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West Maitland, N.S.W.: E. Tipper, August 23, 1894

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A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

VOL. 3. No. 20. AUGUST 23, 1894. PER COPY, 6d
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I have been breeding Italian bees since 1883, and by careful selection of the best Home bred stock, and constant importations of the best stock to be obtained from the principal dealers in America and Italy, have now a strain that for business and beauty is excelled by none. I can furnish scores of testimonials received from all parts of Australasia, regarding queens sent out during last season.

Carniolans I imported in 1892, and they have since been dispatched to all parts of the colonies. That they have come to stay is proved by the many flattering reports I have received in regard to them. All the Carniolan Queens I send out are raised from best imported stock, and mated to Italian drones.

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For Queens in larger quantities write for special prices. Send at once for New Illustrated Catalogue of Beekeepers' Supplies. Post free. Contains over 60 illustrations and much useful information.

Honey Producing Plants, &c.

HIMALAYAN RASPBERRY.—This is a recent introduction of the Q'land Acclimatisation Society. It is one of the best honey plants I am acquainted with, and comes into bloom at a very good time—end of winter and early spring. It attains a height of about 10ft., and with its tenacious thorns and dense growth, forms a hedge that neither marsupial nor biped will penetrate. Fruit also is delicious.

Rooted plants, post free 2s; 3 for 5s; 6 for 9s; Choko plants, 1s each, post free 3 for 2s 6d.

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Hunter River Bee-Keepers' Association.

MONTHLY MEETINGS.

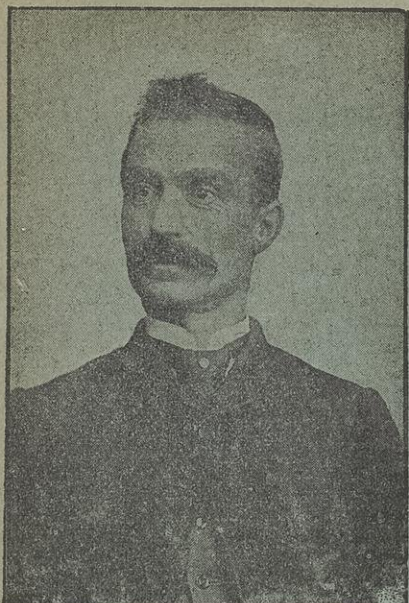
TUESDAY, SEPTEMBER 18TH.

(Annual Meeting).

TUESDAY, OCTOBER 16TH.

TUESDAY, NOV. 13.

C. MANSFIELD, Hon. Sec.



Disappointment versus Satisfaction.

No More Untested Queens!

READ THE FOLLOWING—

Mr —, a large apiarist in an adjoining colony says—"Last season I bought over a dozen from man at one time, untested, but they all proved to be *mismated*, and every one small."

Mr —, a beekeeper in this colony, says—"The six untested queens I got from you all proved to be purely mated with Italian drones."

How many have had an experience like the first of these gentlemen, and after patiently waiting to see the change in their hives from blacks to Italians, have simply got hives of mongrels. For queen breeding my location is unequalled, as far as the eye can reach may be seen waving fields of lucerne, maize, &c., &c., and no bush bees to interfere. My apiary contains nothing but pure Italians, bred from imported mothers.

I intend to give purchasers the benefit of these exceptional advantages, and I therefore have decided to warrant all my young queens to be purely mated Italians. I add a word or two for the information of the uninitiated. Within fourteen days after emerging from the cell the young virgin

queen flies abroad in search of the drone. In a few days the young queen begins to lay, and is termed an untested queen. In three weeks' time her young bees would show at once what kind of drone she met with. If an Italian drone, her bees would all show the yellow bands; if a black drone they would be half blacks and half with the yellow bands. Some breeding yards contain several breeds of bees—Italians, Punic, Carniolans, &c., and some are not fully Italianised, and others are surrounded by bush bees. And it generally happens that the undesirable drones are much the more numerous. This accounts for so few queens being purely mated, and the high prices charged when they do happen to be so mated. My queens will be bred from mothers imported from the most renowned queen raisers in Italy and America. Twenty to arrive this season from America alone.

One breed One Yard.

Ligurians or leather-coloured Italians will be bred in one yard and the American or five-banded in another three miles away, all from Imported Mothers.

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Warranted Golden Italians, 1 for 6/-, 4 for 20/-

One gratis with each half dozen.

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First Prize for Purest Italian Queen and Bees at the N.H. & P. Association, Sydney, 1894.

Scores of flattering testimonials from all parts of the Australian colonies.

C. MANSFIELD,

HUNTER RIVER APIARY, LARGS, N.S.W.

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NOTICE.

All Communications must reach the office not later than the 20th of each month to appear in that month's issue.

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The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—AUG. 23, 1894.

THIS is a very important month of the year for beekeepers. Hives should be inspected on the first fine warm day, taking every care the brood shall not be chilled by exposure. Weak colonies, if very weak should be united to others; if not too low, they may be stimulated by a frame with brood on from a stronger colony, making sure there are sufficient bees in the weak hive to well cover the brood supplied. See that all hives are well supplied with stores. If not feed them. The majority of practical beekeepers recommend inside feeding, and just before dusk, to prevent robbing. If queens are laying well give them extra room very cautiously, either by shifting unfilled brood-frames to the centre, or using full sheets of foundation. In the northern parts of the colonies the moth will probably be at work, so carefully watch your bottom boards and all crevices for their eggs. Remove all drone comb except from your best queens, and if such have none place a frame of drone comb in the centre of brood nest, should you wish to rear good drones. Should you desire to raise queens stimulate by steady feeding the queen you wish to breed from. Be sure every colony has a queen. If not get one. It is cheaper in such case at this time of year if you have not one at disposal to buy a laying queen than wait to breed one.

A good article on "Judging," by Mr M'Farlane of Rooty Hill, in our next.

ERRATA.—On page 115, eighth line from bottom read "sugar" instead of "zinc."

Will our many friends kindly look out for the blue mark on the wrapper of the *A. Bee Bulletin*.

"Binni" writes—Convey my thanks to Mr. H. W. J. Taylor, of Minmi, for pointing out an error in my communication in your June issue. Of course it ought to be over nine inches in diameter and not under as printed.

Mr H. Lord, of the Technical Department, informs us that the botanical name of a plant now flowering very much in parts of New South Wales, and known as Cape Ivy, is *Senecio Scanderes*. It is very rich in pollen, if not honey.

