



LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

The Australian bee bulletin. Vol. 5, no. 11 February 28, 1897

West Maitland, N.S.W.: E. Tipper, February 28, 1897

<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.

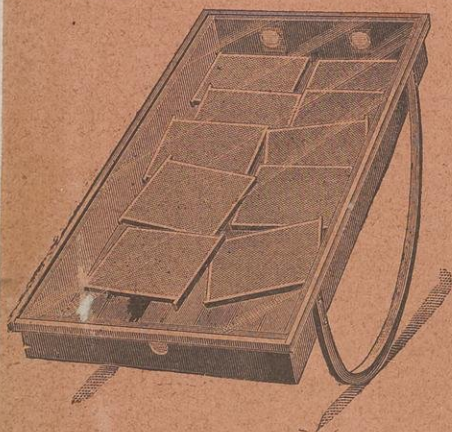
A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

Vol. 5. No 11.

FEBRUARY 28, 1897.

PER COPY, 6d.

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



Solar Wax Extractor.

Plenty of waste combs will probably be laying about your apiary, and the question is how to convert it into marketable blocks of wax with the least trouble and the best results. This, we believe, will be done by BOARDMAN'S SOLAR WAX EXTRACTOR. We have been using the above for melting our waste wax from the foundation room and find it does the work better than we expected. It is made similar to illustration, the glass sashes being 60x30 inches.

PRICE: Without glass, 20/-; with glass, 30/-

PENDER BROS.,

Manufacturers of Beekeepers' Supplies,
WEST MAITLAND.

Can you buy the Timber as Cheap?

- 8-FRAME HIVES**, white pine, rabbetted sides, same pattern and interchangeable with American Dove-tailed Hives in lots of 10.
1-story, consisting of 1 body, 1 floor board, 1 flat roof and 8 Langstroth frames. 3/- each.
1½-story, consisting of 1 body, 1 half-body, 8 Langstroth frames, 8 shallow extracting frames, floor board and flat roof. 4/3 each.
2-story, consisting of 2 bodies 16 Langstroth frames, floor board and flat roof 4/9. ea.

10-FRAME HIVES, one-sixth advance on above prices.

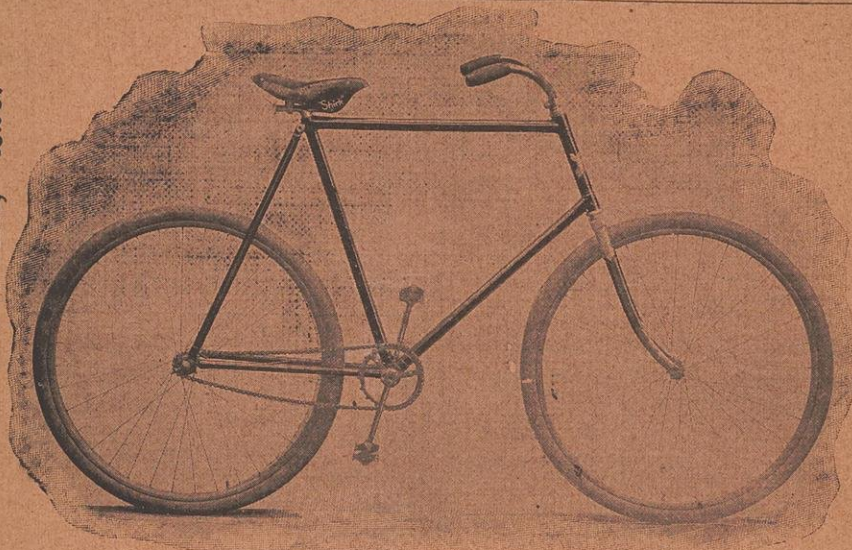
Hoffmann Frames, if desired, can be supplied instead of Langstroth at an advance of one half-penny per frame.

R. K. ALLPORT,
CHURCH STREET NORTH SHORE.

FEBRUARY 28, 1897

The Australian Bee Bulletin.

Ride a "Union," £20.



Ride a "Shirk," £18

Or "TINKHAM" BICYCLE, £12 10s. guaranteed for 12 months; weight 25lbs.
BETTER THAN ANY BICYCLE SOLD AT £16.

HEBBLEWHITE & Co.

377 GEORGE STREET,

Opposite Sydney Arcade and Strand, SYDNEY.

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 apian 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.

ALLAN & Co., COMMISSION AGENTS 118 & 120 SUSSEX ST., SYDNEY.

Special Attention Given to Consignments of Honey.

HONEY TINS OF ALL DESCRIPTIONS SUPPLIED.



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.

OH, I SAY! LOOK HERE.
CHAS. U. T. BURKE.

OF
LOYALSTONE, LYNDHURST, Western Line.
Has Started Breeding Queens,

AND DON'T YOU FORGET IT.

I HAVE spared no expense in getting a good strain of honey gathering Italians, second to none, and have nothing but pure Italians in my home apiary from the best of which I am breeding some fine queens and mating same to select drones. I guarantee to give satisfaction. I am now booking orders to be ready by 1st. October, 1896. Terms cash with order. If queens not satisfactory money returned.

	One	Three	Five.
Untested Queens	5/-	13/-	20/-
Tested "	8/-	22/6	35/-
Choice "	15/-	42/-	65/-

Do you want an Uncapping Knife? Then try the best in the market made by the celebrated Australian cutler, Jno. W. Baker, viz., The Bakers' Loyalstone Uncapping Knife, the steel of which is superior to any other make, and one that will keep its edge, which is more than all other makes will. Price, 7/6 each, post free.

Pamphlet on how to refine your wax and get top market price. Price, 5/-, post free.

NOTE THE ADDRESS AS ABOVE.

Did you Read

That Mrs. Jennie Atchley is one of the largest queen breeders in America. She will send you queens to Australia, or other foreign countries at the following prices:—Untested queens, 4/- each; tested, 8/-; and fine breeding queens of either race she breeds, \$1 each. By mail, post paid at above prices; no guarantee of safe arrival. Queens sent by Express, safe arrival guaranteed, for 10/- each extra for the purpose of prepaying Express charges. I breed the Italians, Cyrians, and Holylands, in their purity, also the Five Band Italians. Each race of bees are bred in separate yards not less than seven miles apart. My long experience in sending queens to foreign countries has enabled me to successfully land them safely, with but few losses of late. My International Money Office is Victoria Texas, USA. Address your orders,

MRS. JENNIE ATCHLEY

BEEVILLE, BEE Co., TEXAS, U.S.A.

P.S.—I will give free with each order amounting to \$1, one year's subscription to our bee-paper, *The Southland Queen*.

"The queens that we have received from Mrs. Atchley are doing well and I am well pleased with them.—H. TIPPER.

Sixth * Annual * Conference

OF THE NEW SOUTH WALES BEEKEEPERS
WILL BE HELD IN

SYDNEY,

ON THE

20TH & 21ST APRIL, 1897.

At which all Beekeepers are invited to be present.

The Secretary requests all persons desirous of reading papers to inform him of the title and subject of same at earliest possible date. On account of the very cheap rates ruling during Easter week the committee hope the Conference will be a large and representative one.

H. RAWES WHITTELL, Sec.,
70 Hunter-street, Sydney.

ROYAL EXHIBITION.

GRAND EASTER CARNIVAL

MOORE PARK, SYDNEY,

14TH TO 20TH APRIL, 1897.

Prize Schedules and Forms of Entry may be obtained on application.

The following is the Honey Section :—

FIRST PRIZE, £1; SECOND PRIZE, 10s.

526 For the best twelve 1lb. sections.

527 For the best six 1 lb. sections

528 For the best large frame of Honey

529 For the best small frame of Honey

530 For the best small frame of Honey (sections excluded)

531 For the best samples of Extracted Honey, in twelve 1 lb. jars or bottles.

Champion Prize—Trophy, or £3, presented by Messrs. J. McEwan & Co., Ltd., Hay Street, Sydney, for the best collection of the Products of an Apiary.

Entries in all Events close on Monday, March 15, 1897.

F. WEBSTER, Secretary,

Tattersall's Buildings, Hunter-st., Sydney.

The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—FEB. 28, 1897.

MOST of the beekeepers have now got their honey stored, perhaps sold. In some quarters there is still a honey flow on. In others a good winter flow is anticipated. In the former if you anticipate no winter flow, begin at once to prepare for winter. Take no more honey off, and see that the hives are snug and comfortable. If there is still swarming help up the swarms by taking brood from strong swarms (the taking of such probably preventing the strong ones from swarming), so as to get them all strong and fit to face the winter and come out strong and healthy in the spring. You might watch for and destroy any queens not up to the mark or too old, and give good ones in their places. An old queen dying in the winter may mean a queenless and weak hive in spring, as should they raise one to supersede her there may be no drones flying to fertilize the young queen, who would consequently be useless. Should you be positive of a good winter flow, it will be better to give plenty of room by extracting or plenty of spare combs, so as to avoid the necessity of disturbing the hives, and destroying their propolis arrangements for keeping themselves snug and warm. The less the bees are disturbed in the winter the better.

WE WOULD strongly urge upon beekeepers the great necessity there is for a good muster at the proposed Conference. As will be seen by advertisement elsewhere, the dates of the New South Wales one are fixed. At the present time, when honey is plentiful and cheap, as scarcely to give any profit to the raiser, beekeepers should meet and consult what is best to be done. As will

be seen by advertisement elsewhere, Mr. Whittel, Hon. Sec. of the N.S.W.N.B.K. A., solicits papers to be read at same, and we shall be very glad, in our next issue, to receive suggestions.

The chief question to be answered at the Convention.—How to keep the price of honey up?

We hear of several large beekeepers who are keeping ants in check by using plenty of lime about their hives.

We acknowledge receipt of illustrated Catalogue of Bee Goods of Messrs C. E. Phenice and Sons, Tacoma, Washington, U. S. A.

Mr. Reid's promise to pass a Foul Brood Act still holds good. The Easter N. S. W. Convention should move him in the matter.

A Mr. Danzenbacker places a sheet of parafined paper on top of his sections, crowded down by layers of newspapers. The bees will not propolise such, and they need no scraping off of propolis.

We would call attention to the advertisement and apicultural section of the Royal Agricultural Show at Sydney in Easter Week. As the N. B. K. A. hold their Convention at the same time we trust there will be a good many entries.

Quite a number of complaints have of late been reaching us of the non-receipt by subscribers of their regular copies of the A.B.B. We are taking the utmost care that all copies are properly sent from our office, and are resolved, if as many complaints continue to be sent to forward them all to the Postmaster-General.

Messrs A. Hordern and Sons are drawing the attention of our readers to the fact that customers ordering by post are treated in the same way as customers buying at the counter, the same prices being charged, and selections are made by specially trained assistants from the same stocks. Patterns and prices are sent everywhere on application.

Mr. Flood tells us of a new wrinkle he is adopting. He uses starters only. In

putting on a super of starters, he places it upside down, so that the tops of the super frames rest on the top of the lower box frames. The bees work on to the top starters quicker than when in their hanging position there is a big space underneath them. When they are built about half-way he places them in their hanging position.

The *Musclebrook Chronicle* says:—"The members of the local Beekeepers' Association have been interesting themselves to some purpose in connection with the prizes to be offered for apicultural exhibits at the coming Show, and have subscribed and collected the handsome sum of £16 to be offered as special prizes in that section. The Association we are informed, intends that the display to be made by it at the coming Show shall surpass in every way all previous efforts of a similar kind made in Muswellbrook.

