins.

BACCHUS MARSH (VIC.) B.K.A

A meeting of persons interested in bee-keeping was held in the Mechanics' Institute on Wednesday, May 13, 1896, for the purpose of forming an Association. Mr. W. Smith was voted to the chair and after briefly explaining the object of the meeting, Mr. H. Simon proposed "That an association to be called 'The Bacchus Marsh Beekeepers' Association' be formed," seconded by Mr. W. Sergeant and carried. Mr. G. Hollis read the rules of the Victorian Beekeepers' Association which after being freely commented on were adopted by the Association with a few alterations to suit the requirements of the district. Proposed by Mr. H. Simon, seconded by Mr. C. Planger that this Association meet this day fortnight, and afterwards every fourth Wednesday at 8 p.m. in the Mechanics' Institute, —Carried. After Mr. G. Hollis had read a paper prepared by Mr. L. T. Chambers (hon. sec. Victorian Beekeepers' Association) on "the Advantages of Association in Mutual Pursuits," it was proposed by Mr. W. Sergeant that a vote of thanks be accorded to Mr. Chambers for his excellent paper, and to Mr. G. Hollis for

reading the same. The following officers were elected:—Mr. W. Smith, president; Mr. W. Sergeant, vice-president; Mr. G. Hollis, secretary and treasurer; committee, Messrs. G. Slack, H. Simon, C. Planger and J. Young.

At the meeting held on May 27th, after the minutes of the previous meeting were read and confirmed, the sec. Mr. G. Hollis, read a paper on "The Honey Bee," which proved to be very instructive, and called forth plenty of discussion. Moved by Mr. W. Sergeant, seconded by Mr. J. Young, that a vote of thanks be extended to Mr. Hollis for his very interesting paper.—Carried. Mr. Smith moved that Mr. H. Simon prepare a paper to be read at next meeting.—Carried. Several samples of honey were shown by Mr. Simon, which proved very interesting and were freely examined and commented on. After discussion on light and dark honey the meeting closed.

The third meeting was held on Wednesday, June 24th. Mr. Smith (president) in the chair. The minutes of the previous meeting were read and confirmed. Mr. H. Simon was then called on to read his paper entitled "Hives." This paper also proved very interesting and was commented on with great spirit by the members present, and after a long discussion it was proposed by Mr. J. Young that a vote of thanks be accorded to Mr. Simon for his interesting and instructive paper.—Carried. Moved by Mr. J. Young, seconded by Mr. G. Slack "That the secretary write to some of the leading apiarists in Victoria and New South Wales enquiring their methods of prevention and cure of foul brood," and carried. After some discussion the meeting closed.

ENQUIRY.

E. TIPPER, Esq.,

Bee Bulletin, West Maitland.

Dear Sir,—I am instructed by my Association to request your answer to the following questions:—

(1.) What do you consider the best way to get rid of foul brood?

(2.) Have you any means of preventing the disease?

I should like to have your reply by the 21st, so as to be in time for our next meeting, but if you cannot reply by that date, we should be glad to hear from you at any time, as any communication on disease would be doubly welcome.

Yours, &c.,

GIDEON HOLLIS,

Hon. Sec. Bacchus Marsh B.A.,
Victoria.

[There are those who say they have cured foul brood with chemicals. We believe they have done so, the secret being to give the chemicals in such a diluted state that the bees will eat it. If you see the hive only slightly affected you might keep it in check by dipping a pencil in carbolic acid and dipping it into the affected cells. When it gets any headway the best plan is to place the bees in a fresh hive with starters only, placing queen excluder zinc at entrance, or they may swarm out. At the end of three days you may place them in a second clean hive, giving them food. We have, however, cured it without the second transfer. Re means of preventing the disease, occasionally sprinkle the inside of hive with Little's Soluble Phenyle (a tea spoonful dissolved in a quart of water. This is as good a remedy as we can recommend.)]

WELLINGTON POINT SHOW QUEENSLAND.

A. F. BURBANK.

At the above Show, held May 24th, the following prizes were awarded:—

Best collection of beekeepers' utensils, A. F. Burbank, 1st.

Best 3 bottles of extracted honey, W. E. Burns 1st.

Best sample of honey in comb, A. F. Burbank 1st.

Best Italian Queen Bee, W. E. Burns 1st.

Best 6lbs yellow beeswax, W. E. Burns 1st.

Best hive of bees in observatory hive, A. F. Burbank 1st.

Best 6lbs of white wax, W. E. Burns 1st.

Mr. R. H. Jervis writes: I think I told you I sent two samples of honey home to England. Got a reply the honey very good but not quite equal to the best English. It was a wholesale drug house I sent to.

ORIGINAL POETRY.

W. D. RUSSELL.

My dear Mr Long,
I deem 'twon't be wrong
To reply to the verses I've seen
Both this month and last
As my eyes I have cast
O'er the pages of *Bee Bulletin*.

The beemen, you see,
Have in both you and me
Poets of an order not mean;
Though perhaps to most men,
And most likely to them
The fact may not clearly be seen.

Your verses are meant
To cause merriment.
They do it—there's none will deny.
Your humour's so droll
It went straight to my soul,
And I laughed till I started to cry.

O'er my honey that's lost,
O'er the labour and cost
To export it (no energy lacking.)
I once used to cry,
But my eyes are now dry
Since you say we'll import it as blacking.

To get it again
Will indeed be a gain
If it comes in a shape to our landings
That we all may use,
Not only for shoes,
But to polish our dull understandings.

If 'twill only incline
Beemen to combine
Our interests in common to forward.
The loss we have met
Will soon be offset
By success that will then be our reward.

So good-bye, Mr Long
To the end of my song
I've come, so I bid you farewell.
I hope before long
We'll hear from you, Long,
When you've something amusing to tell.

T. M. H., Lismore, June 27th.—My bees are now in winter quarters. Gums everywhere are heavy in bud, and on the coastal parts the ti-tree is in full bloom. There is a great show for clover. All we want now is rain; we have had no rain to speak of for about six weeks, but heavy frosts. Of course we are looking forward to a good spring. I sent 60 of my hives to the west, three months ago with my partner—somehow he had the misfortune to smother 20 of the best—got hold of the wrong sort of railway carriage and it was a very hot day.

THE CONFERENCE.

R. H. LONG.

I've just read all about it, and what is bound to please
The man who takes an interest in the welfare of the bees
Is that little resolution where the Conference agrees
To hold *examinations* in the art of keeping bees.

Every art is represented at our Universities,
With one *notable* exception—in the art of keeping bees.
Yet the Master of *all* Arts can take his certified degrees,
And may not even know there is an art in keeping bees.

Let us draw then some distinction in our *Institute* for
bees,

Between the Masters of the A's and Masters at the B's,
And those who pass with honours thro' our new academy
Let them sign their names in future

Yours truly, (NAME), M.B.

R.H.J., Moss Vale.—I consider the early spring when the queens first commence to lay the proper time to transfer as at that time there is no loss of brood, and the work can be done with less trouble, the only thing is the bees want more care. They should be crowded on as many frames as they will cover and be fed liberally with good food. It is also the best time to treat foul broody bees on Jones' starvation plan. If in summer and honey coming in McEvoy's treatment is best. I have transferred a lot of bees and find the best time is early in the season.

S.A.L., Footscray, July 7, 1896.—Last season I tried a variety of ways to grow the spider plant, but failed utterly in all, and I cannot assign any cause except seed being old. Perhaps some of your subscribers might be good enough to put me on the track (they are grown in our Botanical Gardens to perfection, I am told.) I had the same experience with the Chapman Plant. I do not know that the seed was old, but presume so.

Mr. W. S. Pender tells us in sandy soil he had it come up annually from fallen seed and grow great size.

C.B., Benalla, July 7.—If any bee-keeper is troubled with red ants, or what some people call meat ants, they can very easily be killed, not hunted, with carbon. If its a medium size nest, 1lb. poured down the holes would be sufficient, but a large one it would be best to use 2lb. Cover up all the holes so the fumes don't escape, if done towards night no ants will ever leave that nest.

Would it be Carbon Bi-Sulphide. How about the cost?

CAPPINGS.

(From American and other Bee Journals.)

The Ontario Government are sending comb and extracted honey to the Imperial Institute, London, England.

Dr. G. C. Miller says that nearly all who have tried inverting unsealed queen cells every seven days have given it up as a failure.

A London paper says:—A mean man who is cultivating honey has placed several hundred glow-worms in the hives so that the bees can work at night.

Mr. Wm. S. Barclay, in *American Bee Journal* says:—As a cheap fuel, I find to take old newspapers (thick carpet paper is better), put them in loose rolls about two inches in diameter, and soak them in pretty strong salt petre water, and then thoroughly dry them. I find nothing cheaper or more convenient.