A Singleton lady says:—"Some time back I noticed an article in the *A.B.B.*, asking for suggestions as to the best way to bring honey before the public notice. My answer is, interest the ladies in it. Let them see what excellent cakes and puddings can be made with honey, and they will want to use it often."

Every number of *Gleanings* contains, in addition to its large stock of bee literature, some most valuable information under the head of "High Pressure Gardening." The *American Bee Journal* has now also added another department to its pages, by securing the services of 'a Dr. L. F. Peirs, to give "Doctor's Hints." Those that have appeared are very practical and useful.

The members of the H.R.B.K.A. are reminded that the annual meeting takes place on the 18th September. The meetings have not been attended of late as well as they should be. Beekeepers should remember that Unity is Strength. If honey raising is to be a profitable employment the comparison of the *single* versus the *bundle* of sticks should not be forgotten.

A Mr Carl Schræter, in *Deutsche Imker*, reports entire success in the cure of foul-brood with carbolic acid. As generally used it is a failure, being too weak if diluted, and driving the bees out if full strength. He uses full strength, a tablespoonful mixed with as much tar, put under the frames in a little box, open enough to allow evaporation, but bee-tight. That's the whole cure, renewed every three months.

We have a large supply of "Hopkins' Australasian Bee Manuals" to hand, which we shall be pleased to forward post free on receipt of 6s 6d postal notes.

The Hon. R. L. Taylor, of the Michigan Experimental apiary, U.S., demonstrates by experiment, that it is better to winter bees on sugar than on honey stores in North America.

A beekeeper, who has a neighbour with a foul-broody lot of bees, complains bitterly that nothing was done at the Convention, re legislation on this matter. We wish that beekeeper had been there to remind them of it.

We would remind those of the New South Wales beekeepers who have not taken shares in the Honey Supply Co., they are neglecting a great duty to themselves, their fellow beekeepers, and the industry generally. The deposit money is only 5s. per share, and the secretary is Mr J. Trahair, of Messrs. Hebblewhite & Co., Sydney.

Mr. G. M. Doolittle does not agree with superseding queens after their second year. As to a queen only laying say 200,000 eggs in her lifetime, he instances one queen that gave 259,000 eggs in 63 days, some of his queens had done good work in their fifth year, but at the above rate, in three years a good queen would lay 729,000 eggs.

Willie Atchley, writing to *Gleanings*, speaks of eggs being found in upper stories where no queen could be. He has found, by careful and close watching and is positive that all such eggs are laid by worker bees and are drones, and that bees never carry eggs from one cell to another, nor to any part of the hive. The first place a laying worker wants to lay in is queen cells or queen cell stubs. He has counted more than fifty eggs laid in queen cell stubs by laying workers. But it is true, nevertheless, if there are no queen cells or queen cell stubs, the laying workers will then use the drone comb first, and lastly they will lay in worker combs; and he has seen eggs so evenly deposited by laying workers that the work could not be detected till the larvæ were sealed.

We are in receipt of two most complete and useful catalogues, either of which, we presume ere this, is in the hands of most Australian beekeepers. The first to hand was that of Mr R. L. Pender, whose extensive manufacturing works in Maitland are well-known to many of our readers. It is well illustrated throughout, and was printed at the *Bee Bulletin* office. The other is from the enterprising bee man, Mr H. L. Jones, of Goodna, Queensland. It also is well illustrated and got-up, and will no doubt be much appreciated. As with advancing spring live beekeepers will find themselves in the midst of a lot of "wants" these catalogues will be very welcome.

C. G. V. thus writes in the *British Beekeepers Record*:—"Some may say, what is the good of getting such a lot of honey when there is no market, or only a low price to be obtained for one's produce? Mr M'Nally, in this month's *Record*, has laid it down that the cause of the drop is that curse the middleman, coupled with a sudden inpouring of quantities of honey by small apiarists. It may be answerable for part, but I think the real cause must be that blessed 'Free Trade,' which allows a quantity of so-called foreign honey to glut the market at a low price." Interesting this, is it not, to those who look to England as a market for Australian honey!

In "Heads of Grain" in *Gleanings* Karl R. Mathey says:—"In Germany great complaint is made over the depression in bee culture, and for this the new tariff law is responsible. America and Switzerland send into Germany nearly one million dollars' worth of honey, and this is sold at so low a price that, together with low protective duty, it renders it out of the question for the German beekeepers to hold their own. So also the price of wax has suffered an important decrease of about 50 per cent. in price. That is, from 48 to 60 cents. it has fallen to 26 and 30 cents. From this we see there's no longer any motive for keeping bees in Germany; and worst of all is the adulteration of honey, against which the law seems to provide no ade-

quate defence. Besides, to add to the trouble of those who live in the Lonnenberg Heath, and who cannot get even the poorest kind of extracted honey, large quantities of so-called Lonnenburg extracted honey are thrown on the market." [Strange, a recent par in *Gleanings* stated a German court fined a man \$700 for selling adulterated honey!]

THE BRISBANE EXHIBITION

Which took place on August 7th, 8th and 9th, was a great success, the attendance being exceedingly large. Very little was said about the apicultural part of the show by the Brisbane press, on account of it being judged two days later than the other exhibits. This delay occurred through two produce dealers, who knew nothing of bee-culture, being appointed judges. The exhibitors objected to this, with the result, that a most competent judge in the person of Mr. D. R. McConnel, of Indooroopilly, was appointed to act. This gave the exhibitors much satisfaction and even those who were unsuccessful admitted the impartiality of his decisions. There was only one exhibit for honey, but for Italian bees there was quite an increase in the number of entries, no fewer than six competing. Best hives and implements for the apiary, H. L. Jones, received 1st prize with R. J. Cribb 2nd. The winner's collection was specially recommended by the judge for neatness and completeness. Mr. H. L. Jones also secured 1st prize for both surplus and brood foundation.

12 lbs extracted honey, Miss Helen T. Fitzgerald 1 entry.

Best hive of Italian bees, to be shown in an observatory hive so that the queen can be seen, H. L. Jones 1, and silver medal (queen specially commended); Frank Burbank and H. L. Jones equal for 2nd. Both recommended for bronze medal. 6 entries.

Best foundation for brood combs, not less than 6lbs, H. L. Jones 1, G. W. Smith 2. Three entries.

Best foundation for sections, not less than 4lbs., H. L. Jones 1 (specially commended), G. W. Smith 2. 3 entries.

Best hives and implements for the apiary, H. L. Jones 1, R. J. Cribb 2. 2 entries.