We have to thank an unknown friend for a copy of the *Eastern Province Herald* (Cape of Good Hope), of January 1st. We cannot find any bee news in it, but there is a great deal in it that is very interesting, not the least being a large, nearly full page advertisement of the annual report of the De Beers Consolidated Diamond Mines, which during the twelve months had produced to the value of £3,165,382 1s 4d, with an expenditure of £1,452,527 14s 0d! We had just written the above when we discovered the following written in pencil:—"Honey coming in. Wishing you a happy new year. Greetings to all bee-farmers." We heartily return same greetings, and trust there are many more De Beers mines in South Africa, and that our correspondent has a good interest in same.

In the multitude of counsellors there is wisdom. Now is the time of abundance of honey and low prices, surely much wisdom is wanted. Then let there be an abundance of counsellors at the forthcoming Easter convention of beekeepers in Sydney. The Royal Agricultural Metropolitan Show will have commenced on the previous Wednesday,

the 14th, lasting till the 20th, and the Convention will take place on the Tuesday and Wednesday following, the 20th and 21st. Railway privileges will be granted all over the colony. Remember the larger the attendance the more influence and weight its decisions will have. Every beekeeper who has to sell his honey at a price far too low, and every beekeeper who has a grievance that his fellow beekeepers can help him to remedy, should try his best and be there.

AN OUTING.

We won't say a ramble this time. We met and dined at Quong Tart's Tea Rooms, hurriedly purchased some tobacco of a special brand for a friend away, and getting into a passing 'bus enabled us to reach the railway station five minutes before the train's departure. It was the two o'clock Saturday train, crowded with passengers, possibly more than the usual Sydney outpouring of toilers, to their suburban residences, as many having farms or residences at greater than average distances were now going home for the Sunday only—their one weekly visit. Twenty miles riding in a suburban train gives you many a little problem to solve as to who and what may be the constantly arriving and departing passengers. We arrive at last at Cabramatta, a small township, and were met by our friend's brother with a buggy, in which we were driven about ten miles to his residence, Oak Farm. Of the road, it did not differ much from the usual first-class country roads of New South Wales. A stretch of cultivation, then forest, a slow pull up hill, a putting on of the brakes to go down, a little more caution, a temporary stoppage of the conversation to pass the culvert, or a friendly nod to the occupants of a passing vehicle, whether we knew them or not. We were beekeepers, and talked and noticed the trees. There was a white box, but somewhat different to what we knew as such in another part of the colony, a little iron bark, woolly butt, a small leaved ti-tree (splendid

drainer of swampy land), some fine specimens too, and great quantities of spinosa shrub, much of it in full bloom. The road was formerly the main one to Bathurst, and at one time much wheat was grown in its neighbourhood, but some thirty years ago the rust stopped the wheat growing, and the iron horse superseded the road. The old wayside inns have in many instances not disappeared, but resolved themselves into comfortable farm houses. Such was the case with our host's residence. Formerly it was known as the "Spotted Dog Inn," now the Oak Farm. To those of our readers who do not happen to know, "Spotted Dog" means plum pudding. We fancy we passed a small post office on the way out, also a public school in the distance. We also passed a sign board, on which the following was painted: "Notis. Trespassers will be Prossiequited BY ORDER," and there at a slip-rail a little bright two-year-old, clean as a new pin, in nurse's arms, was "watching for pa," coming from his week's toil; now driving down the hill behind us. And here perhaps we had better introduce our friend and host to our readers, Mr J. D. Ward, son of worthy parents, his father being one of the old pioneer farmers of the Kiama district. Mr Ward himself intended at one time to enter the Anglican church, but sickness and other causes interfered with his studies. He is now an active financial business man in Pitt-street, Sydney, but has not given over his hope of yet becoming a church minister, and so, after his week's toil, takes his turn on Sundays to do some long travelling to superintend Sunday School and conduct service at the pretty little church of Rossleigh, six miles from Oak Farm. Rossleigh church is nearly a century old, was built by convict labour, is of the pointed style of Gothic architecture, with a very steep roof. There is a fine organ harmonium, and the singing is led by some well-trained lady voices. To return to our worthy host. Having ourselves been living in a stern mountain district,

the quiet comparatively level country, the calm sunshine on the smooth meadow and cultivation round the house seemed a most refreshing change, notwithstanding the farm-house was at present a bachelors' hall, Mr Ward's brother and a gentleman friend managing it in the absence of Mr Ward and his family. Mr Ward has a fine lot of bees here, and he shewed us some very nicely coloured ones he has raised himself from a queen presented him by one of our largest honey raisers. He has also in another place some Carniolan bees, of which he speaks very highly. He has this season got a lot of light box honey, but at the present time some of a darker colour was being gathered. He had also been fairly successful with poultry, and shewed us some strong healthy-looking, three-parts grown chickens, a cross between white leghorn and game. During our short stay we visited a large poultry farm in the neighbourhood kept by a Mr Burns, at one time an extensive timber merchant in Sydney. If plenty of separate yards and wire fencing is conducive to success in poultry raising they were here in abundance. We felt greatly interested in some snares Mr Ward had placed in the bush around his place for catching opossums and native cats. On finding the tracks of such up a tree a sapling is placed against the tracks, and about two feet from where it touches the tree, a wire loop attached to a string tied to the sapling, fixed so that as the animal comes down the tree and takes the sapling for descent instead of its usual track, its head gets into the noose, its body cannot; it falls off the sapling and gets strangled as the noose tightens with its weight. Hearing that a train ran of a Sunday evening at 8.30, from Cabramatta to Sydney, it was decided to avail ourselves of that instead of having to get up at the small hours of Monday morning, and so arrived at Mr Ward's pretty residence at Strathfield about 10 o'clock at night, giving an agreeable and joyous surprise to the members of his family, notwithstanding

they had retired to rest, and concluding to us a most pleasant two days' outing. A stroll through the bush, a lesson on snaring opossums, a drink of refreshing honey beer, will form some of the pleasing recollections of the day.

N. B. K. A.

A committee meeting of the above was held at Messrs Hebblewhite's, George Street, Sydney, on Friday evening, February 5th. Present:—Messrs J. D. Ward (in the chair), Whittel (Hon. Sec.), G. Bloxham, Roberts and E. Tipper.

Apologies for unavoidable absence were read from Messrs Maxwell, O'Halloran, Abrams and Gale.

The minutes of previous meeting were read and confirmed.

A letter was read from a Mr Ruff, asking for information relative to the best situation in which to start beekeeping.

Mr. Whittel said through efforts made by him the Government had been specially collecting information on that point, and were always willing to place it at the disposal of beekeepers.

A letter was read from the Molong Beekeepers' Association thanking the members of the N.B.K.A. for the steps they had taken towards stopping indiscriminate ringbarking.

The following letter was read:—

Clear Creek,
15th August, 1896.

H. R. Whittel Esq.,
Sydney

Dear Sir,—We inform you that ringbarking is in full swing again here on Clear Creek, on Marsden's leasehold land. A number of ringbarkers started last Monday (10th August) just in front of Mr. Taylor's bees, and they are at work yet, but they do not carry out the restrictions of the decision of the Land Board at Bathurst. The restrictions cover all trees that are or may become useful for fencing or building purposes, but they leave only the apple trees and ring all other timber, which consist of box and stringy bark most useful for fencing and building purposes. We have been up to Orange and informed the Chairman of the Local Land Board of the above. He said, that

he would write to Marsden at once and advise him to carry out the full restrictions. Further, he read to us what the law tells about the ringbarking question. It says "Each ring barker must be supplied with a written permit from the person who got the permission to ringbark from the Land Board, with all the particulars and restrictions of the decision." Now, the fact is, that the ringbarkers have no written permit at all, they just do what Marsden told them. We urged upon the Chairman to send the Crown Lands Bailiff out to stop the ringbarkers, but he said he had no authority to give orders to the bailiff, but if we would inform the Secretary for Lands at Sydney, it would have the desired effect, he would give orders to the bailiff to stop the ringbarkers at once. We have done so last Tuesday (11th August) but no effect and no answer so far. Please will you take the matter up and try to stop the ringbarkers. We sent you a letter with all the particulars of the ringbarking case before the appeal came off, but we are without answer. Did you not receive the letter?

Yours very truly,
MOLLER & HANDCORK,
Beekeepers, Clear Creek
via Bathurst.

Mr. Whittel had seen Mr. Hurley, the member for the district, and the Government officer, who had reported that Mr. Marsden was acting within his permit.

A small account was ordered to be paid.

Mr. Whittel read the following suggestions from Mr. Gale:—

Division of the Government Grant to the Metropolitan Agricultural Society to the Bee Section.

Judging at the same show in Apicultural Section.

The appointment of the bee expert (sic) at the Agricultural College.

It was resolved that we write to Mr. Webster, Secretary of the Royal Agricultural Society, that we are prepared to recommend competent judges at the forthcoming show.

After some conversation it was arranged that the next Convention be held in Sydney on Tuesday and Wednesday, April 20 and 21, and that the city members of the committee be a sub-committee to carry out details. It was also decided that an advertisement be inserted in the A.B.B. inviting beekeepers to same, also to read papers on matters pertaining to the industry.

It was resolved the Secretary write to the Department asking that two separate departments be formed at the Hawkesbury Agricultural College, of the bee and poultry, with an expert to each.

It was stated the person now holding the dual appointment was not a bee-keeper.

It was resolved on the motion of Mr. Tipper, that Professor McEvoy, of Canada, be thanked, on behalf of the bee-keepers of Australia, for his excellent letter on Foul Brood, which appeared in a recent number of the A.B.B.

ADULTERATION OF HONEY.

It is some time since we called attention to the amount of honey adulteration that existed in New South Wales. We now give some extracts from Public Health Act of New South Wales, passed in November last, from which it will be seen a considerable improvement has been made in the law, and if adulterated honey is sold it will be the fault of the local beekeepers in not taking steps to have it stopped.

51. From and after the commencement of this Act, no person shall, except as hereinafter provided, sell, or offer, or expose for sale, or deliver any adulterated article, or articles of food unfit for human consumption, either in the streets, or in any store, market, shop, stall, or vessel within the meaning of the Navigation Acts, or other place of business, or on a round from house to house, under a penalty for a first offence of not less than two pounds nor more than ten pounds, for a second offence twenty pounds, for a third or subsequent offence fifty pounds: Provided that if the certificate of the Government analyst shall state that the adulterated article has been so adulterated as to be injurious to health, the Court is hereby empowered to impose five times the amount of the maximum penalty laid down for a first, second, or third offence, and may impose, in addition to the penalty a term of imprisonment, with or without hard labour, for any period not exceeding six months.

52. (1) Any officer of the board, or of a municipal council duly authorised in writing by the mayor, or any of the following officers, that that is to say, any inspector of weights and measures, or superintendent, inspector, sub-inspector, or sergeant of police, or any constable specially authorised by the Inspector-General of Police, or by any superintendent of police, may, at any place of sale or elsewhere, or during transit towards a place of sale—

(a) on payment or tender to any person dealing in any food or drug or having it for sale, or his agent or servant of the value thereof, demand and select and take or obtain samples (not being of a quantity greater than is reasonably requisite for the purpose of analysis) of the said food or drug; and

(b) require the said person or his agent or servant to show and permit the inspection of the vessels in which such food or drug is at the time kept, and to take or draw therefrom in his presence the samples demanded.