Dr. Hayward, of Cropsey, Ill., calls attention to honey as a remedy for erysipelas. It is used locally by spreading on a suitable cloth and applying to the parts. The application is renewed every three or four hours. In all cases in which the remedy has been employed, entire relief from the pain followed immediately, and convalescence was brought about in three or four days.

We take the following from a London weekly paper, called *Answers*:—"The most regrettable fact in connection with large cities is the ignorance of country life they engender in the minds of those who are too poor to leave the scenes of their daily labour and get away for a breath of fresh air amid country lanes. The following letter, which I received a day or two ago, is a very good illustration of what I mean: 'Dear Sir,—I should like to grow honey; how much will it cost to keep a bee?' Although it is extremely funny, it has, at the same time, its pathetic side."

Here is "Morton's Brother-in-law," in the *American Bee Journal*, says:—In visiting an apiary of about 25 colonies, I

found the bees all fastened tightly in their hives by a cigar box nailed over the entrance, with wire cloth over one side of it. It was well along into warm weather, too, and the bees had been flying freely on several occasions previous to my visit. The proprietor explained that he had noticed bees come out too early and died in the snow, so he "fixed 'em last fall that-a-way, and they are all snug and safe yet." That was a new way to me, and I urged him to release them right away, and give them a chance for life. To my surprise their long confinement had not injured them, as far as I could discover, and two weeks later those bees were working as well as you could ask them to—and he only lost two colonies, one of which was queenless.

M. M. Baldrige, in *American Bee Journal*, says:—I sow about 50 acres of sweet clover every spring, and any time between the first of February and the 15th of April. As a rule, I plough and harrow the ground before sowing the seed. I then sow about 15 lbs of unhulled seed per acre, and do not cover it at all. I have never failed to get a good stand. Sometimes I sow the seed upon land not ploughed at all, and even then I seldom fail to secure a good "catch." It will grow on Bermuda or Johnson grass sod, and it is in my opinion, a better plant for enriching the land than cow-pea vines or red clover. When sweet clover is grown for honey, and a crop of blooming plants is desired every year, and from the same land, then two crops of seed, in successive years, should be planted, for, as you must be aware, the plant is biennial, and blooms only every other year.

E. L. Dunham, in *American Bee Journal*, says:—Two weeks ago yesterday, I opened the hive of a colony of bees that I knew were very weak, and found that there were not more than enough bees to cover a space six inches square, but as they had a very nice queen and a hive full of honey, I closed them up again to see if they would not build up in numbers as soon as the weather was warm

enough for them to rear brood. There were eggs, but no brood in the hive. About five hours later I found the hive in an uproar with robbers. I gave them a good smoking, and as soon as the bees stopped coming out and started in again, I closed up the hive tight, and did not open it again for two days. In a very little while they were robbing as badly as before, and when I thought the hive had as many robber-bees in it as there were likely to be at any one time, I closed it up again, and kept it closed six days, until no bees were flying about the outside of the hive, and then opened it in the morning, and those robber bees came quietly out, and went to work bringing in pollen, guarding the hive and so on, just as though they were hatched and reared in that hive. This morning I found sealed brood and eggs, and brood in all stages, and three or four times as many bees as when I looked it through before.

In the *British Bee Journal* Mr. J. W. Banks claims to have overcome the foul brood difficulty by the use of bromide. He says:—"Having received during the last twelve months many enquiries respecting the treatment of foul brood by bromide as suggested by me, I should be glad to be allowed to state through the journal that my apiary this summer appeared quite free from disease. When I say that my average yield of honey per hive was between 70 lb and 80 lb (a very good average for the Old Country), I think that you will agree with me that this fact of itself serves as a fairly good guarantee of the healthiness of my bees; and when I remind you that two years ago my apiary contained fifteen diseased stocks, you will admit that I have some reason for considering that this treatment in my own case has proved successful. Sulphur fumes and carbolic solutions are, we know, powerless to touch the spores, while the effective application of steam is too troublesome and expensive an application to be resorted to. My plan with hives is as follows:—Having stopped up entrances,

etc., I allow the fumes of bromide to pervade the interior, after which with a bromide solution I thoroughly wash inside and out. I claim for this method a simplicity equal to the ineffectual practices commonly resorted to, and at the same time a thoroughness as complete as the most troublesome and, for many people, impracticable application of steam.

Professor U. J. Cook in *American Bee Journal* says:—"If the bees swarm before the season opens, or if queen cells are already formed and peopled when the section-cases are added so that swarming occurs, then it is best to proceed as follows: Put the new hive, containing combs if they are to be had, or frames filled with foundation, or at least with starters of the same, on the old stand, exactly where the old hive stood, and in case the sections were on the old hive, put them on the new one. Put the old hive close beside the new one, with the entrance facing the opposite way. That is if the hive, before swarming occurred, faced east, the new hive for the swarm will face east, and the old hive will stand close beside it, but will face west. Of course, if the queen's wing is clipped, she will be caught and caged, and as the swarm comes back she will be permitted to enter with them, and with almost no trouble or work the new swarm is hived, and will go right to work, very likely in the sections. Soon, within a day or two, we gradually commence to turn the old hive around, and by the seventh day after the swarm left it, have the entrance east again close beside the entrance of the new hive. On the evening of the seventh day move this old hive to another part of the apiary. On the next morning as the bees go forth from this hive to work, they will nearly all return to the old place and enter the other hive, making that colony very strong, and in condition to store a great crop. The other colony will be so reduced in numbers that the bees will not be moved to swarm again, and will fall in with the first queen that hatches, and

destroy all the other queens, and while this colony will not probably give much surplus, it will make a good strong colony by the close of the season, and will very likely have more honey than it will need for the winter supply. This prevents after-swarms, with no pains to destroy queen-cells, and while it will not always prevent further swarming, it will be more likely to do so, than will the method of destroying all the queen-cells but one, for it is very difficult to do this last; some cells in a corner or other concealed place will be missed when the third swarm is likely to issue.

At the annual meeting of the Ontario Beekeepers Association (a full report of which is given in the *Canadian Bee Journal*), a long discussion took place re wintering. Allusion was made to solar heat penetrating the hives, and as air space between the hive proper and the outside cover would prevent the effect of the solar rays, such outside cover was not a necessity. It was pointed out, however, on the other side, that in Canada in winter time there was only one sunshiny day in twenty. Mr. F. A. Gemmel gave his plan of wintering, said:—"I had an experiment last winter. I had some five colonies last winter that had no ventilation on top, and they were the best colonies I had in the yard last spring. You will understand that the colonies and hives were never allowed to be completely covered with snow at any time." Mr. Hall said:—"I have bees seven miles from home that are exposed to the sun, and they are also exposed to 10 below zero, and that frosts lasts longer than the sun does, and I certainly take the non-conductor to keep the frosts out and we will take the heat of the bees to get up the solar part of it. Last winter these bees were covered after a big storm and I was'n't feeling well enough to dig them out, and I have what I call yards or drop boards to save me the trouble of cutting the grass and these hives that were snowed up the worst I dig well in front of them, about twenty inches by thirty-three or thirty-

six inches, and I laid the board on top of this hive and I did not do any more to them. One of the hives was queenless, and was lost, but the six were equal to any in the yard, and three of them the best. There was no top ventilation, and there was a space at the front about 4½ inches to five. The mice are at liberty to go in, but they do not go inside my hives. These hives did so well that if my hives become covered with snow again, I will go out and give each one a well, because my experience of last year was so satisfactory." A Mr. Best said:—"I have had them drifted up with snow considerably, and thought that surely they were dead, and I looked for the bees to be dead, but they came out better than some of those that were not snowed up. I suppose they received air through the snow. I took the snow away as soon as I could conveniently." Mr. McEvoy said:—"The best kind of packing was leaves—sawdust was no good. Mr. Hall used 3½ inches packing on the side, and six inches on top."