THE MINMI SHOW.

The following were the awards at the above :—

Most attractive display of honey, H. W. J. Taylor 1.

Three jars honey, A. E. Ayerst 1, C. Osborne 2. Best beeswax A. E. Ayerst 1, R. A. Taylor 2.

Mr. J. Hopkins again acted as judge and gave the greatest satisfaction.

NORTHERN AGRICULTURAL ASSOCIATION, SINGLETON.

The following were the prizes awarded at the above, which took place on the 15th, 16th, and 17th August :—

Most attractive display extracted honey, T. H. Moore. 2 entries.

Most attractive display honey in comb, John Sattler, 1, T. H. Moore, 2. 3 entries.

Comb honey, best 6 1lb sections, C. H. Dight 1 and two.

Extracted honey (liquid) six bottles or jars, Peter Krams. 9 entries.

Extracted honey (granulated) six bottles or jars, Peter Krams. 6 entries.

Best queen and bees in observatory hive. John Sattler, 1. 3 entries.

Beeswax not less than 10 lbs., T. H. Moore 1, Henry Horaden 2. 8 entries.

Comb foundation, best three sheets, different thicknesses, R. L. Pender 1 and 2. 7 entries.

Best Honey Extractor, R. L. Pender 1 and 2.

Best beehive suitable to the district, R. L. Pender 1, T. H. Moore 2.

Cakes made with honey instead of sugar, Mrs. Jas. Moore, jun. 1, John Hayes 2.

Collection of fruits, preserved with honey instead of sugar, Mrs. Manly 1, John Hayes 2.

Collection of jam made with honey instead of sugar. Miss Collett 1, Mrs Manly 2.

The judges were Messrs A. J. C. Vogeles, H. W. J. Taylor, and E Tipper. They used the scale of points adopted at the 1893 Convention, judging separately, and as each judging was compared the uniformity of awards was singularly in accord with each other. The exhibitors were thoroughly satisfied.

Mr Geo. Packham, Molong, writes—
I went through some of my bees to-day for the first time this season, and find them in good condition. They are working when it is fine on white box and iron bark.

THE LAWS OF THE BEE-HIVES.

BY WILLIAM D. RUSSELL,

With apologies to Rudyard Kipling.

Now these be the laws of the beehive,
Provided by nature for them,
Like the laws of the Medes and the Persians,
They may not be altered by men.

As the walls of historical Spartan
Comprised of its people—you see.
That the strength of the hive are the workers,
The strength of the workers the bee.

The mother of all is the Queen Bee;
She reigneth supreme in the hive;
And while she continues to prosper
The rest of the colony thrive.

When the queen lays an egg in a brood cell,
That's one-fifth an inch in its length,
The bee that emergeth in due time
Shall add to the hive's working strength.

But if laid in a cell that's much larger,
And covered e're long with a dome,
At the end of a couple of fortnights
Hatches out a big male bee—a drone.

While a bee is a downy young worker,
It shall stay in the hive and at home
And shall work as a nurse-bee, until it
Has the strength of a bee that's full grown.

When grown, it shall go to the forest,
To gather the nectar that's there,
And then to the hive it shall bring it,
That all in the honey may share.

The hive of the bee is its castle,
Through its portals no stranger may stray,
For the guards at the entrance are waiting
To drive the intruder away.

No bee shall go robbing his neighbour
Of his stores, or as quick as a breath
The bees of that hive shall pounce on him—
In a moment they'll sting him to death.

Each day when the sun shineth brightly
The bees to the forest shall roam;
For the day is for getting the honey
The night for making the comb.

Beside the sweet nectar thou findeth
In the bloom of the hill and the dell,
Thou shalt go the flowers and gather
The grains of pollen as well.

As the season approaches the winter,
And the winds through the crevices drive,
Thou shalt gather the propolis and with it
Stuff up all the cracks in the hive.

When nearing the end of the season,
And the drones are not needed about,
By the scruff of the neck you shall take them,
And tumble the gentlemen out.

If by chance, from some cause or another,
The queen be removed or be slain,
You shall rear from an egg that remaineth
Another. So prosper again.

The disease that attacks the embryo
Is known as foul brood among men,
But up to this year of our Lord, there
Has no cure been discovered by them.

The sting of the bee is the weapon
With which it defendeth its store,
But the bee that once stingeth a man, it
Shall pull out its sting nevermore.

Now these be the laws of the bee-hive,
And needful and simple are they.
The bee that would thrive in a bee hive
Must remember each one to obey.

WHAT A VISIT TO THE CARRINGTON APIARY DID.

Mr. Editor,—Some 18 months ago I made the acquaintance of a typical Scotchman, a level-headed, genuine, warm-hearted man, about 55 years of age and residing not 100 miles from Gosford, but one who from his experience of black bees in gin cases "would have nothing to do with the vicious and profitless creatures." He resides in a locality eminently suited for beekeeping and I have frequently tried to awaken in him an interest in our buzzing pets, but seemingly to no purpose.

It however, happened that a few days ago I had the pleasure of his company on a visit to the Carrington Apiary, and this settled the question, speedily, conclusively and, I think, permanently.

This apiary is situated about three miles from Gosford, at Narara. It is admirably placed at the head of a valley opening towards the east, and flanked on the north, west, and south by hills densely clothed with the semi-tropical vegetation characteristic of this district. It is the most complete, best arranged and best kept apiary within my knowledge, and no wonder it drove home the part of my argument, when brought under the notice of a keen observant man.

I introduced my friend to the capable, courteous, and ever obliging manager, Mr. T. Schroder, and we were speedily

on a tour of inspection. First we viewed the neatly kept grounds (now prepared for the coming spring), and the straight clean paths evidently pleasing to him. "But what are these?" he asked in astonishment, as we approached and looked along the corridor extending between a double row of neatly painted and methodically arranged Berlepsch hives, numbering about 150, and containing vigorous colonies, housed and comfortable looking on their two tiered stands, under a firm, well finished neat shed of galvanised iron. "There are the bees," I said. "What, all these? What, all these buildings—all this outlay and care just for bees?" said my friend. "Yes," said Manager Schroder, "We must take care of our bees if we want returns from them. "Just come and look into this hive." And he removed the back of the hive and showed him a fine colony of Italians prepared for winter. Permit me here to state, that Mr. Schroder is a firm believer in good winter preparations, although the climate here is mild. Weak colonies are strengthened, each is given a good supply of winter stores, the strong being made to help the weak, and the interior space is contracted by the removal of superfluous combs and pressing forward the neat well-fitting glass followers, so that the heat generated by the bees is conserved. We then proceeded to the honey and extracting house, and were shown the complete arrangements for carrying on these parts of the apiculturist's occupation. Here were two extractors (made on the premises) mounted on stands so that the honey flows from them into two large receiving and evaporating tanks. These tanks are divided into divisions, for keeping separate the differently-coloured honey, and the strainers are so arranged that by a slight re-arrangement the honey can be turned into any of these divisions. Then in an adjoining room are samples of honey and wax prepared for show purposes together with an expensive rack containing hundreds of combs now out of use, and so arranged that in a few minutes the whole can be sulphured.