(II) Any such person or his agent or servant who, being thereto lawfully required—

(a) on payment or tender of the value thereof as aforesaid, refuses or willfully neglects to deliver to any such officer any such sample, or prevents or attempts to prevent the officer from selecting, taking, or obtaining any such sample; or

(b) willfully and without just cause refuses or neglects to show to the officer or refuses to permit the inspection by the officer of such vessels as aforesaid, or obstructs him in making the inspection, or refuses or neglects to take or draw as aforesaid the samples demanded, shall be liable to a penalty not exceeding fifty pounds, and in case of a subsequent offence to a penalty not exceeding one hundred pounds.

(III) When any officer in pursuance of the provisions of this section takes or obtains a sample of any food or drug, such food or drug shall be deemed to have been sold to such officer by the person dealing in it or having it for sale or his agent or servant within the meaning of this Act, notwithstanding that the quantity so taken or obtained may be less than the quantity which the person dealing in the food or drug or having it for sale is authorised to sell or dispose of at one time.

53. It shall be lawful for the Governor, on the recommendation of the Board of Health by notice in the *Gazette*, to fix limits of strength and purity for articles of general consumption.

54. The person purchasing or the officer taking or obtaining any food or drug with the intention of submitting it to analysis shall thereupon notify to the seller or person dealing in food or drug, or having it for sale, or his agent or servant, his intention to have the same analysed by an analyst, and shall offer to divide the food or drug into three parts, to be then and there separated, and each part to be labelled or marked and sealed or fastened up in such manner as its nature will permit; and shall, if required to do so, proceed accordingly, and shall deliver one of the parts to the seller, or person aforesaid, or his agent or servant.

He shall retain one of the said parts for future comparison, and submit the third part, if he thinks fit, to the analyst.

55. If the seller or person dealing in the food or drug or having it for sale or his agent or servant do not accept the offer of the purchaser or

officer aforesaid to divide the food or drug in his presence, the analyst receiving the same for analysis shall divide it into two parts, and shall seal or fasten up one of those parts, and retain such part for production in the event of proceedings being afterwards taken in the matter.

58. Upon complaint to the Board that any food or drug is being sold contrary to the provisions of this Act, such complaint being accompanied by a sample of the food or drug, and a report by an analyst supporting the complaint, together with an affidavit by the complainant that the sample submitted is in the same state as when purchased, and is the food or drug referred to in the analyst's report, the Board shall have the sample submitted analysed, and if the food or drug be found not in accordance with the provisions of this Act, shall direct a local authority to obtain a sample of such food or drug from a seller of same, and to have the sample analysed. The local authority shall act as directed by the Board, and, if the analysis show the food or drug not to be in accordance with the provisions of this Act, shall prosecute the seller.

59. Upon complaint on oath to a justice that the complainant suspects and believes that any food unfit for human consumption, or any drug unfit for use is being kept for sale at or in some premises or place to be specified in such complaint, and upon reasonable grounds being therein shown for such suspicion and belief, the justice may grant a warrant to any constable to enter and search the said premises or place; and such constable may break open any doors not opened within a reasonable time after demand, and may seize any food or drug which he may then and there find, and any vessels in which the same is at the time kept.

(i) It shall thereupon be lawful for any justice to grant a summons calling upon the owner of the food or drug, or the person in whose possession it has been found, to appear before any police or stipendiary magistrate, or any two justices in petty sessions, to show cause why the food or drug and the vessels aforesaid should not be forfeited and destroyed.

(iii) Upon, the said owner or person so appearing, or if after being so summoned he fails to appear, the said magistrate or justices may, after inquiry into the matter, and if satisfied by reasonable proof—

(a) that the food was in such premises or place for the purpose of being sold for human consumption, of which fact the presence of such food in such premises, or place shall be *prima facie* evidence, and was unfit for such consumption; or

(b) that the drug was in such premises or place for the purpose of being used or sold, and was unfit for use, or might, if sold, of which fact the presence of such drug in such premises or place shall be *prima facie* evidence, to a purchaser and used by him in a proper manner, injuriously affect him; adjudge such food or drug, and also every such vessel to be forfeited, and the same shall be destroyed.

In default of such reasonable proof the food or drug and the said vessels shall be forthwith restored to the owner or person in whose possession they were found.

62. (1) Every person who—

(a) for purposes of sale mixes or causes or permits to be mixed any ingredient or material with any food or drug in order thereby fraudulently to increase its weight, bulk, or measure, or to conceal its inferior quality; or

(b) to the prejudice of the purchaser sells any food or drug with any ingredient or material whereby the weight, bulk, or measure of such food or drug has been increased or its inferior quantity concealed.

shall be liable to a penalty not exceeding twenty pounds, and for a subsequent offence to a penalty not exceeding fifty pounds.

(ii) Every person who to the prejudice of the purchaser—

(a) sells any food or drug which is not of the nature, substance, or quality of the food or drug demanded by such purchaser; or

(b) any compound food or drug which is not composed of ingredients in accordance with the demand of the purchaser shall be liable to a penalty not exceeding twenty pounds, and for any subsequent offence to a penalty not exceeding fifty pounds.

63. Any person who sells a food or drug shall deliver the same to the purchaser in its pure state, and in strict accordance with its labelled description, and with the name under which it is sold, unless it is sold as a mixture, in which case the added ingredients shall be pure, and the fact of the admixture, with the names of the added ingredients, shall be distinctly and legibly written or printed on a label affixed to the outside of the containing vessel or parcel or to the outside wrapper of the food or drug. A breach of this section shall be deemed an offence under the last preceding section of this Act: Provided that it shall not be necessary to so affix a label in the case of food generally known to users as a compounded article or a drug not recognised by the British Pharmacopœia mixed with any matter or ingredient not injurious to health, and not intended fraudulently to increase its bulk, weight or measure, or to conceal its inferior quality.

64. In any prosecution under the provisions of section sixty-two of this Act it shall be no defence to allege that the purchaser having bought only for analysis was not prejudiced by the sale, nor to prove that the food, or the drug, the subject of the prosecution, though defective in nature or in substance or in quality, was not defective in all three respects.

67. (1) In any prosecution under this Act for the sale of any food or drug, it shall be no defence that the defendant purchased the food or drug and sold it in the state in which he received it, and without knowledge that the nature, state, or condition of the food or drug was such as would render him liable to prosecution under this Act, unless he further proves that he had no

reasonable means of ascertaining the condition of such food or drug.

(II) If the defendant, having purchased the food or drug, proves that he sold it in the state in which he received it from the person from whom he purchased, and without knowledge—

(a) that the nature, substance, or quality was not that of the food or drug demanded by the purchaser; or

(b) that any material or ingredient had been mixed with the food or drug contrary to any provisions of this Act; or

(c) that the food or drug was unfit for human consumption or use; or

(d) that otherwise any provisions of this Act with regard to the nature, substance, quality, or labelling of the food or drug had been contravened, he may recover, in any court of competent jurisdiction, from the person from whom he purchased the food or drug, the amount of any penalty in which he may have been convicted in respect of such prosecution, together with the costs thereof, paid or payable by him upon his conviction, and those paid or payable by him in and about his defence thereto; and the Court that inflicts the penalty on him may suspend the operation of the conviction for any period not exceeding three months to enable him to recover, as hereinafter provided, from the person from whom he purchased the food or drug.

68. (1) In any prosecution under this Act for the sale of any food or drug, it shall be no defence that the defendants only the agent or servant of the owner of, or person dealing in the food or drug or having the same for sale, but the agent or servant and the owner or person aforesaid shall be liable: Provided that a servant shall not be liable if he proves that the offence was committed in a store, shop, stall, or other similar place in which business was, at the time of the committing of the offence, conducted under the personal superintendence of some other person.

(II) If the defendant, being an agent or servant, prove that he sold the food or drug without knowledge—

(a) that the nature, substance, or quality was not that of the food or drug demanded by the purchaser; or

(b) that any material or ingredient had been mixed with the food or drug contrary to any provisions of this Act; or

(c) that the food or drug was unfit for human consumption or use; or

(d) that otherwise any provisions of this Act with regard to the nature, substance, quality, or labelling of the food or drug had been contravened, he may, notwithstanding that his employer or master has been convicted and fined, recover in any court of competent jurisdiction from his employer or master the amount of any penalty in which he may have been convicted in request of such prosecution, together with the costs thereof paid or payable by him upon his conviction, and those paid or payable by him in and about his defence thereto.

Where an agent or servant has been convicted as aforesaid, the Court may, if he thinks fit, suspend the operation of the conviction for any period not exceeding three months, to enable him to recover from his employer or master the penalty and costs as aforesaid.

W. Crawford, Wingello, Feb. 11th.—Bees are doing fairly well this season, although they were very weak at the commencement.

G. S. H., Cootamundra, Feb. 12.—Up to the present bees have been doing very well considering the extremely dry and excessively hot weather we have been passing through. The flow from the yellow box pretty well ceased about the 1st or 2nd week in December, and a few gum trees have been showing in flower. Now, to crown matters we have had a splendid shower of rain, in fact the best for the past ten years, records showing from five to over six inches in three days. This will undoubtedly bring along every thing there is to produce honey before the end of the season. I therefore think all well cared for hives in this district should go into winter in the best of order. I am sorry to say that Foul Brood continues in this district, cases cropping up where least expected. My experience has been two cases this season, both of which I have treated successfully by the McEvoy treatment. In the latter treatment I do not observe any advice as to how the honey combs on the top story are to be treated. I have extracted mine, thoroughly washed them in warm water, and then bathed them in a strong solution of salicylic acid. I am again using them so far with no ill effects. I should like to see in your next issue the experience of some other beekeeper in this direction. I had 7 hives spring count have increased to 15 and taken 1,400 lbs of extracted honey. Mr. G—— has had a similar yield and bees doing well. Mr. T. W. H—— has commenced keeping bees and has some Cyprians with good results, having taken a fair amount of honey. He is now experimenting in queen rearing on the Doolittle and Alley methods.

VICTORIA.

REV. J. WILSON, VIC.

The eminent naturalist, the Rev. J. G. Wood, says, that he fed thirty-seven large flies and four long-legged spiders to a dragon fly, all of which were devoured in rapid succession, showing that this creature is well named, seeing that he is a veritable dragon. The same author observes that he believes that as many more would have been taken had not the lion's provider been tired of catching flies. This remark leads me to speculate as to the damage sustained by my apiary by the ravages of a dark grey insect of the same species. These flies have been very prevalent this year, and I have frequently observed them with my Italian workers in their mouths. On one occasion I caught him red-handed, or rather red-mouthed, for he swooped down and caught up a bee from the open hive just under my nose. Unlike the common dragon fly (*Libellula Depressa*) whose larvæ are found in water the larvæ of this species live in the ground. Suppose only fifty of those fellows on the wing, and that each one consumed only twenty bees per diem (a moderate estimate) there is a thousand bees straight off. If this went on for a month we can imagine that a considerable decrease would be made in a season's returns. Suppose again that the estimate were diminished by one half, fourteen thousand bees would have fallen a prey to this voracious monster. The enemy is so swift in his flight that it is very difficult to despatch him. Possibly other beekeepers whose land is constantly thrown up, so as to expose larvæ to insectivorous birds, may know little or nothing of the trouble. If this glutton could only be persuaded that the blood of drones is as sweet as that of the workers, he might be turned into a useful ally by cleaving off surplus members of that fraternity.

Although I keep the ground under my hives free from rubbish, I found on one occasion a spider's web under the bottom board in which had been imprisoned more than one hundred bees. These

had fallen a prey to one small black spider. If an unfortunate magpie or summer bird were discovered in suspicious proximity to our hives we should no doubt wage terrible warfare on these larger game, whilst perhaps we suffer far greater injury from more insignificant foes.