D. F., Wonwondah East, Vic., June 15th,—It has been a very poor honey season here, the bees gathered enough to winter well on. It is beautiful weather here, nice sunny days for the bees. They are storing a little honey from grey box. I looked through mine to-day they look very strong and healthy. I have cured foul brood by using Napthaline in the hives, by taking the affected brood out. The swarming season is drawing close and I fully expect a good season for honey, as the trees are loaded with buds. Wishing you success with your *A.B.B.*

Rev. James Wilson, Beaconsfield, Vic. June 16th,—Just as I can tolerate any bad road since I have seen the roads of Tarrawonga, so I am much mollified in view of a most trying season amongst my bees, by finding that I am in good company. Many like myself have not taken an ounce of honey, and have had their colonies greatly reduced. Never

mind, we have had our good times, and surely they will come again. I think that the prophet Habbakuk is our man for times like these; for if that worthy were not a beekeeper he would have made a good one with his indomitable courage: "*Though the fig-tree shall not blossom, neither shall fruit be in the vines (for the bees), the labour of the olive shall fail, and the fields shall yield no meat (for the bees), the flock shall be cut off from the fold, and there shall be no herd in the stalls, yet I will rejoice.*" '95 was a splendid season with me, for I am in the midst of a forest of messmate and box, which yielded a sample of honey, if not equal in quality to yellow box or clover, was much appreciated by all who purchased it. I anticipate a similar honey harvest this year if only I can build up my apiary in time to attack it. The Rev. J. Ayling has had, I observe, what to me would be a unique experience, viz., that of officiating at a Beekeeper's wedding. I have in my time married "All sorts and conditions of men," and women too, clerks, carpenters, blacksmiths, farmers, widowers, widows and deceased wife's sisters and the like, but never have I had the felicity of performing that ceremony for either a Bee-master or a Bee-mistress. In any case such parties would be sure to spend the sweetest of *honeymoons*, and like their happy colonies would be sure ever to live together on principles both of harmony and economy. That at least is my wish for them. Although I have never met friend Ayling, I know that he has always taken a deep interest in apiculture in the sister colony; and therefore I read with much regret his touching reference to the fact of his inability, through failing health, to continue that active interest in the future. My bees are not Sabbatarians, for on more than one occasion, just as I am getting ready for my Sunday's duty, out comes a swarm, and there is no peace until I find a home for them. This, as a work of necessity, I take pleasure in. Poor homeless little creatures; it is surely an act of mercy to

pack them snugly away in a nice patent hive, rather than allow them to range the country side in search of either a hollow log or the carcass of an animal. But of course I should draw the line at constructing a hive, or doing any other unnecessary work amongst them, on the Lord's Day, as I hope every other beekeeper would. I read the *A.B.B.* with much interest and wish it success, and all brother beekeepers a prosperous season.

QUEENSLAND NOTES.

A. F. BUREANK.

That is right, chew away at the forest murderers (ring barkers) until they have not a leg left to stand on. This ringbarking nonsense must be put a stop to some how. Here in Queensland (in some places) they not only ring the best part of the trees in a district, but those on main roads as well, the consequence is, teamsters, etc., who happen to travel along these roads can't even get a nice shady tree to camp under for a while on a boiling hot day.

Flying-foxes have been very bad this year, beekeepers as well as fruit growers should declare war on these wretches, because they destroy the Eucalyptus blossom wholesale.

Our bees are working well at present (13th June), but the queens are not laying very much, I expect it is on account of the cold nights we are having.

I had the pleasure of tasting some samples of honey (in charge of the Agricultural Department) that are said to find most favor in the London market. The samples were four in number, Chilian, Californian, English and Jamaica. The Chilian honey is light coloured and is greasy to the taste, the Californian is also light (pale amber) and I think it is old because it has hardly any flavour; the English sample is light, and has a weak smoky taste; the Jamaica honey is very dark, similar to our red bloodwood in appearance, and tastes a little of the comb, it has the best flavour of the lot, according to my taste. All the samples were candied and very fine grain.

Honey is still selling at a low figure in Brisbane; 1½d to 2d per lb. is the ruling wholesale price at present. Yet the grocers have plenty of rubbish, that they call honey, for sale at 3d per lb.

Grass trees have been blooming well about here lately. This is a great honey yielder. I have seen the nectar [when bees and birds, etc., have left the bloom alone] over-flow the little cups and run down the stem for about six inches.

MY FIRST NINE MONTHS.

W. L. DAVEY, GEM APIARY, TOOAN EAST, VIC.

Having studied bees theoretically and practically, I left the service of the Commercial Bank of Australia, Limited, on August 15th, 1895, and reached this far north-west corner of Victoria a date or so later. I built me a house 8ft. x 3 x 4ft. high, of bags, then supplemented this with a galvanized iron hut, and this again with a skillion 20 x 9, for future honey room, using it now as a bachelor's residence, and another skillion 10 x 10 as honey room. So much for quarters. I purchased 20 hives from a bush bee man, who had kept bees for 12 years, without foul brood. I paid him cash down, and would you believe it, every one turned out rotten with foul brood. So much for buying without inspection—"Once bitten twice shy."—even though the hives are boiling over with bees and 50lbs. of honey. I treated for foul brood, but three weeks bad weather finished that lot off. Not discouraged, I bought ten splendid hives (not without inspection) and spent four weeks in the scrub with the bush bee man, getting swarms. We must have fallen 100 trees. I transferred brood, and united, making about 38 good hives for next season out of the 100, and they are in good fettle for spring. Apart from wintering, I extracted only 12 tins of honey, but expect big things next season, as my brother and myself have 85 swarms at present between us. My bee pasturage will consist of an unlimited supply of white gum in November, red gum in December, box of three descriptions (namely, black, grey and swamp) in January and February, and stringy bark from thence to winter. For spring feed I have an unlimited field of cape weed, sorrell, my small orchard, and a large one half-a-mile off, besides hundreds of acres of heath (full of a sickly-flavoured honey) lasting from about August to October. Now, Mr. Editor, don't cut me short, as I wish to say a word to some of the friends about the Foul Brood Act. We do not want an Act of Parliament, but an Act of Beekeepers. I'll tell you something better than that Foul Brood Act—just this. Mrs. —, $2\frac{1}{2}$ miles from me, had nine hives; I cured them (up to the present) and united to three. I'm to get half swarms. Mr. — had three swarms left out of six. I sulphured one, it being so bad, and united the other two, putting them through the starvation cure, but I need enumerate no further, but I have acted within five miles of my hive, and my neighbours' box hives have given place to the frame hive, so my district is cured. The bush bee man lost 140, and his brother 80, through foul brood. Friends beekeepers, do not vote for the Act in N.S.W., but against it, and then set to work in right good earnestness, and spread starvation cure, carbolic and frame hives wherever possible, and destroy all trees with bees, upon ascertaining their being diseased.

How very nice of Mr. A. J. G., in February issue (being a C.S. with a salary at his back) to suggest a shilling fee. How about the apiarist that depends upon his bees during such a season as the past. 300 hives at 1s. is £15—a no small item when he has to buy feed for 300. And to prevent the small beekeepers from putting a tax upon us (who depend solely upon our bees), to pay for an inspector to watch their bees, I would suggest that, if possible, we who keep bees should have one vote for every 50 hives or part thereof, as to whether it be advisable to petition the Government to pass a Foul Brood Act, and I believe the majority of beemon will vote against it. "Doing unto others as we would that others should do unto us," as Christ taught us, to my mind will effectually rid your district of Foul Brood, as it is doing in this district. I would like to say a word on the question of health being marred in the worker bee, by the not allowing them to build wax, as W.S.G. in January issue says (page 275), but I don't believe it, and I think I can prove it, and would like to, but dare not, as I see in imagination either the editor's scissors or waste paper basket. Hoping the *Bee Bulletin* will experience the best season it has ever had, and yet the worst it is ever going to have.

PRODUCING COMB HONEY.

W. Z. HUTCHINSON, *American Bee Journal*.

When bees are handling honey, as they are in the working season, there is more or less of what might be called involuntary wax secretion. Unless there is an opportunity to use this it is wasted. When honey comes in slowly it is quite likely that sufficient wax is secreted, and that there is abundant time in which to make it into comb, to furnish storage for the honey that is gathered. As the flow increases, honey must be consumed expressly for wax secretion. Whether such consumption is profitable I am not able to say. The amount of honey consumed under favourable conditions in producing a pound of wax, is a difficult point to decide definitely, but there is no doubt that it is much less than many people suppose. Just how much of the honey consumed goes to support the life of the bees, and just how much is made into wax, is hard to find out. The old estimate of 20 pounds of honey producing one pound of wax is decidedly an error. Later estimates, that place it at five to seven pounds for one pound of wax, are probably much nearer the truth, and show that the consumption of honey even for wax secretion is not so very expensive. As the flow of honey increases, a point is finally reached where wax cannot be secreted and combs built with sufficient rapidity to furnish storage for the honey. When this point is reached—possibly before—comb foundation can be used with profit. The only place in

which I have found it profitable to allow the bees to build their combs unaided is in the brood nest of a newly hived swarm. The profit here does not come so much from the saving in comb foundation, although that is quite an item, as it does from the conditions brought about whereby the bees are induced to store their honey in the supers instead of the brood nest. When there are no combs in the brood nest, simply starters of foundation, no honey can be stored in it until combs are built, and the honey must from necessity be stored in the sections (set over from the old hive) until comb is built in the brood nest. Just as soon as a few cells are completed, the queen, being kept out of the supers by an excluder, is ready with her eggs, and continues to follow up the comb builders. The result is that nearly all of the honey goes into the sections, while the combs in the brood nest become almost solid with brood. The hiving of the swarm on the old stand, the contraction of the brood nest, the Heddon method of preventing after-swarming, compelling the bees to build their own combs in the brood nest—all these combined throw a great mass of *willing* workers into the sections. These bees have swarmed. The fever is over and passed, and their whole energies are now bent to the gathering and storing of honey. The foundation in the sections gives them an opportunity to store the honey as fast as they can gather it, the tying up of the supers allows them plenty of time in which to ripen and seal it, the building of comb in the brood nest gratifies their natural desire for comb-building, and all goes as merry as the marriage bell.