"This is astonishing," said my friend, "there is evidently something in bees to warrant all this expense, besides, I see bee-keeping is quite a profession." The workshop next received our attention. Here are all the tools and appliances necessary for the successful carrying on of an apiary and here every requisite is made by the manager and his assistant. These having been fully inspected we bade farewell to our kind and obliging host, delighted with all we had seen, and thanking him earnestly for the courteous, hearty, and instructive reception accorded us at the Carrington Apiary.

On the way home I discovered my friend had made his mind up to become a beekeeper. "Yes" he said "there is something in it, I live in a good locality for bees and I must begin in the spring."

Thus, Mr. Editor, a visit to this complete and well kept apiary did in a few minutes what I had failed to do in 15-months. It convinced my friend that beekeeping properly managed, is a profitable and pleasure giving occupation.

CONTRIBUTOR.

SHOULD SCHOOLMASTERS, &c.

I believe it is within the limits of justification to enlarge upon the above subject. From what I can gather it appears that teachers like to keep bees, and that they have done much in the way of educating others in the art. This being so, and admitting that the industry is yet in its infancy and requires development, it seems to me the best course to adopt would be: To make it compulsory for every public school teacher to keep bees in order that he shall instruct the pupils in the method of systematic beekeeping. The educational department recognised the utility of this course already since it encourages the teachers to keep bees, so there ought to be no obstacle in the way in that direction, while the teachers will be with us from the outset. Just think of it beekeepers—all teachers keeping bees! Beekeeping must thus go ahead! A few

teachers may rise objections at first, but when they take into consideration what beneficial results the pupils will derive thereby and the pecuniary profit the teachers themselves will reap, such objections will soon cease. This course would be fair and just. At present the children at some schools have the advantage of gaining a knowledge in beekeeping, but those at others are deprived of this means of teaching. All pay equal for the children's education; all should stand on the same level as regards instruction.

Do teachers not instruct others in the art? Look around you and see. Do you want to lose the best, the most generous of men? Take Mr. Mansfield for instance, a teacher. Not enough with giving instructions, he now offers to forfeit £10 to the latest infant of his, the National Beekeepers' Association, which sum, by the way, the Association may consider as theirs, and it will go a long way towards defraying the extra expenses incurred through the change of the name, for which he deserves another medal—leather-coloured. What beekeeper has offered the like sum before? Who will do it after? What beekeeper has a ten pound note to spare, if he has one at all, not to mention the risk attached to a bet? With other civil servants the matter stands somewhat different, as they have shown no desire to benefit others by their keeping bees. They are, however, under control different to teachers, and I will not interfere at present.

About half a dozen hives of bees might be enough for any teacher to make a start with, but if he desires to go in for more at the outset, I would not restrict as to number of stocks. In Germany a somewhat similar course has been under consideration some time ago, but I do not know whether it has been carried out, and if, how it acts. I think all beekeepers will agree with me that the idea is a good one, and I hope to see it in effect ere long.

W. ABRAM,
Beecroft.

GOOD WORDS FOR AUSTRALIAN HONEY

Mr A. Gale, of the Technical Department, Sydney, having received the following very interesting communications, has kindly forwarded them to us for publication:—

From Lord Carrington,
50 Grosvenor Street W., London,
June 22, 1894,

My dear Sir,—Will you thank the Association for kindly sending me some honey, which has arrived in capital condition.

Yours truly and obliged,
CARRINGTON.

Albert Gale, Esq., Technical College,
Sydney, N.S.W.

The Mansion House, London,
June 21, 1894.

Sir,—I have had the pleasure to receive, through Sir Saul Samuel, the Agent General, your letter of the 13th April, and the samples of New South Wales honey which you have so kindly sent to me. The honey is delicious, and you have my sincere good wishes for the success of this interesting phase of industry in your colony. Yours faithfully,

GEORGE ROBT. TYLER,
Lord Mayor.

A. Gale, Esq., Technical College,
Sydney.

104 Eaton Square. S. W.,
June 22, 1894.

Dear Sir,—As Lord Jersey is absent in Canada I beg to write on his behalf as well as on my own, to thank you and the members of the New South Wales Beekeepers' Association for your great kindness in sending us the samples of N.S.W honey duly forwarded to us by Sir Saul Samuel. I am taking the case to-morrow to Osterley Park, where I am expecting some friends, and shall have great satisfaction in introducing these products of Australian industry to their notice. I have written to inform Lord Jersey of the acceptable present which you have sent us, and which I hope he will share on his return. Believe me, yours sincerely,

M. E. JERSEY.

Albert Gale, Esq., N.S.W. B.K.A.

THE CHICAGO HONEY EXHIBITS,

Mr. R. Patten, the secretary of the committee who forwarded the honey exhibits from the H.R.B.K.A. to Chicago,

has received the following award, which he has kindly placed at our disposal :—

NEW SOUTH WALES.

Department A.—Agriculture.

Exhibitor—Hunter River E. K. Association.

Address Tamworth. Group 3. Class 24.

Exhibit—Honey.

AWARD.

Superior honey of several varieties peculiar to Australia, well ripened, of good body and fine flavour.

(Signed) EUGENE SECOR,
Individual Judge.

Approved—Geo. C. Taylor,

President Departmental Committee,

Copyist B. A. Date, May 24, 1894.

JNO. BOYD THACKER,

Chairman Executive Committee of Awards.

NON-SWARMING BEES.

ARE THEY DESIRABLE?