Our principal honey flow (from the messmate) has just begun, but the continuous rains—

"For the rain, it raineth every day." make it appear as if we may be unable to harvest it. However, we must hope for the best.

The editor of your journal shows good taste, I think, in affording us an opportunity of renewing our acquaintance with Sir John Lubbock; for all beekeepers do well to study the observations of so painstaking a naturalist. There is interesting reading, too, in the article from the pen of Mr. R. Helms, of W. A. It is fitting also that one should acknowledge one's indebtedness to Mr. Beuhne, and many others for valuable hints given in the A. B. B. from time to time.

I am looking forward to the discussion on a Foul Brood Act at our prospective conference in May, when I see that the subject is to be opened by my namesake of Teesdale. From what source the trouble came to me, I know not, but what it did against me I know only too well.

A. H. Mooroopna, Victoria, Feb. 6th., I value the *Bee Bulletin* highly both for the information it gives and the way in which it looks after our interests re Foul Brood Act. By the bye what has become of the Victorian Foul Brood Act. I have heard nothing about it for a long time and we want something of the kind very much.

W. K., Mudgee, Feb. 11th.—We are having a dry time of it about here at present, but the honey is coming in very fair; it is extra clear, being very near as white as water. Foul brood is raging about here, but I have not had it myself yet and I hope I never will. Wishing you success with your interesting paper and also your bees

green paper. I now put blue paper instead of white.

At 8.12 she turned to the honey on blue paper; but it will be remembered that she had been previously accustomed to the blue. I now put red instead of blue.

At 8.23 she turned to the honey on green paper.

At 8.25 she turned to the honey on green paper.

At 8.47 she turned to the honey on green paper.

I then ceased observing and removed the honey.

Thus the bee which was accustomed to green, returned to that colour when it was removed about a foot, and replaced by yellow, orange, white, and red; but, on the other hand, when it was replaced by blue, she went to the blue. I kept this bee under observation till the 28th, but not with reference to colours.

August 24.—At 7.45 I put another bee to honey on green paper, to which she kept on returning till 9.44. The next day (August 25) she came at 7.38, and I let her come to the green paper till 9. The following morning she returned at 6 A.M., coming back as follows, viz.:—

At 6.10	At 6.45
„ 6.18	„ 6.54
„ 6.25	„ 7. 3
„ 6.35	„ 7.13

I now put orange in place of green, and put the green a foot off.

At 7.24 she returned to the green. I replaced the paper with the bee on it; and when she had gone I put light blue in place of the green, and again moved the green a foot off.

At 7.36 she returned to the blue. I again replaced the paper with the bee on it; and when she had gone I put yellow in place of the green, and again moved the green a foot off.

At 7.44 she returned to the green. I then did exactly the same, only putting vermilion in place of the green.

At 7.55 she returned to the green. I then did exactly the same, only putting white in place of green.

At 8. 3 she returned to the green.

These observations clearly show that bees possess the power of distinguishing colours.

It remained to determine, if possible, whether they have any preference for one colour over another. M. Bonnier in a recent memoir denies this. He does not question the power of insects to distinguish colours, which he admits that the preceding observations clearly prove, but he maintains that they would not be in any way attracted or guided by the colours flowers. This he has attempted to demonstrate by experiment. With this view he proceeded as follows:—He took four cubes, 22 centim. by 12 (*i.e.* about 9 inches by 3½), and coloured red, green, yellow, and white, placing them 6 feet apart in a line parallel to and about 60 feet distant from the hives. He then placed on each an equal quantity of honey, and from minute to minute counted the number of bees on each cube. He found that the number of bees on each was approximately equal, and that the honey was removed from each in about twenty minutes. In the experiment he records the bees began to arrive directly the honey was arranged, and in ten minutes there were nearly a hundred bees on each cube. I presume, therefore, that the bees were previously accustomed to come to the spot in question, expecting to find honey.

I do not think, however, that any conclusive result could be expected from this experiment. In the first place, after the first five minutes there were about thirty bees on each cube, and in less than ten minutes nearly a hundred, and the colour therefore must have been almost covered up. The presence of so many bees would also attract their companions. Moreover, as the honey was all removed in less than twenty minutes, the bees were evidently working against time. They were like the passengers in an express train, turned hurriedly into a refreshment-room; and we cannot expect that they would be much influenced by the colouring of the tablecloth. In fact,

the experiment was too hurried, and the test not delicate enough.

Then, again, he omitted blue, which I hope to show is the bees favourite colour, and his cubes were all coloured. It is true that one was green; but any one may satisfy himself that a piece of green paper on grass is almost as conspicuous as any other colour. To make this experiment complete, M. Bonnier should have placed beside the honey on the coloured cubes a similar supply, without any accompaniment of colour to render it conspicuous.

I could not, therefore, regard these experiments as at all conclusive. The following seem to me a more fair test:—

I took slips of glass of the size generally used for slides for the microscope, viz. 3 inches by 1, and pasted them on slips of paper of the same size, coloured respectively blue, green, orange, red, white, and yellow. I then put them on a lawn, in a row, about a foot apart, and on each put a second slip of glass with a drop of honey. I also put with them a slip of plain glass with a similar drop of honey. I had previously trained a marked bee to come to the place for honey. My plan then was, when the bee returned and had sipped about for a quarter of a minute, to remove the honey, when she flew to another slip. This then I took away, when she went to a third; and so on. In this way—as bees generally suck for three or four minutes—I induced her to visit all the drops successively before returning to the nest. When she had gone to the nest I transposed all the upper glasses with the honey, and also moved the coloured glasses. Thus, as the drop of honey was changed each time, and also the position of the coloured glasses, neither of these could influence the selection by the bee.

To be continued.

THE HONEY BEE.

(By RICHARD HELMS, Biologist, Bureau of Agriculture, Western Australia.)

From the *Journal of the Bureau of Agriculture.*

(Continued.)

A number guard the entrance against intruders, and often combats occur to keep aggressors out of the hive. Everything of an obnoxious nature is carried out of the hive, or else embedded under a wax and propolis covering. The sanitary as well as the other duties are under the control of the workers. Some are generally engaged fanning fresh air into the hive, which is done by vibrating the wings. In warm weather this is a very trying exertion, and at times nearly all the members of the colony require to be engaged in this work. The function of the workers, as we have seen, are manifold. They have to build combs, caulk the hive, refit the cradles for the reception of new inmates, remove objectionable intruders, and sometimes fight them, ventilate the home, keep the brood warm, and feed all the other inmates, whether larvae, queen, or drones. They hardly ever rest, for the feeding goes on at night, as well as during the day. Moreover their foresight or innate industry keeps them constantly engaged in storing provisions for future emergencies. All this labour taxes their energy greatly, and during the busiest time of life, when plenty of honey and pollen is gathered, and consequently much brood reared by them, they wear out rapidly. The life of the workers lasts on an average only forty days during the summer, but in times of inactivity continues up to four months.

ABNORMAL BEES.

Some workers occasionally show abnormal characteristics which deserve mentioning. In queenless colonies laying workers are sometimes met with. Considering that all workers are females it is scarcely surprising that now and again one occurs with in completely atrophied ovaries, which, under stimulation,

J. B., Axedale, Victoria, Jan. 29th.—It is early yet to speak of the honey flow but so far as this district is concerned I believe it will prove to be light.

may, to some extent, be excited to functional activity. This takes place only when the bees have no means of rearing a queen. Their hope of saving the colony from decay, by means of exciting a worker to lay, is, however, futile, as nothing but drones are reared from eggs so produced. At times numbers of very dark and glossy bees may be seen in a hive. Naturally bees lose their pubescence as they get older, and appear more or less glossy, which, however, is not prominently noticeable, owing to the gradation in which it occurs. But if by some chance the heat suddenly rises in the hive the bees may get damp, and by this means as well as through the extraordinary exertions required to reduce the temperature a great number may become suddenly more glossy than is generally the case. Through a certain disease bees also lose the hair. The young bees are always abundantly covered with hair, which gives them a downy appearance. This led some to regard the nurses as a fourth kind of bee. Neither the hairy nor the glossy bees are distinct kinds; they are merely workers at different ages. Probably the most curious abnormalities are the lilliputian bees. As a rule the workers and likewise the drones inhabiting the same hive differ but little in size among themselves, whilst those of different colonies, as well as their queens, may differ to some extent. This is often very perceptible among the queen, and more frequently noticeable with the drones than the workers. In some colonies, however, much smaller bees than ordinary are occasionally met with. Queens have occurred not larger than an ordinary worker, and drones even smaller whilst workers the size of a house-fly have recorded. Of the latter sometimes only a few have been seen, and at other times they have appeared by thousands. It has been observed that drones bred in worker cells are more slender than those bred in drone cells. This seems to point to the fact that the narrowness of the cell influenced their development. To some extent the same may occur with workers

bred in very old cells that have been narrowed through the cocoons of successive generations. Experiments, on the other hand, have proved that a temporary interruption in the feeding and the supply of warmth will stunt the development of bees. It is therefore reasonable to conclude that the want of sufficient nutrition together with a periodical withdrawal of warmth is the cause of the diminution of the insects. The insufficient supply of food is no doubt the main factor in the production of abnormally small bees.

The evolutionary process of the bee, like that of all other insects of the higher orders, progresses steadily through four distinct forms. These forms are characteristic stages of a definite duration, varying to some extent with the three kinds of bees found in a colony. Although readily recognisable at certain periods the gradation of these phases are hidden under protective coverings. The cycle of forms which constantly occurs in the life history of the bee embraces the ovum (or egg), larva, pupa, and imago (or perfect insect), which again produces the lowest form—the egg. Two stages of this transformation, occurring alternately, are quiescent (namely the ovum and pupa), the other two (the larva and imago) being active.

THE OVUM

The egg is deposited at the bottom of the cell, to which it is fastened in a rectangular position by a glutinous substance secreted in the oviduct of mother. Its length is about 1-16 of an inch, and scarcely a third as wide at its thickest part. Its appearance is glossy white, and under a magnifying glass the outer vestment is seen to form a regular network. At the upper and broader end the threads of the network converge towards a shallow depression, in the middle of which the membranous shell of the egg is perforated by a microscopic opening. This orifice is technically termed micropyle (small gate). It extends as far as the yolk of the egg, and serves the purpose of admitting the fertilising

cell called spermatazon. The spermatazon, the male germ, enters the micropyle during the act of extrusion, and rarely coalesces with the ovulum, or female germ, which is enclosed in the yolk. The internal structure of the bee egg much resembles that of any birds' egg on a minute scale, but without the distinct colouration between the yolk and the white as in those. The yolk and the white in the bee egg also act functionally in the same manner as these substances do in the eggs of all other animals. The yolk contains the ovulum develops from this cell into an embryo. The embryo gradually absorbs the white which serves no other purpose than that of its nutrition. With the help of moderate warmth the transformation within the egg is completed in three days. The egg in the meantime has gradually bent down, and now is found in a horizontal position; the integument ruptures and a small white maggot, the larva, emerges. Part of the foregoing applies only to the eggs from which queens or workers, according to the treatment of the larvæ, will arise. The eggs from which drones emanate are originally the same as all other bee eggs, and cannot be distinguished from them. But, one of the strangest phenomena of nature is found connected with them, namely, they are unfertilised and yet produce young. This marvellous fact is well authenticated and scientifically proved. Every fertilised egg, if not prematurely destroyed, must ultimately produce either a queen or a worker, and every unfertilised egg a drone. The nature of the egg when in the ovary of the female is male, when, during the laying operation, a specialised cell, originally emanating from the male, is added, and successfully coalesces with the ovulum, the sex of the egg is changed to that of a female.