Very excellent results may be secured by hiving swarms upon full sheets of foundation; far superior to what may be secured by using drawn combs, but not equalling those that come when only starters are used in the brood nest. There is more difference in this respect between combs and foundation than there is between foundation and starters only. Of course the foundation can be drawn out into combs in two or three days, but during even that short time the bees have begun storing their honey in the supers, and, having made a beginning, they are inclined to continue the practice.

To this plan of management there is just one objection, viz.:—that perfect combs are not always built in the brood nest. They may be crooked or bulged, or drone comb may be built. The last is the greatest difficulty. When using the Langstroth hive and contracting to only five frames, I never had any difficulty in getting straight combs. The brood nest was so narrow at the top that all of the combs were commenced at once grew at the same time, and were brought down to completion as straight as so many boards. With the new Heddon hive the top of the brood nest is wider, and the centre combs are more likely to be commenced some little in

advance of the outer combs, and bulging is sometimes the result.

Drone-comb is the result of either an old queen that cannot keep pace with the comb builders, or that the bees are thinking perhaps of superseding, or of using a brood nest so large that the bees hatch from the first laid eggs in the centre of the brood nest, and the queen returns to re-fill the cells so emptied before the brood nest is filled with comb, and when comb is built for store comb (which would be the case if the queen were not at hand to fill it with eggs), it is quite likely to be drone comb if honey is being brought in quite rapidly.

As before mentioned, this system of management does not leave the swarm in the best condition for winter. If there is a fall flow, this condition can be easily remedied, simply by adding more combs and allowing the bees to breed and store honey to their hearts content. The same result can be obtained by feeding, and in those localities where natural stores do not always prove wholesome for winter, this lack of stores is really an advantage, as there is no extracting to be done—simply the feeding of sugar. To find bees short of stores in the fall simply because the white honey had been stored in the sections, is not objectionable, as the lack of honey can be supplied with sugar syrup costing only about one-third as much as the honey will sell for. What course to pursue after the white harvest is past will depend upon circumstances, such as whether there is a fall flow, whether it is suitable for winter stores, whether an increase of colonies is desirable, etc. I favour uniting the light colonies soon after the sections are off as this gives an opportunity for discarding imperfect combs and poor queens, furnishes abundant combs and bees, and lessens the amount of feeding that must be done.

CRUMBS.

“AUSTRALIAN YANKEE”

HOW TO KEEP HONEY FROM GRANULATING.

It is a well known fact that bees do all the work in the hive, such as building comb, evaporating nectar, and sealing the honey in the cells in darkness. If we put a frame of glass in the side of their hive so as to give them a little light to work by, they at once put down the blinds, by smearing the glass over with wax and propolis. Do they do this because they are modest young ladies and do not want us “he fellows” watching them making their attire? Oh no! nature taught them that it requires darkness and warmth to keep the honey from granulating.

If we would keep our honey in a liquid state we should heat it and then seal it in air-tight tins, and do all the work in a perfectly dark

room, and store the tins in a dark warm room. We could then keep our honey in a liquid state for an indefinite period of time. What have all you sages been thinking of all these years, not to have thought of this simple method of preventing granulation. It is nature's way taught us by the bees.

CONTRACTION.

Shall we contract the brood-nest? is the general cry of the beekeeper. I consider that there is a great gain in surplus honey by contracting, but we want to watch our bees very closely to know just the time to contract, and we must not keep them "contracted" too long, or we will lose in that way. In spring we want to get the queen to fill as many combs with brood as we possibly can, and then just as the first honey flow starts restrict her to a few frames; six or eight Langstroth frames I would consider quite sufficient. As soon as the bees commence to store honey freely, remove all but five of the frames from the brood nest, leave those with the most hatching-brood in them, add from one to three frames of empty comb, according to the number of bees, and fill the rest of the hive with dummies; hang the frames that you removed from the brood chamber into the extracting super, adding enough empty combs to fill out the super. A colony so treated will seldom swarm, and if there is any honey in the fields, they are bound to put it into the super just where we want it. When the honey flow begins to slacken remove the dummies from the brood-chamber and fill out the space with worker comb. Should another good flow set in from another source, in the course of a month or so, it will pay you well to contract again, but if late in the fall leave more brood in the brood-chamber.

DRONES.

Are drones reared from a impurely mated queen, pure? No Sir, most decidedly not, at least in my 11 years close study of the honey bee leads me to believe that they are not. Some mismated queens produce drones of an almost uniform colour, in fact a novice would say that they were pure.

A queen producing such evenly marked drones usually produces workers so nearly "pure" as regards marking, that the novice would either buy or sell them for pure Italians. But the veteran will distinguish here and there a bee that has not got the three yellow bands that are characteristic of the pure Italian bee. It therefore behaves every queen breeder, to see that all his drones are reared from eggs laid by a purely mated queen, otherwise he cannot honestly sell untested queens.

ARE YOU A BEEKEEPER?

Or do the bees keep you? In other words do you make the keeping of bees a success from a £. s. d. point of view. If you dont you should

give up beekeeping at once. Any fool can keep bees, but it takes a man or woman with brains and energy to get the bees to keep them. If apiarists would content themselves with a comparatively small number of colonies, I am sure that they would make more profit out of them, as there is nothing in the whole universe that repays us better for all extra care than does the honey bee. Fifty colonies properly cared for will give us more clear profit at the end of the season than 200 colonies attended to in a shipshod fashion. Far too many new beginners in beekeeping, allow themselves to be led away by the belief that if they could only number their colonies by the hundreds they would make their fortunes. They come to this conclusion from having obtained large yields from the few colonies that they have the first year or so. The secret of their success lays in the fact of their giving those few colonies every attention thus causing each colony to do its level best. But let them have a few hundred to attend to and then see the difference in the average yield per colony. But you say, why this difference in yield? the reason is because the apiarist have not the time to devote to each individual colony, therefore some are allowed to have inferior queens. These colonies will give little or no surplus, thus bringing the average yield per colony very low. I believe the veteran G. M. Doolittle attributes his great success and large yields to the fact that he keeps only a limited number of colonies. I think this is a subject well worth considering. Let us discuss it during the winter months, whilst our little pets are taking their winter nap. I think we should study the theory of beekeeping in the winter and then put it in practice in the summer.

MOULDY COMBS.

All of us are troubled with more or less mouldy combs in spring, if our surplus combs are stored in a damp room. Well, I have just discovered a way of killing the mould-spores. I dare say you all know that mould is a form of vegetable life. My method is, to burn a large quantity of sulphur in the room. This effectually kills all the mold-spores. Brood-combs will never mould in a room so treated. By the way, if there is a room in your house that is badly infected with fleas, bed-bugs or cockroaches, they may all be killed by burning enough sulphur in the room. For a room 14x14x10 use from two to four pounds of flour sulphur, less if stick brimstone is used. Remove all clothing or articles of furniture that the fumes of the burning sulphur would be likely to damage, as if sufficient sulphur is used to enter all the crevices and kill all the insects, it will leave a yellow substance on walls and ceiling. Be sure and close all doors and windows and dont leave the baby or cat and dog in the room whilst the sulphur is burning.

STIMULATIVE FEEDING.

Feeding our bees in early spring, so as to rouse them to increased brood rearing, pays well, in fact it very often is the means of giving us a good honey crop, whereas if the bees were allowed to build up of their own accord they would not be sufficiently strong in numbers early enough to gather the early summer flow of nectar. The question then arises, what kind of feeder shall we use? The one that gives me the most satisfaction is the cheapest that can be devised—it costs absolutely nothing. It is simply an old empty tin—old jam tins will do, but they are rather small—tins which have had fresh salmon in them are just about the right size; wash them out perfectly clean, and then drive a two inch wire nail through the centre of the bottom of the can driving it through from the inside of the can. Leave the nail in the hole, and set the can on top of the brood frames of the colony to be fed. First laying a heavy enamel cloth quilt, having a hole about one and a half inches in diameter, cut in the centre, or where you want to set the can, let the nail hang down between two frames. Now set on an upper story or super. Pour what syrup you wish to give the bees into the can and close the hive. The bees moving about the nail causes the syrup to flow slowly down, and the bees will take it as fast as it drips through. The hive would be all the warmer if you put about two or three inches of chaff on top of the enamel quilt. The best time to give the bees their feed is just after sundown, as no robbers will be moving round, at that time of day. See that the cover fits well so that no bees can force their way under it, and get a scent of the syrup that may adhere to the can. From half a pint to a pint of warm syrup is sufficient to give each day.