In these days of advanced apiculture, we constantly hear the cry, "Oh that we had a race of non-swarming bees." Many apiarists are devoting their time to trying to breed a strain of non-swarmers, but I venture to say that they will never succeed, as long as the statement stands good in the good old book, "Be fruitful and multiply." Let us consider for a few minutes, whether it would be a step towards perfection, could we attain that end. Would our queens be as prolific, would they fill our hives to overflowing with bees in the early spring, so as to be ready to give us a large surplus when the honey flow came? I for one very much doubt it. Is it not the queen's desire to raise bees enough so as she may lead out a large swarm in the early spring, and so fulfil her part in replenishing the earth? Is not this the reason that she deposits an egg in every available cell, (if weather and stores permit)? Again, would the worker show that energy in gathering honey, if they had no desire to swarm? Is it not animal instinct that prompts them to hasten to the fields at the first streak of light that heralds the birth of day, and return to their hives so heavily laden, that many of them drop to the ground several feet away from the

alighting board. Perhaps many will ask the question, why do they store so much honey in the supers after swarming season is over, if it is the desire to swarm that prompts them to gather so much honey? Why not simply fill the brood chamber, as that would be sufficient stores to carry them over? Has the desire to swarm anything to do with this? I would answer such a one, Yes, most certainly it has; in fact this is where the honey producer receives the greatest benefit from the swarming impulse. Instinct seems to prompt the bees to store as much honey as they can gather (after the swarming season is over), so that they will have an abundance of stores to carry them through the winter, and rear a great amount of brood in the late winter and early spring, so that they can send out a large swarm as soon as the flowers begin to open and secrete nectar.

The thrifty apiarist takes advantage of this desire to store honey on the bees' part, and encourages them all he can, by giving them frames of empty combs or frames filled with foundation, so that the bees do not lose any time in comb building; and as soon as the combs are full of honey, he promptly takes them away and extracts the honey from them, giving the bees empty combs in the place of the full ones. The desire of the bees to have abundance of honey for spring brood rearing prompts them to again fill the combs with honey. Hence the apiarist can continue extracting from each hive every few days as long as the flowers secrete nectar in abundance.

Let us now in fancy take a look at the non-swarming race of bees. We will commence in the early spring, say September. See there is only a small patch of brood in one or two frames; the queen seems to think there is plenty of time to rear bees to gather honey enough to last them through the winter. What's the use of rearing a lot of bees? They would only fill the hive and make it so hot and uncomfortable; and besides what's the odds, we only want to keep

alive; so therefore there is no need of rearing many more young ones than there are old ones dying. Well, they go along in this way up till midsummer, just increasing slowly until there is a fair swarm; then they begin to think about winter stores. So they gather enough to fill a few of the frames at one side of the hive. Just a few colonies may fill the eight frames in the brood nest, but not one would go into the supers to store honey. What would be the use? Eight frames would hold all the honey that they would need to carry them through the winter, and as they would have no desire to swarm they would not rear much brood in the spring, and consequently not need so large a supply of stores. The above is not all imaginary, as I once had a colony that refused to swarm, and at first thought I had a great thing, so I reared several queens from brood taken from that non-swarming colony. The young queens hatched alright and commenced to lay, but to my surprise they did not keep their hives filled with bees, neither did their bees seem inclined to store much honey, when all the other hives in the yard were just booming things. Well, I kept them through the winter, and watched them closely in the following spring to see whether they would swarm. Oh they were non-swarmers and no mistake, and they were almost "non-brooders" too. I think it was some time in December when I pinched off every one of their queens' heads, as they had not got their hives half full of bees. I then introduced swarming queens to them with something like an assurance that I had had enough of non-swarming bees. Ever since then it makes me feel sad to see others trying to raise a race of non-swarming bees. In that summer and spring I saw what the busy bee would dwindle to if we keep going against nature in trying to breed out the desire to swarm.

Just take a look at the advertising columns of the leading bee journals, and see what a number of the queen breeders' ads. contain these words: "All queens

reared under swarming impulse." Does not this show that all of the leading apiarists consider queens thus reared as worth more than those reared by other means and under other conditions?

What we should devote our time and use our best energies in is breeding bees for honey gathering qualities and gentleness, and then use some one of the many good plans of controlling increase, and turn the desire to swarm to good account in the greater yield of honey per colony. I have written this article thus early so that any who were thinking of trying to raise non-swarming bees the coming season might be caused to stop and think well over the subject before making the attempt.

GEO. COLBOURNE, JR.,
Cave Creek.

A correspondent at St. Peters writes— I received the A.B.B. all right, and looking for the next. My bees stored enough honey to take them through the winter so far. I cannot say where they got it from—good luck to them; there is a grocer or two and a jam factory—every little helps; by-the-bye, a brick yard and a pottery. Excuse my little joke. There is a little damp in my hive, in front above the entrance. I have a cover on the hive, and the mat on top with roof on it. I have now placed flannel on the frames. Is that right? Does it take brood longer to mature in the winter than summer? If I am not mistaken I have had a patch of brood in my hive since May 5th until August 5th, and about the latter date the queen started laying. Every time I opened the hive within these dates I could see young bees. I think they were young by their flowery appearance. They seem alright, plenty of honey, not more than three or four dead bees in front of hive on the ground.

[A piece of old corn sack is better than flannel. Re the damp, the moisture condensed from the heat given off by the bees coming in contact with the cold timber will produce this. Brood does not take longer to come out in winter than in summer, unless the bees fail to keep the necessary warmth.]

THE CONVENTION.

(Continued.)

SECOND DAY.

Mr. James' question, "What is a pure Italian bee?" was now called on, but Mr. James being unavoidably absent, Mr. Bradley was called on to open the subject, "Diseases of bees, and jointly the effect of our present system of queen breeding." Mr. Bradley read an extract from the *Agricultural Gazette* of April by Mr. Helms, page 257, giving a description of what Mr. Helms termed bee paralysis. As he (Mr. B.) differed from Mr. Helms he would give his views. The disease had no right to be called bee paralysis. Calling it by this name has prevented hundreds from experimenting on it. Had we some other name for it we would have tried to cure it long ago. Paralysis is a loss of brain and nerve power. He had never heard of it being infectious or contagious. Mr. Helms attributes both to some bacillus or microbe organism. There were two diseases. "Depilating" disease is the first to appear. When that appears you may look out for the other disease. Mr. Bradley reviewed Mr. Helms' connection with it at Mr. Kitchen's apiary. His (Mr. Helms') method with it was rather elaborate. Setting fire to the grass was no doubt effective. He (Mr. Bradley) would try something more practical. He succeeded by simply chipping in front of the hives. He cured it in every instance with the oil of cinnamon. He cured it in all hives with the exception of two, and had disease there for nearly a whole year. Mr. Helms attempted the cinnamon cure, and thought that the oil of thyme was better. He (Mr. Bradley) got some, and tried both hives one with the other, and cured both (unfortunately). Mr. Helms objects to the cinnamon because it is irritating. He (Mr. Bradley) finds oil of thyme quiets them still more. Cinnamon is superior to thyme. In this disease the bees are bloated. Bee paralysis no doubt is a bacteria. The sting was not given for the sole purpose of defending themselves. He