THE LARVA.

This first active stage is variously termed maggot or grub, and also, but erroneously, caterpillar and worm. Grub is not strictly applicable, because this term implies boring and grubbing, and

is generally applied to the larvæ of beetles, which mostly bore in wood or the ground. They are possessed of feet, whilst maggots are footless larvæ as is the case with those of bees. The word larva is perhaps the best, being a general term applied to all insects when in the second stage. It is derived from the Latin and signifies a mask, and is given in allusion to the hidden forms that will evolve from it in time. The larva, at first smaller than the egg, grows very rapidly, and in about five days increases to upwards of fifteen hundred times its original weight. At first stretched out it soon finds the cell too narrow for a straight position and becomes consequently curved, in order to accommodate itself to the room, till ultimately it lies in almost a perfect circle with the mouth touching the tail. All the time it is surrounded by food pap, which it swallows, and, probably, also to some extent may absorb through the skin. Besides finding the width of its cradle too limited for a straight position it is also embarrassed by its own covering. The rapid growth of the larva does not extend to its outer skin, which soon gets too tight for its comfort, and not yielding, is ruptured and cast off; a new one, more elastic, which has been formed underneath, taking its place. Soon this skin also becomes too narrow and another moulting is necessary, such casts being of almost daily repetition. The helpless, fat and whitish looking baby moves slowly round whilst floating on its food. Twelve slight constrictions mark its body, dividing it into thirteen segments. The first segment bears the eyeless head, having a mouth with soft lips and jaws. The simple intestine is without a dual opening.

To be continued.

A beekeeper at Lake Macquarie told us the honey came in so fast they could not get tins up fast enough to put it into.

As Mr. J. W. Ayling was riding a bicycle recently down Boxhill, near Rivertree, a hare, crossing the road, ran into the bicycle, breaking its neck.

We have to congratulate Mr. George Bloxham on the position he has attained as Manager of one of the largest manufacturing establishments in Sydney. Mr. Bloxham is a young man who has great beekeeping interests, being also Treasurer of the N. B. K. A., has been one of the most active members of the committee, and has acquired his present business position by steady, earnest, conscientious work. We not only congratulate him but wish him continued prosperity.

BEES' POISON AS A REMEDY.

A novel undertaking in the manufacture of drugs has been begun by two Pennsylvanians, who are making a regular business of extracting the poison from honey bees. According to the accounts they have two different ways of collecting their crop of venom. In the first the bees are caught and held with their abdomens in small glass tubes until the poison sacs have been emptied. In the second they are placed in a bottle on wire netting, and enraged until the tiny drops of venom fall into the alcohol which fills the lower third of the bottle. This venom is said to be a sovereign remedy for cancer, rheumatism, snakebite, and a hundred others of the more terrible ills of humanity.

DEATH OF AN OLD VICTORIAN BEEKEEPER.

The late Mr. Alexander Patterson, who died December 29, was a native of Berwickshire, Scotland. He came to Adelaide early in 1839, and took up country under Dr. Kelly, not far from Adelaide, and had charge of his stock. They lived together for several years, at first under conditions little better than camping out. The blacks being numerous, it was necessary to carry firearms, and Mr. Patterson had many narrow escapes. He came to Melbourne in 1842

and soon after arrival went up to Mr. W. Hamilton, of the Sugarloaf Station, beyond what is now Kilmore. Shortly afterwards he crossed overland to Sydney and assisted in selecting 100 rams from Mr. M'Arthur's famous Camden merinoes and brought them over to Mr. Hamilton's station with only a man and a blackfellow, crossing rivers and creeks as best he could, for there were no roads or bridges in those days. He had often to subsist by his gun; his blackfellow cooked the birds in the native way, without plucking, plastering them over with clay, and roasting them in the ashes. On the clay being removed after cooking, the feathers came with it, and the birds were ready for eating. From the Sugarloaf he went out to the Tatiara country, with Mr. T. Hamilton, a brother of Mr. W. Hamilton, and broke into practically new country there. Shortly afterwards he became manager of the Wannon Station for Messrs. Riley and Barker (the late Dr. Edward Barker, of Melbourne). He then resolved to look out for a run for himself, and in exceptionally dry season rode down country and went to Westernport, where he took up a station on the Cardinia Creek in January, 1848, being attracted, as he said, by the green grass on the banks of the creek—the first he had seen on his travels. Here he remained, gradually stocking up his run, engaging in pastoral pursuits. When the Westernport district was surveyed Mr. Patterson bought a considerable portion of his run, and for a number of years continued to lease Crown land till it was occupied by free selection. Over 30 years ago he had already made his reputation as a successful breeder of horses and cattle, he having been a buyer of the highest-priced heifers at the late Mr. Robert M'Dougall's first short-horn sale. In Scotland as a boy he was very fond of working among bees, his his father making a hobby of bee-keeping; and, curiously, in less than 3 years after he settled in Westernport, when riding out one day, he was surprised to see a swarm of bees on the fallen branch of a

tree. He rode back, had a box made, and hived the bees, carrying them home himself. This swarm he supposed to have come from the stock of the late Mr. Edward Wilson, of *The Argus* who had imported bees, and taken them up near Dandenong. The hive stood for over 20 years, being known as "Old Granny," and it was most prolific. Mr. Patterson, who could do almost anything with bees, sent swarms to his friends in various parts of the country. When the succeeding generations of bees at length died out of the old box he found the comb to be as black as coal and almost as hard, and kept a piece as a curiosity. In 1852 Mr. Patterson was married in Melbourne to Miss Marian M'Murtrie, by the Rev. William Miller, of John Knox's Church. His wife predeceased him by seven years, and he leaves a family of three sons and one daughter. One of his sons is Mr. Thomas Patterson, secretary of the Royal Agricultural Society.--*Australasian*.

NOTES.

BY THE DRONE, IN THE *Australasian*

It will be interesting to note whether, when the warm weather returns again, the bees will continue killing off their drones. It appears on the surface as though they had anticipated the unseasonably cold weather of the past few days. At the time they were killing drones there seemed to be no reason for it, as honey was coming in freely; but now that the cold and rains have swept over us, it looks as though the bees had instinctively been able to forecast the stoppage of supplies. Last season they killed all drones at the beginning of the year, thus predicting a failure in the honey crop; this year they appear to have given an accurate forecast of the present cold weather, had we been knowing enough to have discerned it. The former Government astronomer (Mr. Ellery) was an expert on bees, and no wonder, considering the interest they had in common about the weather.

The weather in the northern parts of

Victoria still continues favourable to the honey flow. It is well that the close, unbearable heat does some good, as it is neither appreciated by the honey-eating public nor yet by the beekeepers themselves. The latter will have the satisfaction later on of knowing that their cheques were larger owing to its prevalence. The terrible burning fatality at the Grampians recalls a pleasant trip I had once to that locality. Hall's Gap is an ideal beekeeping country, and ten years ago many of the selectors kept bees in gin cases, finding a readier market for their honey then than they do now. Beekeeping ten years ago in that region was primitive but lucrative. The selector's apiary near which we camped consisted of some forty hives. It was Christmas time, and the hives upon being lifted were heavy, and as we wished to purchase honey to take back, a start was made at daylight to rob the hives; an accompaniment of tin cans being played by the selector's younger son the while. Why this was done I cannot say, but an idea still prevails in some quarters that the rattle of tin cans soothes the savage instincts of the bee. We got our honey, also sundry stings, notwithstanding the gentle influence of the empty kerosene tin and the blue gum stick.

It was proposed some time ago to introduce the African honey bird into Victoria. Beekeepers should be on the alert, and prevent any importation of this nature until assured that the bird does not injure the bees. Bent describes the bird as leading to honey, but does not explain whether it does so in order to share in the spoil or to benefit from the slaughter of the larvæ after the hive has been destroyed. He writes:—"I had always been sceptical about the honey bird until its virtues were properly proved to us when at Matindela. An insignificant little bird, with a significant chirp, led our men over rocks and through jungle till they actually found honey, so that we could no longer indulge in doubts as to this mysterious gift, which like water-finding divining rods, I will leave others to ex-

plain." When travelling through Mas-honaland, the same writer describes the natives in the north as keeping bees in pots on high boulders, with stones around and on the top. In the south, bark hives are used for the same purpose. Groves of medlars and forests of the white-flowered sugar tree, with its pretty flowers, like silvery white chrysanthemums, three inches in diameter, provide a plentiful honey flow in season. Honey sells readily for a few beads, and there appears to be any quantity obtainable from the natives, who amongst other qualities, have the art of making mead.

NEW ZEALAND.

"Novice," writes in the *Otago Witness*:—"Almost every year, at the end of the honey season, beekeepers may be heard when they meet speaking of the extraordinary yield of some particular hive which has distanced all the others, and stored nearly twice as much honey as most of them, and questions will almost be certain to bring out another fact, viz., that there are other hives which have persisted in swarming, but have added very little to the total yield. Variations of this kind are quite common in most apiaries, whether large or small, and yet how many beekeepers are there who endeavour to perpetuate the very desirable qualities of the good colony? Not many, most beekeepers being content to take the swarms as they come; and as the hive in which is the queen in whom this very desirable variation occurs seldom swarms, it is lost when the queen in whom it has arisen dies; while, on the other hand, the progeny of the queen whose hive is constantly swarming, and in whose bees the instinct of storing a large quantity of surplus honey—much more than they can possibly need for their own use—is not unduly developed, will by reason of their constant swarming leave their impress in the future on the bees of the whole apiary. I want to impress this on the minds of beekeepers as strongly as possible, because if we do not take advantage of such valuable var-

iations in our bees when they do occur, a golden opportunity of vastly improving our stock is to slip past us. From which cows does the dairyman save the calves that in the future are to be the milk cows of his herd? Is it from those that go dry quick-st, or from those which can be relied on to keep in good milk month after month? It is only by careful selection and breeding from the best that the vast improvement noticeable in all kinds of stock has been made. Variations as they occur are noticed at once by keen sighted thoughtful men, and if desirable are soon developed into new and valuable types. "How often have I felt quite elated at hearing beekeepers who are for the first time visitors at the apiary say in admiration, 'What splendid slabs of brood! Why, I never get anything like that with my queens.' No, but every beekeeper might do so if he would only take the pains to stock his apiary with the progeny only of his best, and not tolerate an inferior queen, or tolerate her only so long as would enable him to raise a better one to introduce in her place. "It is true that to raise a queen of good quality and capable of perpetuating the best qualities of her mother requires time and attention to minute details, but such time and attention is amply repaid by results. Simply removing a queen from the head of a colony will not produce good queens, though one often sees this method recommended on account of its apparent simplicity; but the bees in their eager desire to remedy the disaster will feed a larva which is too old to reap the full benefits of the special food which is fed to the young larva the bees intend to develop into a queen, and so on the tenth or eleventh day after the queen was taken away there emerges from her cell a young queen, which, though she looks all right, is invariably incapable of keeping her hive up to the proper standard, and is thus of no use to us in our endeavour to perpetuate the good qualities of her mother. The special food which develops an ordinary worker egg into a queen is a secretion from a gland in the head of young bees only.

QUESTIONS.

W. D. RUSSELL.

99.—What is your opinion as to the best method to adopt to sell our honey in England?