CORRECTION.

In my last supply of crumbs an error appears under the heading of beefarming, pure and simple. Instead of 150 colonies, please read 50. I noticed the error before posting the MSS., but I evidently neglected to correct it. As these crumbs are written with the desire to benefit and help others, I gladly make the correction.

THE VICTORIAN BONUS.

H. RUSSELL.

In the May number of the A.B.B. you insert a paragraph from a N.S.W. paper re the bonus granted by the Victorian Government to the Wimmera Apiaries Co., and ask for more particulars.

The paragraph is partly right and partly wrong. The bonus is only granted on one ton of the first shipment, and is £10 only, not £20 to each supplier, as the paper says. The Company is treated just as were the individual shippers of honey in the 56lb. tins. The report is

correct in saying that the honey is done up in first-class style, in specially made 2 and 4lb. tins and has sold at satisfactory prices. I may add that a shipment of 100 cases (to order) will be in London ere this.

A BEEKEEPER'S WEDDING.

On Tuesday afternoon, June 30, a very interesting ceremony was performed in the presence of a large circle of friends at Chalmer's Church, Castlereigh-street, Sydney, by the Rev. Mr. Ayling, of Pitt Town, the occasion being the marriage of Mr. George Packham, the well-known beekeeper, and Mayor of Molong, to Mrs. Elizabeth Saunders, widow of the late John Saunders, of Smithfield. The bride, who was given away by her brother, Mr. W. Anderson, of the Moore Park Grammar School, was attired in grey crepon, white silk vest, and bead trimming; Miss Fanny Soden, dressed in pale green cloth, was in attendance as bridesmaid, and Mr. Tipper, editor of this journal, acted as best man. After the ceremony the wedding party and guests returned to the bride's brother's residence, where light refreshments were served, and music and dancing were indulged in till a late hour. The health of the bride and bridegroom was proposed by the Rev. Mr. Ayling and drunk with great enthusiasm. At 5 p.m. the bride and bridegroom left on their honeymoon tour, amid a plentiful shower of roses, rice, and we hope, lucky shoes. Among the guests were: Mrs. W. Anderson, the bride's sister-in-law, in black silk crepon, trimmed with black satin and jet; Mrs. Downs, of Carlingford, sister of the bridegroom, in a handsome gown of black satin, elegantly trimmed with passementerie; Mr. and Mrs. James Anderson of Smithfield; Mr., Mrs., and two Miss Carpenters of Parramatta; Mr., Mrs., and Miss Cochrane, and Mr. and Mrs. Dolphin of Balmain; Mrs. Smith, Misses Kenyon, Critchley (two), Ash, Anderson, and a host of others. The bride was the recipient of numerous handsome presents.

RULES OF THE N. B. K. A.

[Adopted at the Goulburn Conference.]

1. This organisation of beekeepers is named, The National Beekeepers' Association of New South Wales.

2. Its objects are the encouragement and advancement of bee-culture, the regulation of the price of honey and the disposal of same on co-operative principles, the holding of Conventions and exhibitions, the obtaining of legislative remedial enactments respecting bee diseases, the prevention of the importation, manufacture and sale of adulterated honey, the preservation of our natural forests, and to guard and secure the best interests in all apicultural matters.

3. The Association shall consist of a president, vice-president, secretary, treasurer and committee, ordinary associate and honorary members.

4. Honorary membership shall be conferred only upon such persons as in the opinion of the council have rendered special service to the Association.

5. Ordinary members are those who have paid their annual subscription.

6. Associate members must be members of affiliated associations.

7. This Association shall be managed by a council consisting of a president, vice-presidents secretary, treasurer, and a committee of twelve, to be elected by ballot or otherwise annually.

8. At any council meeting five shall form a quorum. The chairman shall have a casting vote in addition to his own vote.

9. The council undertakes to carry into effect the objects as per rule 2, and it shall fix the dates for all meetings.

10. The council may make and alter by-laws for the guidance of their proceedings, provided that such shall not contravene any rule made by the Association.

11. At the annual meeting the business shall be as follows: (a.) The presentation and consideration of the report for the previous year and financial statement certified by two auditors. (b.) The alteration of rules, of which alteration notice shall be given to the council. (c.) The election of officers as per rule 3 & 7. (d.) Such other matter or business as may be brought forward.

12. Any vacancy in the council may be filled at the next council meeting by the appointment of any member, who shall continue to act subject to these rules.

13. It shall be the duty of the secretary to promptly attend to all correspondence and other matters of the association, to receive subscriptions and acknowledge same, and to keep a list of members of the association.

14. The treasurer shall submit all accounts to the council for approval before payment, to initial the butts in the secretaries receipt book

and to submit a statement of accounts when requested.

15. Any person may become a member with the consent of the committee upon the payment of 5/- annual subscription to the secretary. Membership dates from the date of payment of subscription to the end of the financial year.

16. The financial year of the association commences from the 1st of January in each year.

17. All business at any meetings shall be disposed of by a show of hands, but a ballot of the members present may be demanded by any three members present.

18. Votes may be given personally or by proxy, but the holder of a proxy must be a member or delegate.

19. These rules shall not be altered except at an annual or special general meeting.

The Affiliation Rules, which follow these, were published in our March issue.

Hunter River Beekeepers' Association.

A MEETING of the above will be held at Science Class Room, Technological Museum, West Maitland, on Saturday Evening, July 25th, 1896, at 7.30 o'clock.

Business—Consideration of motion to amend Rule No. 5—(first sentence) so that in future it may read—"Members shall pay an annual fee of 2/6." Discussion on proposed Food Adulteration Bill. Hums from the hives.

MICH. SCOBIE,
Hon. Sec.

BEE FARM FOR SALE.

THE well-known FERNDALDE APIARY, situated at Ashgrove, six miles from Brisbane. Over 100 hives of Pure Italian Bees, very strong and in first-class order; a large Honey Store; and every appliance required to efficiently manage an apiary. The Apiary is in good locality, with regular honey flow. Several acres of land planted with choice fruit trees and other improvements.

This property is bringing in a good income, and will be sold VERY CHEAP, on account of owner leaving colony.

For full particulars, apply to

E. C. CUSACK,
Ashgrove, Queensland.

THE NATIONAL BEEKEEPERS' ASSOCIATION.

To the Editor Australian Bee Bulletin.

(This letter came to late to appear in our last issue.)

Sir,—In your last (May) issue of the *Bulletin* appear two or three caustic editorial remarks upon the indifference of beekeepers to their own interests in not joining the National Beekeepers' Association and supporting its committee, and Mr. Bloxham also, in a letter to yourself, published in same issue, intimates that he does not intend to seek for re-election as a member of the committee of the N. B. K. A., alleging as his reason that the beekeepers think everything is being run by a coterie of Sydney men who mainly compose said committee. I would ask you, Sir, does not this constitute the real grounds for the mass of country beekeepers holding aloof from the Association. Let us glance at the facts of the cases.

1. The *soi disant* National Association of beekeepers, from its badly framed constitution, seems to be in a fair way to become defunct from non-support.

2. It is evidently named "National" on the *lucus a non lucendo* principle, as its members, so far as I am aware, consist mainly of Sydney honey merchants and a few beekeepers around Bathurst and Maitland, the bulk of the Colony's beekeepers being unrepresented.

3. The majority of its members are Sydney men. Possibly this could hardly be helped, and would not matter much, but that

4. All power of action seems to be vested in the committee, they being the executive and legislative body in one, and the members of the Association are simply lay figures, powerless to do anything, except, of course, to pay in their subscription monies.

5. If we scrutinize the work done, we see that while beekeepers have very much to be grateful for to the committee of the National Beekeepers' Association, and especially to its indefatigable secretary, Mr. H. R. Whittell (as instanced by their successful agitation for reduced railway freight charges on honey—due allowance being made for the fact that in this they were greatly assisted by private beekeepers their efforts to gain the English market for honey and wax—though in this they have so far utterly failed, &c.,) still there are matters (as could only be expected under the circumstances) in which they have deliberately run counter to the wishes of the beekeepers of N. S. W. I need only cite two instances.