believed that the sting was given to bees (one purpose rather) that the formic acid that they secrete in their sting shall be available to clear themselves from bacteria. Give the bees the use of their sting and they will at once set to work to clear themselves from bacteria. If there is no formic acid available for use on the legs, the bacteria beat the bees at once. The first thing is to purge the bees with Maclean's mixture. Give it quietly just before corroborree time. Keep the hive quiet till they have filled themselves, and then put them out bodily, for they will not go out on the sugar they eat. Their excreta is scattered far and wide. As soon as they are purged they can use their sting and set to work to remove the bacteria from their bodies. You must change your hive, put them in a clean hive. When you have done that the probability is you have them weakened and not fit to do anything. I do not box them with another hive. I set the queen going. If men are weak, the doctor supplies them with a tonic. Bees have their tonic, and if you give the bees the tonic you can make the queen lay quite up to winter, and as to the tonic he would name he would make her lay right through the winter. But it was not always advisable to do it, as she must give way sooner or later. Sooner or later you would have to replace the queen, which was not always convenient with 50 or 60 hives. Under these circumstances he would recommend a tonic for the bees:—Eight ounces sulphate of iron, 1oz. sulphuric acid, one gallon of water. One tablespoonful of this mixture in a quart of water, and give it to the bees. Don't add the water to the acid, but add the sulphuric acid to the water, stirring it all the time. Don't put it into metal; put it into a wooden trough, and if you put a little ~~zinc~~ ^{sugar} to it they will flock to it in thousands. It will set the queen going, and she will lay right through the winter. This disease is entirely connected with our system of queen breeding. It comes from sickly stock, there is no shadow of doubt. They had been importing queens. These

queens undergo great hardships in the long journey. They are not acclimatised — put into quite a different climate altogether, and called on to perform duties they are fully unequal to. It would be far better for the queen breeder to get a queen from a climate similar to his own than from America or abroad. The best queens he had came from Adelaide. (Mr. Patten: Hear, hear.) There and the climate of Campbelltown was very much alike. If you took a black stock in our bush, is it not wonderful how they thrive and multiply? They are always in their own climate, and they are fairly acclimatised and fit to work in that climate. It was not right to get a queen from the northern and send them down to the southern climates. You would find by that means queens are no use. Referring to bees in the bush, there was a great difference between queen breeding and queen rearing. He had seen queens he would not take 10s to put into a hive, — that he would not have at any cost. Doolittle recommends with those cups of his that you can raise from twelve to fourteen queens in a hive. He had the greatest respect for Doolittle as a beekeeper, — the greatest man they have had yet, — but in this respect he (Mr B) must differ from him. He must bring him back to the laws of nature. Mr Doolittle says twelve or fourteen queens can be raised in one hive. Don't the black bees in the gin case live four or five years? Take a gin case as soon as the first swarm is gone out; you will not find twelve or fourteen queens there. (Mr W. S. Pender: Twenty or thirty.) How many would live? The first out is always the strongest queen. If the hive is poor she will supersede at once; if strong she will go out. The first queen on the Doolittle principle will not destroy the twenty queens. (Mr Patten: What's the difference?) There's more food given to the strongest queen. The larvæ is all put in at the same time, and one queen will come out several hours before the others. The first queen has possession of the hive. Look at a string of

cells on a bar. You can look and see which will be out first. Before she comes out of the hive or cell you can say "that is the best queen, and that the second-best." The rage for cheap queens has been so great that many queen breeders get twelve or fourteen, and they can raise them all alike. Jennie Atchley says she puts out 5,000 cells every year, and gets 2,500 queens. How is that to be done? If we take a bees' nest in the tree it is seldom more than three queen cells you can count, and the rest is looked upon as very little good. I don't hesitate to say that it is simply impossible for anyone to go and put out 5,000 queen cells a year, and recover 2,500 good ones. What we have been doing here to a very large extent is putting out cells and rearing a lot of queens, but beyond three or four they are of weakly constitution, and their stock is not able to stand climatic changes; and there was no place where climatic changes were greater than in New South Wales. Are these weakly-constituted queens and their stock able to stand these changes? The result is, disease unquestionably follows. We must breed queens and stock that will stand wear and tear, and work for years, but now after the second year men have to look around to requeen their apiary, but it was not so in the gin case. The queen there would live for four or five years and do good work. I strongly recommend every beekeeper to read Mr Helms' work about spraying bees. I did not mention, when making bees swarm out to purge them sometimes it is necessary to spray them. It is not always so, but it was sometimes necessary. (Mr. Bradley exhibited a sprayer he had used for about thirty years.)

The Rev. Mr Ayling did not know what bee paralysis was, but a friend of his his bees were all dying off. He got him to send the queen to him. He introduced her straight away at once, and she went laying away, and there was not a trace of paralysis.

Mr Abrams said this paralysis, or what goes by that name, was quite new

to him—only about four years. It has been known in other countries. It was known in America long before it was known in Australia. He cited a few instances from foreign bee journals. In Indiana and Missouri fully two-thirds of the bees died off. Even chaff hives made no difference. One said, "I have lost every bee in my hives during the winter." Another lost 700 out of 900. The *American Bee Journal* in 1887 said—"Most of the beekeepers in our district lost nearly all their bees during the winter." Doolittle said fully two-thirds in his district died, and "of my bees which have been wintered on the outside stand fully 25 per cent. died." This showed that there was really something which caused the loss of a great number of bees during the winter. In their ordinary condition the bees could not die out as they did in America. He (Mr Abram) had come to the conclusion that the disease known as paralysis was a disease imported from America. He never knew of the disease till four years ago, when it broke out in the Maitland district. It would not pay beekeepers to go on losing 75 per cent. The question remained, what was to be done to get a cure? In America they would make remedies, but one remedy contradicted another. There was no remedy that could be relied on as successful. In about a fortnight it breaks out again, perhaps worse. From all he had seen he was convinced it was a bacillis. We must give it into the hands of scientific men, and induce them to find out what is the cause of the disease. Mr Helms was almost convinced that the cause of it was a bacillis. If we cultivated the bacillis in the different stages, and watch, practical beekeepers may perhaps drop on the very thing that could cure it, but it was fully a matter of chance. We must try to persuade the Department to go more fully into the matter.