100.—What do you think of sending a man to the large manufacturing centres of England to dispose of our honey through canvassing agents among factory operatives?

101.—What will you give towards sending such a man?

102.—What do you think about a delegate being sent from N. S. W. conference to Victorian conference, to arrange about sale of honey in England for both colonies?

(This last can be varied to Victoria sending delegate to N. S. W.)

103.—Have you any experience with solar extractors?

GIPPSLANDER.

94. If there are lots of bees in the bottom put a section with unsealed honey on top of brood nest; if that won't bring them up there are not enough bees in the hive.

95. All eucalypti show buds for months before bursting.

96. I don't think she is.

WILLIAM GER.

85. Altering the size of Langstroth frame. I have forty hives in Langstroth frames, and would not think of altering them in any way, as I think they are frames that will suit any district. When there is a great flow of honey supers should be used; the hives could be made smaller to suit the district. I advise every new beginner to use Langstroth frames; I think it a mistake for beekeepers to use different sized frames, as every manufacturer praises up his own hives.

95. Does the white box show bud long before bursting into bloom? In this district they are from ten to fourteen weeks before they bloom, commencing about the beginning of February and ending in June. They do not bloom every year here; they may go for three years or longer.

JAMES BENNETT, VIC.

98. None whatever. My present practice is to extract the first side, then swing the baskets (reversible) round and extract the other side, turning the extractor handle the same way all the time. Thus if the bottom bar leads for one side of a comb the top bar leads for the other. I have extracted in this manner at least 15 tons

and have not seen the slightest indication of advantage from the bottom bar leading. It is just one of the many things in beekeeping that are "easily proved" (on paper) yet "ain't so."

99. Make use of existing channels to attack the market from as many points and in as many different ways as possible, starting always in a small way, and enlarging as experience is gained and in the direction shown by experience to be most effective.

100. I do not think it is feasible. If I had as much confidence in this scheme that Mr Russell seems to have I would shouldert my own honey and slip quietly away to England, and having disposed of the honey at a satisfactory price I would publish results. So much honey would be immediately offered me for disposal that I would secure a large business while Mr Russell was scolding in general terms all and sundry.

101. If he is successful I give him credit for being a better man than I now take him to be.

102. No objection. Discussions, suggestions and criticisms are all now in order, and we can't have too much of them; but let us not forget that the actual experience must come from the other side.

103. I consider the "Solar" one of the most useful tools that can be found in an apistry. As generally made they are mere toys. They should be large enough to hold eight or ten L frames placed singly on the comb support. See article elsewhere.

R. H. JERVIS.

100. I believe a good man would do well; I think it is the only practical way.

101. Two pounds.

102. Not enough surplus honey this season.

GLENEZEL.

99. Why can't some Australian apiarist take his own honey to England, and settle the matter for ever. The first time I find myself with ten tons of good honey on hand and unsaleable here, I'm going.

100. Go yourself, Mr. Russell, 't would be a good spec. You can get honey cheap if you have not enough of your own.

101. There is no such man.

102. Nothing would come of it as usual.

103. No.

J. D. WARD.

99. I think the best method can only be found in the establishment of a depot either exclusively for honey, or for honey and other Australian produce.

100. Not much use unless in conjunction with a depot which shall be the base of all operations. Of course it may be found practicable to get some English firm to establish such depot, but I still think that the proper way is by a Co-operative Supply Company.

101. This question is not answerable till the details of the scheme are known.

L. T. CHAMBERES, VIC.

102. I think that this is a pure matter of trade, and quite apart from the objects of our Association. Any number of beekeepers may combine in co-operative arrangements to market their produce, but they alone should formulate their plans and bear their own expenses. The Association of Beekeepers supplies the arena in which such co-operation may be brought about, but its objects should not take in any business methods. Any attempt by any member to ex-

plot his association and make it a means by which he might make personal gain should be resisted as likely to cause disaster and shipwreck. Mr Russell has been working in this direction for some time, and would make use of our Association in an unworthy manner. In any case export trade laid out on the lines indicated would need to be controlled upon business principles and subject to law, and our Associations should not be asked to support any project having the object of benefiting part of their membership. As a producer I am quite open to pool a given quantity of honey and pay a part of expense proportionately to my contribution towards a foreign market, but in this matter I should claim to deal solely with men bearing similar risk, and bound by legal ties, and not ask any other members of Association to vote or contribute.

T. BOLTON, VIC.

99, 100, 101 and 102.—I will contribute my share to this experiment when some practical scheme is settled upon, and I think that owing to the intermittent nature of our honey crops two or more colonies would be necessary to ensure a sufficiently regular and reliable supply of honey to warrant our expecting the attention, and going in for the advertising so necessary for success. Accordingly I think that the N.S.W. and Victorian beekeepers should exchange delegates, if they cannot have a combined meeting, at some border place, and that this question should have the whole time of the Convention, and all trivial matters left alone till something is accomplished that will make beekeeping worth pursuing. This subject of export, and that of dealing with foul brood, are the only two worth discussing at present.

103.—My experience of solar wax extractors is that they are at times a convenience, but on the whole not to be compared in value to a wax press. I have tried one 2ft x 1ft, and it was useless. I raise tomatos with the sashes now, and made myself one 4ft x 2ft of red pine (previously seasoned some years as a shelf) and with double glass. This implement has a knack of burning up everything put into it. The temperature rises to 230 degrees, the honey is reduced to tar-like colour and consistency, and the slum gum cinder is of the same. The wax is however not spoiled, to all appearance unaffected. My experience, in short, is that they either don't melt capings up clean, or when they do it is with the above result, the honey is spoiled.

W. S. PLEFFER.

94.—Lift two or three frames from brood nest place in a super and place sections by their side without separators. When bees are well into them, put on tin separators.

98.—Always see that the bottom bar goes first in the extractor.

F. W. PINBEETHY.

99.—Honey should never be sent home marked Eucalyptus as it would be confounded with the oil of that name. An English grocer will only buy our honey when he can sell it as English. Our honey does not suit the English taste, and honey sent home and used for manufacturing purposes will never educate their taste for it, and if it is not used as a luxury it will not pay to send home at all. I should say send home white clover honey and mix in a little yellow box honey, and increase the dose a little every year, so as to educate their taste for it.

100.—No good, factory operatives too poor, golden syrup too cheap.

101.—Nothing.

102. The two Conferences should be held one after the other every year, so that delegates could visit both.

103.—Very handy in a small way, but too long in hand, don't use them now.

QUESTIONS NEXT MONTH.

104.—Can you tell by the number of queen cells in a hive whether the bees are raising them for the purpose of swarming, or for superseding an old or disabled queen?

105.—Does the colour of the timber of a tree give any indication of the color of the honey from it—a light coloured timber a light honey, a dark coloured timber a dark honey?

106.—Can you inform me if red cedar is suitable for hives. The only objection I can think of is that it may swell and shrink to match the weather. Perhaps some of your readers may have had some experience.

107.—What length of time should comb be left in the brood chamber before it would want replacing.

108.—Give suggestions re the forthcoming Conferences.

MELTING WAX.

Australasian Bee Manual.

When melting the wax a double boiler should always be used, the inner one for the wax and the outer one for water, in order to prevent the wax from burning; burnt wax is of no use for foundation. To make rapid work two such double boilers should be used, one in which the wax is melted from its cold state, the other to be kept supplied with melted wax at the proper temperature and used as a dipping boiler. The next things needed are a tub of cold water, two or more dipping boards the length of the sheets required, and a thin knife. The boards should be made of very thin wood—or stout galvanised iron will answer—and made so that they can be reversed when dipping. Wax melts at a temperature of about 145 degrees Fahr., and the contents of the dipping boiler should be kept at very little over that temperature. The boards after being soaked in cold water and drained, are at first just slightly touched over with soapy water to give them a start; care should be taken to use no more soap than is absolutely necessary, as it is said the bees

dislike it. Take a board and dip it over head in the wax; lift it out and let it drip; as soon as it has ceased to drip quickly reverse the board and dip it overhead again; and repeat the process until the sheet is of the desired thickness. Two or three times is sufficient for stout foundation, and once or twice for thin. After the last dip plunge the board into the cold water, and if everything is right the sheets will peel off without trouble. If the wax is too hot the sheets will break, if too cold they will stick to the board. According as the wax in the dipping boiler is used up it should be replenished from the melting boiler, which must be kept on a good fire.

H. R. A. & H. ASSOCIATION.

The following list of prizes (in the Apicultural Section,) have been offered at the above Show, to be held on the 28th, 29th, and 30th April, 1897. Entries close on the 13th April, 1897.—

512 Comb Honey, most attractive display, not less than 20lbs., labels allowed, 10s. and certificate; second, 5s.

513 Comb Honey, best 12 lb. sections, 10s.; second, 5s.

514 Extracted Honey, most attractive display not less than 50lbs., manner of putting on market to be considered, labels allowed, 15s.; second, 7s 6d.

515 Extracted Honey, liquid, 6 2lb screw top glass jars, 10s.; second, 5s.

516 Extracted Honey, granulated, 6 2lb. screw top glass jars, 10s.; second, 5s.

517 Beeswax, not less than 5lbs., soft, clear, yellow wax to be given the preference, 10s.; second, 5s.

518 Best Leather coloured Italian Queen and her bees, displayed in a single frame glass nucleus, 10s.

519 Best yellow Italian Queen and her bees, displayed in single comb glass nucleus, 10s.

520 Honey Vinegar, in glass, not less than half a gallon, 10s.

521 Beveridges, best and largest number, not less than three, made from honey, 15s.

522 Comb Foundation, best three sheets, different grades, 10s.; second, 5s.

523 Cookery, best and largest assortment, made with honey as an ingredient, 15s., sec. 5s.

524 Best wire frame of comb foundation, 5s.

525 Best colony of bees, 10s.; second, 6s.

526 Best bee hive suitable to the district, 10s. second, 5s.

527 Best three empty combs, naturally built, 5s.

528 Best three empty combs, built on foundation, 5s.

529 Best and largest collection of Fruits, preserved in honey, 15s.; second, 7s 6d.

NOTE.—All exhibits to be the bona fide production or manufacture of the exhibitors.

VICTORIAN NOTES.

R. BEUHNE, TOOBORAC, VIC.

The Victorian Beekeepers Association is still in its usual biennial sleep; it will perhaps wake up next May. Mr Russell and myself have made several attempts to rouse it, but without avail, for excepting the one instance when Mr. Adams sat on Mr. Russell and snarled at me it has given no sign of life. One little swarm however has emerged from the larger drowsy mass and is showing great activity. Whatever life there is left in V. B. K. A. appears to be pretty well all centred in the Bacchus Marsh B. K. A.

IN-BREEDING.

I cannot quite agree with the recommendation to obtain fresh breeding queens at frequent intervals. Experience has taught me to leave well alone. Of course when stock has deteriorated a change must be made, but make haste slowly. Get your breeding queen and raise a few queens from her and then wait 12 months and see how her own stock and those of her daughters turn out in your locality. A queen may be the very best in one district; transfer her to a different climate and elevation and she may be the very worst for breeding purposes. Some years ago I bought two queens from a well known breeder in another colony; they were beauties, very prolific and their stocks very industrious. I had therefore no hesitation in breeding largely from them at the end of the season to requeen the apiary. Judge of my dismay when in early spring both breeders and their workers died in *globo* and 80 out of the 90 stocks I had requeened from were badly affected with paralysis, not a few sharing the fate of the parent stocks. I

had to draw on my old unrequened stocks for several months to keep the stocks of these beauties going till I could again requeen them, this time from my old original stocks which I had kept for many years without infusing fresh blood and which had in no way deteriorated through in-breeding excepting that they were somewhat dull in colour. Had I sent that queen breeder £20 and let him keep his queens I should have been many pounds in pocket. It will not happen again. Any new queens I put on probation now for at least twelve months, but raise a few queens from her at once, for the queen herself and her workers may acclimatize very well and yet the progeny of her daughters which were mated to drones from local stocks may be as undesirable as a mixture of beer and wine.