1st.—*The Foul Brood Bill*.—Despite the fact of a host of letters on the above subject in the A. B. B., 9-10ths of which, perhaps, expressed strong disapproval of the proposed measure, the committee of the National Beekeepers' Association persist in its efforts to get this Bill

through Parliament, mainly, it would seem, to gratify a few beekeepers around Sydney, and procure two or three governmental situations (as Foul Brood Inspectors), for — who can tell? The beekeepers in districts where Foul Brood is never heard of would very possibly if not probably, be forced to contribute to the payment of such officials, the Bill passively allowing of the taxation of beekeepers. But should they escape would it not be equally unjust as absurd, that the country so overburdened as it is, should be obliged to defray the annual cost of the carrying out of an Act which the class legislated for absolutely reject, and which the committee that is trying to force it through Parliament only succeed in having made law by masquerading as the representative body elect of the beekeepers of the colony—an assumption about equal to that of the historical three tailors of Tooley Street, who once issued a manifesto in the name of the people of England to the Emperors, Monarchs, and Potentates of Europe.

The latest instance of the autocratic bearing of the N. B. K. A. Committee may be seen in their choosing Goulburn as the *rendezvous* for this year's Convention, as in this they must be aware that they are diametrically opposed to the wishes of most beekeepers. This consideration, however, does not seem to have affected the committee in the slightest degree. Their *fiat* has been uttered, and their dignity would be compromised if that *pronouncement* were modified to please some grumbling beekeepers.

I would ask Mr. Bloxham, as well as his fellow committee members, to kindly and fairly consider above statements, and then ask themselves whether beekeepers have not some very valid and sufficient excuses for not supporting an association, the acts of which—no matter how disapproved by or obnoxious to its members—they would be utterly powerless to control or modify, everything depending on the will of an autocratic Committee?

The remedy to apply in order to resuscitate and vivify the N.B.A. to me seems very plain. It would consist simply in amending its constitution, so as to oblige the Central Executive Committee to refer all matters of importance either to members of the Association, or, they having affiliated with the N.B.A., to the different district associations of beekeepers, and then carry out the wishes of the majority on the subject in question.

A change on such lines as I have above somewhat crudely indicated, appears to me to be the only plan of making the Beekeepers' Association what its name implies, i.e., a consolidated and vigorous union of the beekeepers of New South Wales.

Trusting that the beekeepers of the colony will see to this—to them—vitally important subject at the approaching Convention.

Yours, &c.,

J. R. H. GAGGIN.

Lismore Apiary,
June 12, 1896.

[Mr. Gaggin does not evidently recognise the great difficulty beekeepers labour under in being so isolated from each other; the difficulty and expense of committee men from a distance attending committee meetings, and the consequent throwing of the work of the Association on those few who can and do attend. Neither does he help the matter as he is not a member of the Association. We trust the rules adopted by the Conference will overcome many of the difficulties.]

VICTORIAN OPINIONS.

W. D. RUSSELL.

Dear Sir,—I was very pleased to see in my last *Bulletin* the letter from Mr. Buehne. I had intended to have written on the subject myself and I trust its the first shot to open the way to something better. To say that the committee is a sham is only drawing it mildly, and I will add, that so far the whole Convention is a sham. More than one who went to it last year stated to me that they would never attend again. The sarcasm Mr. Buehne indulges in is the more amusing for its very truth: "Left in the hands of the Secretary." That's just it. I never conceived so many men could meet together and be so devoid of ideas. Its more like a meeting of children. I remember a story of a gentleman, who having a number of other gentlemen to dinner, handed round a sample of wine for their opinions. All expressed themselves well pleased with it. Then another kind was sent round, and a like expression of approval. Then several more different kinds—each one excellent. Then lastly a sample which all declared was anything but nice. "Ah, gentlemen," said the host, "those wines are like yourselves. The first six were separate kinds; the last was the former six mixed. Individually you are very good fellows but collectively you are a set of fools." I don't say beemen are that, but what do you think yourself Mr. Editor. You need not put your opinion into print you know. Of course I know what you think.

Imperial Garden Apiary,
Deep Lead, Vic.

MOLONG B. K. A.

The first general meeting of members of the above Association since its inception was held at the School of Arts on Friday night, 26th June. The following were present—Rev. W. C. Hughes, G. Packham, Jas. Packham, W. Charters, R. K. Hall, H. J. Bennett, H. W. Bennett, H. A. Bennett, and the secretary (Mr. G. H. Davis). The president (Mr. G. Packham), presided.

A letter was read from Mr. Thomas Rhodes, Sydney, offering his services to the Association as agent for the disposal of honey, and also stating that he had empty kerosene tins in cases and other requisites for sale.

On the motion of the Rev. Mr. Hughes, seconded by Mr. J. Packham, the secretary was instructed to acknowledge the receipt of the letter, and to ascertain Mr. Rhodes' commission for the sale of honey and also his price for empty kerosene tins in cases.

The Chairman here, as an old beekeeper, urged the members of the Association to subscribe to the AUSTRALIAN BEE BULLETIN, a journal which was published solely in the interests of apiarists. It advocated their interests and dealt with the various diseases that effected bees, and in fact, all the troubles a beekeeper was likely to experience in his apiary. He pointed out how impossible it was for any man to advance in beekeeping unless he kept himself well posted up on all matters connected with his industry, and the journal referred to was a splendid source from which to obtain enlightenment. He also pointed out the necessity for all beekeepers to become members of the National Beekeepers' Association, which was started about two years ago. The extreme head of this Association was located in Sydney. It formed the medium through which grievances of beekeepers were brought before the Government, and its existence was absolutely necessary. But, unfortunately, it was hampered in its good work on account of small funds. Any beekeeper could join the N.B.K.A. by paying 5/- per year, and as it had done, and was doing, good work for apiarists he appealed to the Molong beekeepers to encourage it by enrolling as members. He was not an agent for either the BEE BULLETIN or the National Beekeepers' Association. He simply spoke because he felt that if beekeepers acted on what he had just said it would be to their advantage.

In reply to Mr. Davis, the chairman said a society such as the Molong Bee-keepers' Association could not affiliate with the National Bee-keepers' Association, which was not composed of delegates from different bodies, but maintained simply by bee-keepers in any part joining it.

Mr. DAVIS thought it would be a good thing

an amalgamation of all bee-keepers Associations could be effected, and the constitution of the National Bee-keepers Association so altered as to make it a body really representative of the various associations throughout the colony, who should support it.

The Rev. Mr. HUGHES believed the National Bee-keepers' Association had done some good, and considered its action in bringing the question of ringbarking before the Minister most commendable. He moved,—"That the Secretary be instructed to write to the National Bee-keepers' Association conveying the thanks of the Association for its (the N.B.K.A.) action in bringing before the Government the serious injury that was likely to accrue to the bee-keeping industry through indiscriminate ringbarking."

The motion was seconded by Mr. H. A. BENNETT and carried unanimously.

The CHAIRMAN said one benefit which their association would eventually enjoy by having members in different parts of the district would be that those living in any part of the district where there was a good flow of honey could communicate with the Secretary, and inform him of such, thus enabling those bee-keepers in other centres of the district where there was very little or no honey to shift their colonies to the honey producing centre, being careful of course, not to injure the bee-keepers already there. By this means they would be able to materially help one another.

Several other matters, among which was the question of holding meetings in different parts of the district, were then discussed.

On the motion of the Rev. Mr. HUGHES, seconded by Mr. JAS. PACKAM, it was agreed to hold a meeting at Cummoock in connection with the Association on Saturday afternoon, 18th July.

The Secretary reported several new members had been enrolled since the previous meeting.

An account for 12s subscriptions to bee journals, was passed for payment, and the meeting terminated.—*Molong Express*.

PLANTING FOR HONEY.

J. KERR.

Allow me to compliment you on the very much improved appearance of the AUSTRALIAN BEE BULLETIN. The change of paper must be appreciated by all its readers, for the print or type is almost readable in the dark. The foregoing could not be written concerning the wrapper just cast off. You will please accept my thanks.