Mr Bradley had been convinced for a long time it was bacteria of some kind. We should get something that would kill the bacteria without killing the bees. He recommended oil of cinnamon.

Mr Kitchen said Mr Helms had sprinkled or sprayed with epsom salts—twenty drops to a quarter pint of luke-warm water. And disinfected the ground around by ashes.

Mr Bradley—Cinnamon was a most powerful disinfectant.

Mr Mansfield said one portion not yet discussed was the bearing of queen-rearing on this disease. Complimented Mr Bradley on his able paper and his research. The Chairman and Mr Bradley were of opinion that it was bacillis that caused the disease. If so he (Mr M.) did not see the connection of the attacks of bacilli. What is the use of a vigorous system when attacked by bacillis? He had seen people of powerful frame carried off by typhoid. It was not warded off by strong constitutions. As to paralysis in the Hunter district in 1890. He commenced about that time in the bee business extensively. He had it in fifteen or seventeen hives, and the disease was very prevalent both in frame hives and in the bush. Referring to the *A. Bee Bulletin* reports, fully 90 per cent. of the bees in the bush disappeared as a result of it. Since the disease disappeared they had began to be very common again. It is said our queen-rearing methods rather assist the disease. Bees in the bush suffer from it just as much or more than bees raised in the ordinary way. That time he managed to get over the winter with two swarms. About that time he commenced to import in connection with others, and since then had not been troubled with the disease. It seemed to be an autumn disease. He was inclined to put it down to pollen from the pumpkin flowers, but others seemed to have it as well. During the present autumn it has been very prevalent in various parts of the Hunter district, more especially at the upper branches of the Paterson River. The announcement of the paper did not appear in time to give him an opportunity to give the result, but he had made some enquiries among the affected apiaries as to how they raised their queens. One gentleman named Woodhouse, who had 60 or 70 hives; another had over 100; and

all were more or less attacked by paralysis. One increased in the natural way, the other by the ordinary methods. They too got information about the sulphur cure, and by scattering it over the combs it had a very great effect. It was in these two cases, and by one application, cured. I happened to be there the following day. Before that time the bees could hardly come in and out by reason of the dead bees. A great many had increased by obtaining bees out in the bush, but in all cases they were bees that were bad in any way. Some had 50 hives, but did not know how to rear a queen, but could put a swarm in a box. They had 50 hives, and all disappeared owing to this attack of paralysis. Another with fourteen hives had never reared a queen, divided and allowed to increase in the natural way. He said when he (Mr. M.) left he had four and they would disappear in time. A beekeeper at Port Macquarie had something like 40 or 50 hives. His brother knew something of beekeeping in modern practice and undertook to transfer them to modern hives. When he went to do so they were rotten with foul brood, so rotten they could hardly make a job of them in transferring. They let them take their luck, and in the course of a while the disease entirely disappeared from those hives. Could not say that the queen rearing had much to do with the question. The sulphur cure may be effective and it may not. At a meeting of the Hunter River beekeepers one gentleman had heard recommended common salt as a cure. He got salt and brought it home. He delayed mixing it and the disease disappeared. If the salt had been applied it would have been said it was the salt that did the cure.

Mr. Bradley said in the matter of salt the bees must have been in some way or other purged. If of a strong constitution you would not become a victim, but if a weakly constitution disease would follow it. Weak colonies seem more generally attacked, and suffer more or less.

Mr. W. S. Pender—Much of what Mr. Bradley says in reference to the breeding of queens is seemingly correct, but he did not hold with Mr. Bradley in many of his points. To take the queens and breed four or five generations before getting a queen from which the apiary was to be stocked could not be of much advantage, besides the risk run of inbreeding by having the younger queens meet with brother drones to those that met their mothers.

Mr. Nicholas, of Wallalong, and Mr. Kitchen made some remarks.

Mr. Shallard had tried salicylic acid and had cured. Had tried it half a dozen times since and believed it effectual. He did not think it was the same disease they called paralysis in America. He heated the salicylic acid and dissolved it in alcohol.

Mr. Abrams said when first importing Italian queens years ago, he had to look for black bees to introduce them to, and he found foul brood among the latter then. It has been fully proved that the Italian bee was as strong as any other bee. In breeding the selected breeder is always the best. You now say, why do bees in the bush get attacked in the same way as other bees that are bred by beekeepers? It was 50 years ago when bees were first introduced in the colony. The number was small and they were occasionally added to by importing fresh blood. Some bees are better than others, and breeders have bred from them. They selected for those qualities most desired.

Mr. Bradley said foul brood existed in the Appin forest over 20 years ago. The queen breeding was generally to blame for the extent of disease throughout the colony.

The question then dropped, and the Chairman called attention that the annual meeting of the Beekeepers' Union would take place after dinner.

The members then adjourned to the yard of the College for the purpose of being photographed.

THURSDAY AFTERNOON.

The annual meeting of the Union now

took place. In the absence of the president (Mr. Robert Scobie, M.L.A.), the Rev. J. Ayling, one of the vice-presidents, was voted to the chair.

Mr. W. S. Pender read a written address which had been forwarded by the president (Mr. R. Scobie). In the paper Mr. Scobie traced the history of beekeeping, and intimated that he thought that migratory beekeeping would become more common than hitherto.

The secretary (Mr. Major Shallard) read the annual report, which recounted the steps taken with a view to securing legislation to prohibit the adulteration of honey. The committee had been informed that it was intended by the Government to introduce a Pure Foods Bill, the object of which was to guard against the adulteration of any kind of food.

The annual statement of accounts was submitted.

Notices of motion of alteration of rules had been given by Messrs. Trahair, Mansfield and Abrams. These were now discussed. After discussion it was found the constitution demanded that alterations had to be discussed one by one. Rule 1 was amended as follows: "That the name be the National Beekeepers' Association," moved by Mr. C. Mansfield, seconded by Mr. Patten and carried.

A misunderstanding between the chairman and members took place. He ruled that an amendment of which notice had not been given could not be moved; and this rule being dissented from by a majority he left the chair, taking a seat elsewhere. Mr. James T. Wilshire was then elected chairman, and the consideration of the rules was proceeded with.

The further consideration of the proposed new rules was, after discussion, postponed till next general meeting.