FOUL-BROOD ACT.

The Bacchus Marsh Association deserve every encouragement and credit for once more bringing the question of F. B. Legislation forward. When I first wrote to several beekeepers and to our Secretary suggesting the formation of an association, about six years ago, a bonus on honey and a Foul-brood Act were to be amongst the objects. At each *Centennial* convention however it was voted down or shelved, the opposition winning from our own ranks; some considered F. B. the Beekeepers' best friend (save me from my friends) and one speaker recommended and enlarged greatly on moral suasion instead of Grandmotherly legislation. But when it came to the bonus on honey, all were willing to take a penny a pound from our good old grandmother.

The moral suasion has been chiefly in evidence in making additions not so much to the Association but to the crowded ranks of beekeepers. At one time I used to think that beekeeping was a business, but after every convention I became more convinced that it is more of a kind of religion, the principal aim and object being to convert as many to it as possible. There is the bee en-

thusiast, the bee maniac, and the bar frame fanatic, who looks upon the gin case man in much the same way that the Turk does upon the Armenian. At the last perennial convention a number of officers were appointed—central committee of two honey buyers and a supply dealer, a honorary solicitor, a honorary chemist, and an advisory committee of country members (as distinguished from city beekeepers.) The work performed by this staff will be duly reported, after which someone will perhaps be kind enough to read the funeral service.

After our last meeting I met a budding beekeeper on the steps of the Town Hall and asked him did he join the Association. "Yes," he replied, "I paid my subscription, but its a very foolish way of spending half-a-crown." I laughed then, but thought since that he was right. The Association does nothing, and it blocks the way to action for individual beekeepers. I was just going to say something about sending a man to England, but there is Mr Adams, and I don't want to leave the next *Bee Bulletin* unopened.

CORRESPONDENCE.

W. Abram, Beecroft, February 12th. As a whole this has been a very dry summer here. The few showers of rain that have fallen never soaked much into the ground, yet the bees are doing better than in some former wet seasons. They are hard at work as soon as day break and very quiet during the middle of the day on account of the heat.

H.D.S., Plainview, Nebraska County Minnesota, U. S. A., Dec. 31st.—Bees did well here this season. I increased from six to sixteen and got 650 lbs of comb honey, I could have increased to 35 if had wanted to. I practice clipping queen's wings and think it is one of the most labour saving schemes in the business.

W. G., Campbelltown, writes—Just a few lines to let you know how the bees are doing in this district. They got a

nice lot of honey from the apple tree. They are getting honey from the box ; it is a beautiful class of honey, and they are building up their stores fast. By the appearance of the bud they will keep in bloom until June. We have a good variety of trees in this district. The grey gum, cabbage gum and bloodwood will bloom about a month if all goes well in this district.

P.S., Arakoon.—Since my last letter to you about 2 months ago, I complained that my bees would not stop with me when I obtained them from trees. I had not one hive then but now I have 9 and hope to have 9 more within another month. I have obtained most of my bees from the blacks. I get them for 2/6 per swarm but I am going to look for some for myself as I cannot afford to keep paying 2/6 a swarm for them. I make all my own boxes, but not the frames, and I get the art of beekeeping taught me from an experienced man for nothing, so I think I am very lucky.

J.F., Graham's Town, Cape Colony.—To start with, let me, although somewhat late, wish you "A very Happy and Prosperous New Year." With us, as you no doubt know, the past year has been full of trouble and anxiety, what with wars and rumors of wars, drought, locusts, rinderpest, redwater and what not, but I trust that this year will bring peace and prosperity and union amongst the people. We have had and are having very fair rains and so for the bees there seems every chance indeed. Up to the present I have taken more honey out than during the two preceding years. I bought a rubber foundation mill at a sale the other day and now I would like to learn how it is to be made, that is, that I would like to get all the information and instruction I can as to the process of making comb foundation. I would like to try my hand at making some if I only knew how. Can you give me plain instructions, or where can I get such? Again wishing you a "Happy New Year," and trusting I am not troubling you too much.

Any of the standard works on beekeeping would give you the information you want.

T. Bolton, Vic.—Never having seen Mr. Beuhne's waxpress I cannot say if mine is similar, but such as it is your readers are welcome to a description. It is nothing more or less than an old cheese press. A piece of stout plank about 2ft. long by 18in. wide has four legs on one side, mortised in, and on the upper side two uprights with a cross rail. The uprights are 2ft. high, mortised into the plank and into the rail and stand 12in. apart centrally in the plank. Four long bolts also assist in holding down the top rail when the pressure is applied (these bolts are 2ft. x $\frac{3}{4}$ in., with a stout iron plate under the heads of each pair and another plate under the nuts of same on top of rail and over each upright. Through centre of rail a screw works in an iron plate and this screw has an iron vyce handle. Between the two uprights there is a forme or frame 6in. deep and removable; and a stout piece of planking fits snugly but free to move inside this forme. A piece of canvas bag to place in the forme into which the melted wax and water is poured, a piece of loose flat iron to take the thrust of the point of the point of screw off the piece of wood that is laid on the top of bag of wax; a flagged place to stand the press on which is wet and clean and slopes to a small hole also provided with drainage, and cold water constitute the remainder of the arrangements which has saved me many pounds worth of wax since I bought it second hand at a farm sale.

T. Bolton, Vic.—Whilst grateful for the good opinion expressed in your last by T.W., Inglewood, it seems useless for me at present, if I were able to do so, to contribute in the way suggested. Unless we get that English market opened the best "short cut" many can take is to sell their bees and dodge rabbits or some other profitable employment. When all the beekeepers who at present sell their honey at 2d learn to sell it at $\frac{1}{2}$ d per lb, what will be their price then? $\frac{3}{4}$ d or 1d I suppose. Therefore let those who can produce cheaply do so, and those who cannot let them help Mr. Russell and the whole industry by pushing on export for the present. That is the most prac-

tical advice that at present I can give on how to make money out of bees.

A.A., Dubbo.—In your last you say "honey is coming in and beekeepers are reaping the reward." I wish that were true about here but we are having a bad time though we expected a good one. The bush trees bloomed as usual but the weather was dry and the blooms yielded no honey and when rain came there were no trees in bloom so it is still NO HONEY. You mention difficulties likely to be experienced with robber bees at this time of year. I have a plan, which, though simple is effectual, and I have not seen it used or mentioned. Instead of reducing the entrance or covering it up with straw I simply place a drone excluder in front of the hive and I find that it needs very few bees to drive back robbers when they have to crawl through the excluder. The robber can't fight and squeeze through a small hole, and he soon gives it up. Dense honey, how I got it out.—Early this spring my hives had some honey which I wanted and the bees did not, but as it had been in the hive all winter it was as thick as glue, and my extractor, though up-to-date, could not move it at all. I was about to give up in despair when I noticed that one comb which had been in the sun for a little while was better than the others. I put the whole lot right out full in the warm sunshine, first one side and then the other and put it through the extractor and emptied all the combs. The honey was so thick that after it had cooled I could not get it through cheese cloth even with force. I once saw some honey here so dense that it was impossible to empty an unsealed comb with the extractor I was using, but I did not try it in the sun. What about the Convention? I hope it will be held at Easter and in Sydney.

That about drone traps to stop robbing is original and good. You will see elsewhere it has been decided to hold the Convention in Sydney, and at Easter time.

For HONEY LABELS, and all descriptions of PRINTING, send to *A.B.B. Office*.

GOLDEN WEDDING.

AYLING—DALTON.—January 6th 1847
By the Rev. J. E. Richards, at Congregational Church, Wandsworth, Surrey, England, Rev. James Ayling to Mary Ann Dalton, now of Pitt Town, New South Wales.

At the gathering to celebrate the Golden Wedding his four sons, J. W. Ayling, Arthur Ayling, F. D. Ayling, and H. Ayling were present, also his two daughters, Miss Ayling and Mrs. Eipper, also Miss MacDonald, a lady friend who was present at the wedding 25 years ago. All the sons are cyclists and three are beekeepers. Rev. John Ayling went to New Zealand, in the Rotomahana on 8th January. The latest news informs us that his health is improving.

QUITE RIGHT TOO.

JACK: Hullo, there Bill! Where are you off to?

BILL: Oh! I've just sold my honey, and I'm going to pay my subscription for the *Bee Bulletin*. The editor has been good enough to wait for my renewal and now I'm going to pay him.

For Honey Labels and every description of PRINTING send to A.BEE BULLETIN Office.

Scale of Prices for Advertisements

IN THE

"AUSTRALIAN BEE BULLETIN."

HALF PAGE, per annum, £5; half-year, £3; per quarter, £1 15s.

QUARTER PAGE—per annum, £3; half year £1 15s; per quarter, £1.

EIGHTH PAGE—per annum, £1 15s; per half-year, £1; quarter, 12s.

SINGLE INSERTION.—First inch, 3s 6d; succeeding inch, 2s 6d.

If Booked, 10 per cent. extra added to the above rates.

SOME FINE QUEENS!

If you want any send along your order and see what I can do for you. Thanks to the magnificent season we have had this way, I have now on hand the largest number of fine young Queens that I have ever had. Can furnish leather-coloured Italian Queens from best American stock, or Golden Queens from my own well-known strain. If you require a good reliable breeder, I have the splendid leather-coloured Queens from A. I. Root, that I can do at 30/- each. I have doing duty a Holyland Queen, also a fine Cyprian Breeder from Mrs. Atchley, Texas, and can furnish daughters from these as per prices below. 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, Cyprian and Holyland	5/-	13/-	20/-	39/-

SPIDER PLANT I have on hand a large quantity of fresh seed (my own raising) of this noted honey producer, and can furnish same at 6d per packet, or 6 packets for 2/6, post free. I can also furnish seed of the new White Spider Plant (*Cleome Pungens Alba*) at same price. Except in colour, which is pure white, this variety possesses all the good qualities of *C. Pungens* and is one of the most beautiful garden plants. Send for my Illustrated Catalogue, free.

H. L. JONES,

Goodna, Queensland.

Queensland Agent for the "Australian Bee Bulletin."

FROM VICTORIA.

BEEKEEPERS in Victoria, or any of the Colonies, Tasmania and New Zealand, I can supply you with **QUEENS THAT ARE UNSURPASSED IN QUALITY**. I GUARANTEE SAFE ARRIVAL and SATISFACTION at the following prices, viz.:—

Untested	one	5/-;	three	13/-;	five	20/-
Tested .. .. .	..	..	8/-;	..	22/6;	.. 35/-
Selectct-tested .. ..	..	..	15/-;	..	40/-;	.. 60/-

Extra-selected-tested, THE VERY BEST, 25/- each.

I procure fresh breeding Queens every season from different places, so as not to inbreed (a great factor I think in preventing foul brood) and had two (out of a number) arrived safely from America by last mail, and another expected from Italy shortly.

A TRIAL SOLICITED.

JAS. McFARLANE, LYNDHURST VIC.