Should any of your subscribers be desirous of increasing the bee forage in their locality, I would strongly recommend the following, as a few of the very best grown, and would pay well as a crop in suitable districts. White clover is

well entitled to first place on the list. It would pay the farmer to introduce it on his pastures. It would pay beekeepers to induce the farmers to sow the seeds by subscribing, say a half of the sum required to purchase them. It only requires to be sown once, for if let alone it will take care of itself to the end of time. Its white flowers are really beautiful. The next is noted for the beekeeper who may desire to increase the number of honey-bearing shrubs or trees in his district. The one I am going to name is tree lucerne (*Trifolium*). It will come in handy for the man who cannot afford to wait ten years for the blooms of yellow box, and besides it is a very ornamental tree of quick growth. It will grow to a height of twelve or fifteen feet in from three to four years from the seed. It will also be covered with handsome white flowers by that time. Its flowers resemble those of the white sweet pea, but are a little smaller. They do not grow singly on the branches, but hang down in long clusters. The tree blooms for months, and yields lots of honey. It is also a very valuable fodder shrub, as its branches are very fine and twiggy. It is of a semi-weeping habit of growth, and is very desirable as a shelter belt, and very handsome if grown singly on a lawn. Eighteen or twenty feet would be about the limit of its height, and it is thickly covered with fine foliage. Seeds are now procurable from the seedsmen. They should be sown thinly, and transplanted when about one foot in height, taking care to have a ball of earth attached to the roots of each plant. A wet situation is fatal to the young tree. They are first-class drought-resisters, and beekeepers should induce their friends to plant the tree lucerne around their gardens. The former should raise the trees, and then present them to their friends, who would be delighted by the handsome shrubs—so would the bees. The next has two names or more, and is well known by some as sweet clover or bokara. It grows from two feet to six feet in height. It can be sown in drills or broadcast thinly. It is a first-class plant for waste places, and grows quickly. It will take a shrubby form if grown in a single plant. It blooms, I might write, for the entire year. Bees are very fond of it, and it yields honey throughout the day. The flowers emit a most agreeable perfume; so do the seeds. The foliage much resembles that of common lucerne. Its flowers are white in colour, like miniature sweet peas grown on a rocket or stem about a finger in length. The following is a plant of the greatest utility to the farmer, for it is a very valuable crop when grown for cattle as a spring food. It is rape, which should be sown in the autumn, on ground in good condition, say after potatoes or on ploughed stubble land. It is generally grown for house fed cattle and is mown as soon as the plant begins to bloom. It will grow to the height of about six feet in strong ground.

It is a beautiful sight to see acres of it in full bloom. It is simply a mass or sea of lovely yellow blossoms and affords a perfect paradise for bees. What an amount of hums, pollen and honey, enough to make even the most exacting bee-man feel satisfied. The next is the horse bean. It is called tick or heligoland bean. Should be grown in strong ground of a heavy nature; a sandy soil would not suit. It is sown in drills and often broadcast or in ridges. It grows from four to six feet in height and the flowers grow in clusters at regular intervals along the stalk. The sight of a field of beans in full bloom is most beautiful and the perfume is superb. It is delightful to see the bees working on it, and the honey is of the highest quality. I mentioned the foregoing because they will all pay well if grown simply as crops. Bean meal is most excellent as feed for horses and cattle and first class for pig-feeding when mixed with other foods. Then all the foregoing yield honey largely and of excellent quality. It is exceedingly foolish for any person to recommend chrysanthemums as bee plants, they are entirely worthless. Mignonette is excellent as a honey plant for the garden, but it would not pay to sow acres of it. The seed is expensive and it has the disadvantage of being an annual requiring to be sown again each year. Heliotrope is also first rate for the garden. It blooms throughout the summer and spring and in warm localities through the winter also. It lasts for years where the winters are mild and bees visit it all day long. It is difficult at times to raise from cuttings, but it is very easily raised from layers. Wallflowers (single) are excellent for gardens and bees. Double flowers are useless as honey plants. Dahlias must be single to be of any use to beekeepers. Osiers and willows are very good as early spring shrubs, as they afford lots of pollen for early breeding. Osiers pay well when grown in swamp or wet places for basket making and a plantation lasts for very many years. Rasp-bushes are very good, so is the Blackberry or Bramble. Geraniums of all kinds are useless to the bees, as they afford neither pollen nor honey. Currants and Gooseberry bushes in cold districts are excellent for the bees in early spring. Fruit trees generally speaking are of great service. White thorn hedges in cold districts are excellent. Borage is a good plant to scatter about, it will seed or continue itself after being once sown, bees seem very fond of it. The European Dandelion is a good honey plant to introduce, and far superior to the plant termed Dandelion which is a native of Australia. The latter seems to be a very bad weed and of little use to the bees. The former is good in pastures and is the true medicinal herb so often used and recommended by the doctors. It is a good plant to introduce along roadsides and ditch banks as it never becomes unsightly and as fine large blooms. It is sometimes grown in vegetable gardens and is blanched or treated

like celery. It is also pretty when grown as a flower. Its seeds when ripe will be blown about and carried for miles by the winds, as it is not a noxious plant and its self-seeding or sowing qualities with the assistance of the wind makes it a good plant for the beekeeper.

I could name many other bee plants and trees but 'tis not necessary to add to those whose names and qualities I have described. Such will pay as crops alone, and the pollen and honey are thrown in free, which adds great to their value. Honey flowers should certainly have preference in all gardens, Thyme, Mint, Rosemary, Mignonette, Heliotrope, Canterbury Bells, Sweet Peas, Snapdragon, &c., &c. A number of gardens containing flowers as above mentioned would certainly be of great use to bees. Then there are a great number of ornamental shrubs which bear handsome flowers, yielding large quantities of honey and pollen. Such should be selected for lawn planting or for home improvement. I think some of the readers of the *A. B. Bulletin* should furnish the names of any handsome bush plants in their locality that yield honey and furnish seeds. The latter should be collected and sold to those who might desire to grow them.

QUEENS DIRECT FROM AMERICA.

Carniola same price.

FINE BREEDERS, either race, \$6 each.

Tested Queens, \$1.50 each. Express prepaid on each queen \$1.50, and safe arrival guaranteed. I have made arrangements so that I can send queens by express to Australia for \$1.50 each extra. By mail same price, with no guarantee of safe arrival. I am preparing to have a fine lot ready to go in September, October and November. If you want a fine queen give me your order. My Money Order Office is Victoria, Texas, U.S.A.

I can now prepay queens by Express to Australia for \$2.50 each (exchanges) or when 6 are ordered at one time, I can prepay at \$1.50 each.

Mrs. Jennie Atchley,
BEEVILLE, BEE Co., TEXAS, U.S.A.

QUEENS. NEW BLOOD.

To arrive from Italy, Ligurians; America, 5-Banded Carniolans and Cyprians.

I will be breeding from the above, and will have young queens ready in September. I am taking orders, and will execute as received. The five-banded are bred in the home yard. The young Carniolan and Cyprian queens are mated to Ligurian drones in the out-apiary, which consists of 160 colonies of the finest Ligurian Bees in the colonies. Make no mistake! This being a cold district my Queens are hardy, and take a rest during winter; are full of vigour in spring, and far better than Queens that breed all the year round.

Price, 4s. each; six for £1. Special rates for quantities.

R. H. JERVIS,

WREKIN APIARY, MOSS VALE.

I have been very fortunate in securing the services of that good and well-known beekeeper, Mr B. Naveau, to look after the out-apiary, which is a guarantee of good management, so look out for extra good queens.

This Way, Please, This Way.

I allude to those who are anxious to obtain TIP TOP EARLY QUEENS, either Golden American or Leather-Coloured (Ligurian.) My Imported Queens from both America and Italy I expect to arrive about the end of August, and in a few weeks from then can supply Queens bred direct from them, and mated to select drones from last years' importations. I do not in-breed, or raise my queens in the haphazard fashion some do, by merely withdrawing the Queen from a colony and letting the bees raise what they like. I breed scientifically, and can warrant my Queens free from disease. I can guarantee 80 per cent. of my untested Queens to prove purely mated, and why? Because I do not live in a town surrounded by black bees on every side, where pure mating is almost impossible. I have almost sole control of my locality, and use every endeavour to let no drones but Italians fly, therefore my charces of pure mating are second to none in the colonies. To prove this, give me a trial, and I can please you. First come, first served. My prices are—

			1		3		5
Untested	..	..	5/-	..	13/-	..	20/-
Tested	..	..	8/-	..	22/6	..	35/-

SEE WHAT LAST SEASON'S CUSTOMERS SAY—

Mr. F. B., Parkes, writes—After carefully testing the Brood Queen you sent me, I find she is a very valuable one. I would not take 30/- for her now, and feel sure anyone dealing with you will get fair play, and good value for their money.

Mr. J. P., Inverell, writes—The Golden Tested Queen I got from you is a beauty, and her daughters are equally as yellow, and perfect beauties. She arrived just too late, or I am certain I could have won at our Show with her. Book me two more for next season.

Mr. J. W. Walcha, writes—The seven Untested Queens you sent have turned out excellently. Book me 10 more for next spring.