FOR **'The Australian Agriculturist'**
HONEY LABELS,

EVERY DESCRIPTION OF PRINTING

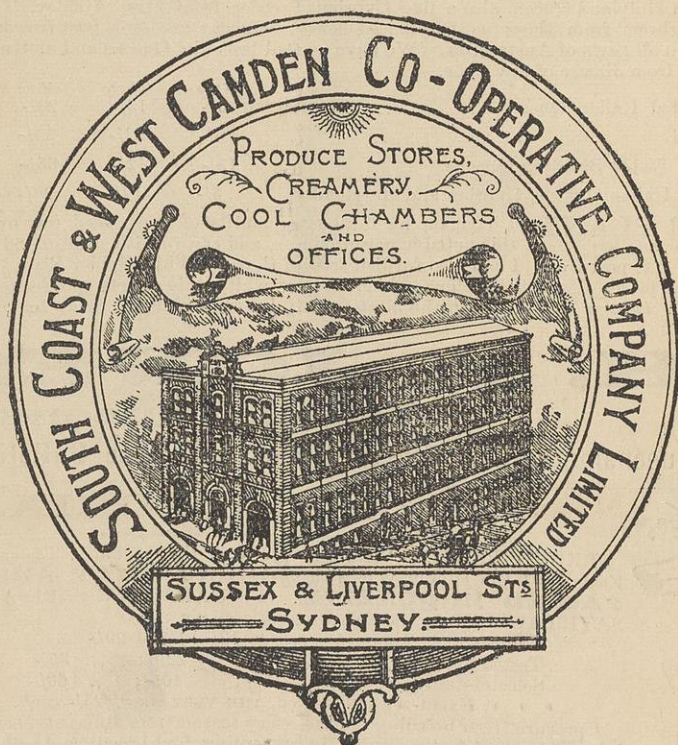
SEND TO

5/- PER ANNUM

To any part of Australasia.

"Bee Bulletin" Office. Head Office: 460 George-street, Sydney.

Honey Sales a Specialty



Produce & Live Stock Salesmen

SALES OF DAIRY PRODUCE, HONEY, &C., AT OUR
WAREHOUSE DAILY.

FARM PRODUCE BY AUCTION AT REDFERN & DARLING
HARBOR.

LIVE STOCK SALES AT CORPORATION YARDS.

TO BEEKEEPERS.

A MERICAN Dove-tailed 8 and 10 frame Beehives and all appliances kept in stock and to arrive during the season—from Root's and other leading manufactories.

JOHN PEASE,

8, 9 and 10, Newtown Road,
DARLINGTON, SYDNEY,

IMPORTER OF

English and American Beekeepers' Supplies.

*Indents executed on Reasonable Terms.***BEEKEEPERS!**

SERVE your own interests in placing all your orders for Queens, Stock Hives, and all kinds of Bee Goods with me, the Most Experienced and Reliable Beekeeper in Australia.

ITALIAN QUEENS:

Untested	5/- each
Tested Pure	15/- "
Choice Breeding	30/- "

On a number of Queens special quotations.

ADDRESS:

W. ABRAM.

ITALIAN BEE FARM,

Beecroft, nr. Sydney, N.S.W.

DON'T YOU SEE? That to reduce the time spent at each hive means increase of profit. This is why you should have Cypro-Italian Bees. They can be more rapidly handled than Pure Italians or Pure Blacks. They will keep you busy—but at the extractor, They winter well, are hardy, prolific and handsome. If you have them you can run out-apiaries with comfort during "swarming," visiting once in nine days.

Autumn Prices—Untested, 4s; tested, 6s; select tested, 12s 6d; Post Free.

"I am so satisfied with your Cypro-Italian queens that I am intending to supersede all my black queens with them. They are a great aid against foul brood, very energetic, do not boll over and take wing like blacks."—W.L.D., Toan E.

"I am highly pleased with the two queens you sent me last year; they are good honey gatherers, and keep strong colonies."—E.C., Lilliput, Victoria.

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.

Pop your Order in the Post

ADDRESSED TO US.

Customers Ordering by Post

are treated in the same way as

CUSTOMERS BUYING AT
THE COUNTER.

The same prices are charged, and
selections are made by specially
trained assistants from the same
stocks.

PATTERNS AND PRICES SENT
EVERYWHERE.

ANTHONY HORDERN'S,

Universal Providers,
HAYMARKET ONLY, SYDNEY.

A Big Honey Crop.

Is what all Beekeepers want, and to get it you must have good Queens. Upon no other one thing does the honey part of the apiary depend as it does upon the Queen. With a poor Queen, one that you must coax for eggs, your crop will be a failure. We all want good prolific Queens, whose bees are good workers and gentle to handle. After years of experience and constant importations I have succeeded in getting a strain of bees equal to any obtainable. The very best imported mothers only are used, and for industry, gentleness and beauty their bees are unsurpassed. I have a splendid lot of drones, and mated Queens are rare. 95 per cent. of my Queens proved purely mated last season. You can have your choice, either Leather or Golden.

	1	3	5	10
Untested Queens ..	5/-	13/-	20/-	39/-
Tested Queens ..	8/-	22/-	35/-	65/-
Select Tested (Breeder) 1 for 15/-, 2 for 27/6				

Honey or Beeswax will be taken in payment (if preferred) for all orders of 10s. and upwards. Safe arrival guaranteed to any Post Office in the Australasian Colonies.

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.

QUEENS 3s. EACH.

Untested 5-Banded, Cyprian, Carni. and Ligurians,	..	3 for 7/6
Tested 5-Banded Golden and Ligurian .. ..	..	6/- each
Selected Tested Breeders .. ..	..	10/6 each

I can give special value in selected breeders, having near 200 to select from. If not satisfactory will change them.

E. J., Yarrawonga, writes: "The Cyprian queen to hand. I prefer them as my bees have a long way to fly, and they seem to fly further than Italians, anyway they gather more."

I have a limited quantity of foundation while it lasts, 5lb., 1/8; 20lb., 1/6; special quotation for cwt.

R. H. JERVIS,
WREKIN APIARY, MOSS VALE.

TO BEEKEEPERS.

STUDY your own interests by purchasing your Queens where you can be served fairly and faithfully. I can give you Quality and Cheapness combined, and a guarantee that no other Queen Breeder is giving, viz.: I guarantee that four out of five of my Untested Queens will prove purely mated. I sent out hundreds of Queens last season with this guarantee, and had no complaints, and can do so again, because I do not live in a town where BLACK bees are always kept. I have my locality under my control, and therefore have nothing but best Italian Drones for mating purposes. All TESTED Queens are thoroughly tried for the honey-gathering qualities of their progeny, as well as for evenness of colour, &c. I obtain tons of honey every year, and am thus enabled to prove them to be good and reliable.

MY IMPORTED QUEENS ARE TO HAND, and the Young Queens this Season are all that can be desired. I have sent out hundreds already all over the Colonies and Testimonials are continually arriving. Some customers have had 12, 18 and 24 untested Queens and word is to hand from them of everyone proving purely mated. Six of these queens with the guarantee I give, are the Cheapest Well Bred Queens in the market.

When sending order make P.O. Orders payable at Scone, or Postal Notes to my address—

A. J. BROWN,
LEAFORD APIARY, PARKVILLE.

The Largest Prizewinner for past year in the Northern Districts, and the first to introduce letter writing by bees.

Winner of over 60 Prizes for Italian Bees and their product at Maitland, Singleton, Muswellbrook, Tamworth and Narrabri Shows.

MADISON
— 1896-97. —

◇ PRICE LIST BEEKEEPERS' SUPPLIES. ◇

BEE-VEILS.

Page.
13 No. 1, 4/6; No. 3, 2/6; No. 4, 2/-; No. 5, 1/6
BEEKEEPERS' HATS 2/6 each.

BEE-BRUSHES.

Cogshall's9d. each
Davis'8d. "
Yaeca3d. "

BEE-ESCAPES.

(Porter's)9d. each

BEGINNERS' OUTFITS (see page 1.)

BEE-BOOKS and JOURNALS (page 33).

BEEES and QUEENS (on application).

BOXES for 1lb. sections, 2d. each; 1/6 doz.

BOTTOM BOARDS SCRAPPERS 2/- each

BEE-ELECTROS .. 2/- "

Blood's Foundation Rollers.. 1/- "

15 Comb Cutters (Carlins) .. 9d. "

,, Fasteners (Parkers).. 1/- "

,, ,, (Daisy with Lamp 4/- each

,, ,, (Daisy Rollers) 9d. "

,, ,, Boss with water 2/- "

,, ,, Jacket ... 2/- "

,, ,, Gray's, Millers & Clark's... 1/6 "

COMB FOUNDATION.

	Lots of 1lb	5lb	10lb &	35lb
17 American (heavy)	2/6	11/3	21/6	70/-
Colonial (medium)	2/-	9/6	17/6	58/-
American (Thin)	3/-	14/-	26/6	85/-
Comb Foundation Machines, 10in.	120/-	ea		
,, ,, Plaster Moulds	20/-			
,, ,, Dipping Tanks	12/6			
,, ,, Boards	1/6			
,, Buckets	6/-			
Cartons or Pasteboard Boxes	7d. doz.	6/-	gross.	

CORKS.

Small, Pickle 3½d. doz.; 3/- gross
Medium ,, 3½d. ,, ; 3/3 "
Large ,, 4d. ,, ; 3/6 "
DEXTERINE 1/-lb.; 10/- doz. lb.

Page
19 Queen and Drone Traps (Alley's) 2/- each

ENTRANCE "GUARDS" (Colonial) 1/6 "
ENAMEL SHEETS (8 or 10 frame) 3d. "
6d. each; 4/6 doz.

FRAMES (see prices page 1).

Metal Corner Frames .. 6/6 per 100

Wide Frames (for 8 1 lb. sections) 12/- per 100

Reversible Frames .. 6/6 "

Nursery .. 5/- each

Frame Blocks .. 2/- "

Gauge Frames (simplicity) 2/3 "

21 Feeders (Simplicity) .. 3d each; 2/9 doz.

,, (Grays) .. 1/- ; 10/6 "

,, (Perfection) .. 1/9 "

Gloves (Rubber) .. 7/6 pair

EXTRACTORS.

21 Novice, 2-Frame, American .. 37/6 each

& ,, 2-Frame, Colonial, deep tank, .. 37/6 "

23 Cowan's 2-Frame, do., do., .. 50/- "

,, 2-Frame, American, .. 52/6 "

,, 4-Frame .. 100/- "

,, 6-Frame .. 120/- "

Stanley's 2-Frame .. 70/- "

,, 4-Frame .. 90/- "

Little Wonder, best, .. 12/- "

,, ,, cheap, .. 10/- "

EXTRACTOR PARTS

23 Novice Baskets and Gear, less,

can only, .. 22/6 set

Cowan's Baskets and Gear, less

can only, .. 32/6 set

17in. Bevel Gear, side, .. 7/6 "

20in. .. 9/- "

17in. Gear Wheels .. 1/6 "

20in. .. 2/- "

17 and 20in. Gear Pinion Wheels 1/- "

Shields for Gear Wheels .. 1/3 "

17 and 20in Gear Handles .. 1/6 "

HONEY GATES.

Tinned and Cut

1½in., 3/9; 2in., 4/6; 2½in., 6/

Japanned 1in., 1/3; 1½in., 1/ 1½in., 1/

Handles for Wrought Iron Ga 1/6 each

HEBBLEWHITE & Co.

Opposite Sydney Arcade & Strand, 377 George-st., Sydney.