A. J. BROWN,
LEAFORD APIARY, PARKVILLE.

Wanted Known

That I am now booking orders for Queens for early delivery in spring. Let me book your orders, and you can send cash on receipt of queen. I have large consignments of queens to arrive from Italy and America, and you can have the choice of this new blood, both Golden and Leather (Ligurian.)

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

Honey or Beeswax will be taken in payment for Queens, if preferred, for all orders of 10/- and upwards. Write for circular giving full particulars. Safe arrival guaranteed to any post office in Australia, Tasmania and New Zealand.

G.B., New Zealand, writes—I received the two (2) queens in good order; only two (2) dead bees. They arrived here in nine (9) days after leaving you. They both turned out purely mated, all the bees showing three bands, and quite a number showing four bands. I have raised several queens from one of them, and they are all as yellow as their mother.

A. A. ROBERTS,

Rosebud Apiary, MUSWELLBROOK, N.S.W.

The New Zealand Farmer.

READ THIS POPULAR AGRICULTURAL JOURNAL.

It is practically the hand book of the New Zealand Agriculturist.

It keeps abreast of every enterprising farmer's daily requirements, enabling him to utilise all modern advantages within his reach.

The subjects dealt with cover the whole field of Agricultural, Pastoral, and Horticultural pursuits, and the legislation affecting these several industries. Its columns contain thoroughly practical as well as scientific information upon all branches of Farm Practice, Tillage, and the Cultivation of Crops, Stock Breeding, and Management of Cattle, Horses, Sheep and Pigs, in health and disease; Dairy Methods upon improved modern lines; Fruit Growing, including the Suppression of Orchard Pests; Poultry Rearing, Special Industries, etc., etc., besides critical Reports of Shows and Market Quotations from every farming centre in the colony.

The "New Zealand Farmer" is the only paper in the colony wholly devoted to the interests of Farmers, Wool Growers, and Orchardists.

Subscription: Per annum, 12s 6d, posted in advance, 10s.

Send your Subscription through any Stationer or direct to the PUBLISHING OFFICE, FORT-ST., AUCKLAND.

First Prize COMB FOUNDATION.

SIXPENCE PER POUND.

Beekeepers may get their Foundation as above on sending their Wax to us direct, carriage paid. We will make it up for them at the price stated, and take either Cash or Wax, at market price, in payment. We have never advertised this line of our business before, because we have previously supplied the leading distributing houses in the colony. We are the original Comb Foundation Makers in the colony, and our trade was learnt with leading makers in England. We manufactured over three tons of Foundation last season. Our system is the same as followed out in England, and our Foundation requires less wiring than others.

W. T. SEABROOK & CO.

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

JULY 20, 1896

The Australian Bee Bulletin

THE AUSTRALIAN
FANCIERS' CHRONICLE,
DEVOTED TO
**Poultry, Pigeons, Canaries, and
Dogs.**

PUBLISHED FORTNIGHTLY.
ILLUSTRATED MONTHLY.
FOUR-PENCE PER COPY, AT ALL
NEWS AGENTS.
Post Free in N.S.W. 4s 6d half-yearly, 8s 6d.
yearly.
E. LEE & CO., 53 MARKET ST., SYDNEY
Printers and Proprietors.

The Industrial Journal

Is a Monthly Magazine devoted to Manufactures,
Mining, Agriculture and Trade.

**A Medium for the Sale and Purchase of
all kinds of Machinery.**

Largest circulation of any journal of its kind in
the Colonies. A leading feature is the free
advertising of any machinery, mining plant, &c.
for sale in any part of the colony.

Subscriptions 2s 6d per annum. Specimen copy
free on receipt of name and address.

Publishing Office: 298 George-st., Sydney

The Farmer & Grazier,

**The Best Illustrated
Farmers' Journal in Australia.**
7s 6d PER ANNUM.

J. TWOMEY & CO.,
52 Market Street,
Melbourne.

THE AUSTRALIAN AGRICULTURIST

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.

Subscription—Half-a-Crown a year in N.S.W.
Three Shillings in Vic., S.A., Tas., N. Zealand,
or W. Australia.

PUBLISHING OFFICES:
SYDNEY, 298 George Street

"WHILE I LIVE I'LL GROW."



Fashion !

Comfort !

Economy !

Deliciously . .

Blended . .

and

Delightfully .

Administered

EVERYTHING YOU WANT

AT

BOTTOM PRICES.

. . POST YOUR ORDER TO . .

**ANTHONY
HORDERN'S,**

**Universal Providers,
HAYMARKET ONLY, SYDNEY.**

ANTS IN THE HONEY HOUSE

Are an abomination in the sight of a Beekeeper.

I Have Devised a way of Building Houses to Keep them out.

No need of Ditches, Moats, &c., around the building. It is simple and cheap, and never fails. It can be adapted to any kind of building—weatherboards, slabs, "wattle and dab," in fact any kind of wall you wish to build. It can be applied to an apiary as well as a house. Just fancy how nice not to have an ant in your apiary. No danger of them killing your clipped queens when they come out with a swarm, and hop away from the hive. When a house is built in this way no mice or rats can ever get into it, therefore saving the expense of traps or poison. The above may sound like an advertising "puff," but I guarantee it to be all true.

Send cheque or postal note for £1, and I will send you a pamphlet telling you how to use this wonderful invention. You can do all the work yourself. The extra expense of applying this method is a mere trifle. You can get all the material in your nearest town.

ADDRESS—

GEO. COLBOURNE, JUNR.,
CAVE CREEK, VIA ORANGE, N.S.W.

P.S.—My Money Order Office is Orange.

BEESWAX WANTED.

The undersigned are open to buy either large or small lots; or to enter into contract for regular delivery.

SAMPLES, WITH PRICES
AND QUANTITY
attached, may be sent by post, or delivered at our sample room.

Anthony Hordern & Sons,
UNIVERSAL PROVIDERS,
HAYMARKET (ONLY),
SYDNEY.

THINK OVER THIS! If you would dispense with brushing your combs singly, and have the pleasure and profit of "handling cases" successfully, with bees that *will* "shake out," if you would enjoy the *full* advantage of divisible brood-chamber hives and shallow frames, inversion and swarming controlled to fixed intervals, then you need a strain of bees different to pure Italians. Cypro-Italians give you the above points, in addition to beauty, vigour and prolificness, and ability to resist foul brood that cannot be surpassed, if equalled by any race.

Queens of this strain during fall of year 4/- untested; 7/- tested. Five for 18/- and 33/- respectively. Safe arrival guaranteed. Please mention this journal.

T. BOLTON,
Grampian Apiaries, Dunkeld, Vic.

The Australian Pastoralist
AND BREEDERS' GAZETTE.
PUBLISHED MONTHLY.

Price, 3s Per Annum.

Contains all the leading Pastoral Intelligence.
Address Orders—

P.O., Woolloongabba,
BRISBANE, QUEENSLAND.

REDUCED!

READ. READ. READ.

And Learn during the long Winter evenings.

A.B.C. of Bee Culture (<i>Roots</i>)	4/- and 5/- each (posted)
Langstroth on the Honey Bee	6/-
Manual of the Apiary (<i>Cook</i>)	4/6
A Year Among the Bees (<i>Miller</i>)	2/3
Bees and Honey (<i>Newman</i>)	3/6
Queen Rearing (<i>Doolittle</i>)	4/6
The Honey Bee (<i>Cowan</i>)	3/6
Thirty Years among the Bees	2/3
Australian Bee Manual (<i>Hopkins</i>)	4/6
Beekeeping as a Business in Australia	1/9
Success in Beekeeping (<i>Heddon</i>)	2/3
New Beekeeping (<i>Quinby</i>)	6/-
Foul Brood (<i>Howard</i>)	1/3
Advanced Bee Culture (<i>Hutchinson</i>)	2/6
Amateur Beekeeper	1/3

JOURNALS.

Gleanings in Bee Culture (<i>A. I. Root</i>), (published fortnightly)	6/- per year
American Bee Journal (weekly)	7/- ..
Beekeepers' Review (monthly)	6/- ..

BACK NUMBERS

Gleanings (1895 complete)	4/6	A. Bee Journal (1895 complete)	5/-
" (1894 Jan. to June)	2/-	" (1894 July to Dec.)	2/-
" (1893 July to Dec.)	1/9	" (1893 complete)	3/6
" (1892 complete)	3/-	" (1893 Jan. to June)	2/-
Beekeepers' Review (1895 complete)	4/6	American Beekeeper (1893 complete)	2/6
" " (1894)	4/-		

HEBBLEWHITE & Co.

Opposite Sydney Arcade and Strand (Between King and Market Streets),

377 GEORGE STREET, SYDNEY.

Printed by E. Tipper, proprietor, High Street, West Maitland, New South Wales.