The election of officers for the ensuing year resulted as follows:—President, Rev. J. Ayling; vice-presidents, Messrs. A. Gale, W. Abram, H. Lord and J. W. Pender; secretary, Mr. H. R. Whittell; treasurer, Mr. J. Trahair; committee, Messrs. Tipper, Seabrook, Allport, Shal-

lard, Bloxham, W. S. Pender, G. Gordon, Cadden, Bradley, Taylor, J. T. Wilshire, and James.

In the evening the convention resumed, and Mr. Trahair, in the absence of Mr. R. Patten, the mover of the resolution, read the report of the committee appointed to work out a scheme for the inauguration of a "Beekeepers' Co-operative Honey Supply Company." The committee's proposal was that the company should start with a capital of £1000, and that it should purchase the honey of the shareholders and dispose of it to the general public in the ordinary way. After some discussion it was agreed that the further consideration of this matter should be deferred until the following day.

On the motion of Mr. Gale it was resolved that next day an adjournment be made at twelve o'clock to enable the country visitors to see the museum.

Mr. G. James being unavoidably absent, Mr. Gordon, of Jamberoo, read his paper.

What are pure Italian bees? Those imported from Italy, having three bands, or those from America, with four and five bands, and called Golden Italians.

This question may not be new to all advanced bee-keepers, but is nevertheless one of great importance to bee-keepers as a body, and should receive more attention, in my opinion, than almost any other debatable subject, inasmuch as we bee-keepers have at all times given each other to understand, that pure Italian bees contain as a distinct character three yellow bands, not at all times shown clearly when the worker bees have no honey in the honey sack, but most decidedly are the three bands shown when the workers are filled and placed on a glass window. From the pens of many who have travelled all through the Italian provinces, not one admits that there are any bees of a golden color, but on the contrary, all admit that the bees to be found in their native clime are of a dark leathery color. Must we not therefore admit that in breeding for golden color, we sacrifice noble worth for greedy gain. But if bee-keepers will stop and look along the line of reason, it must appear apparent to all that we are courting diseases which should be, and is our aim to avert, in every possible manner; we cannot shut our eyes to the fact that all the so called golden bees are suffering an amount of disease at the present that was never known in the earlier days,

when the so called Golden Italians were unknown. From the latest advices from America and California, we find the Bee Paralysis has been making sad havoc among the apiaries, and in almost all cases appears where the golden beauties have had a footing.

No doubt in most cases we have ourselves to blame, as a demand existed for a bee that pleased the eye, and buyers deceived themselves into thinking that an Italian Queen, to be pure, must be golden to the tip, and the worker progeny four and even five banded. I do not wish to say that there are no such things as golden Italians in their natural clime, but who amongst us have ever discovered such. I must confess out of many queens received direct from breeders in Italy, I have yet to see a golden bee and queen, as a direct native of Italy, and has not the time now arrived when we should come to a definite decision as to what we are to accept as the true Bee of Italy. Hardiness, docility, and honey gathering qualities are the main feature, from a beekeepers' standpoint, and let us work with that end in view, putting aside all bias as to color and markings.

A lengthy discussion followed the reading of this paper, but no definite resolution was arrived at, the following taking part:—Messrs. Whittell, Abram, Rev. Ayling, Worrell, Mansfield, Seabrook, W. S. Pender, and Gordon—it being, however, generally conceded that any bee producing three bands was called an Italian, and that the principal American bees were probably a cross between the Cyprian and the Italian bee.

MARKETING OF HONEY.

(Read by Mr. E. Tipper at the late Convention.)

"The paper I have been asked to read is on "Marketing of Honey."

I shall divide the subject into two main parts, the Home (Australian) and the Foreign (English) market.

Re the Home Market last year the total amount of honey raised in the colony was estimated at 1,395,350lbs., added to which 59,000 was imported into the colony, though only 5000 pounds were sent out. The amount thus produced divided among the 1,200,000 inhabitants of the colony gives to each the magnificent amount of about 1 lb. of honey per head for the whole year! But beekeepers are crying out, what shall we do with our surplus? Were it possible to increase the quantity consumed per head to only 1½lbs., what a good thing it would be for beekeepers! Surely no one will gainsay that this, our Home market, cannot be improved to this extent. What stands in the way of this

increased consumption? And why is it at present so low? Have the people had bad and adulterated rubbish and got disgusted? Is it looked on too much as a luxury? or has it been for want of proper energy, or better ways of placing it on the market? Have the people had bad and adulterated rubbish? Give them a guarantee that what you are selling them is pure extracted honey. Increase the confidence of the public in good honey. Find out what becomes of the 600 odd tons of glucose imported into the colony last year, and if a lot of it was mixed with and sold as honey? If so go straight to the Government, tell them the nature of this material, the heavy penalties on its use in food in other countries, how it interferes with your industry; demand what the New Zealanders have got, a duty of 2d a pound on it, or never rest contented till in combination with other organisations, you have a substantial Adulteration Act passed and fully enforced. An Act that will compel honey to be sold as honey, and honey and glucose to be labelled as honey and glucose. In Germany, by the last news, a man has been fined 700 dollars for selling adulterated honey. And only in Sydney yesterday a man was fined very heavily for selling milk mixed with water, under the Pure Food Act. Surely we could get honey protected in a similar manner.

Is it looked on too much in the shape of a luxury?

Show by example that you yourselves have made it an every day requisite. Always have it on your tables; ask for it if from home; give it occasionally to your hospitals and charitable institutions; and at your shows do not merely exhibit it in nice fancy-looking bottles, but let each exhibitor also give a quantity, to be distributed gratuitously to the general public, same as is done by tea men, soap men, and others who make use of Shows to popularise the article they vend. I would suggest some cheap utensil to hold about ½lb. of honey, be used for the giving away of honey at shows. And always have printed recipes showing the various uses to which honey can be put.

I was very pleased at an idea of Mr. Munday's recently uttered, he would like to see it vended from house to house the same as milk, and measured out into people's own vessels the same way. Very much in the way of pushing the sale and consumption of honey depends on the man. Some men can raise honey, some can sell it, some can get rid of rubbish and adulterated stuff. The man for me is the man who can both raise and sell. The man to be shunned and watched is he who thinks he has done a very grand thing by getting rid of bad stuff. The man who can raise and sell is the man who is never ashamed to have a good label with his name and apiary printed on it. People get to know and like his honey. It always gets a higher local price, because the article has been good, and the man is known and respected as an

honourable upright man. I know of such men who never have any difficulty in selling their honey. Their honey may not be better than other people's, but the people know the man, and they know his honey to be good, and therefore they will have his before others.

Beekeepers cannot be too careful what honey they put on the market. Honey should not be extracted before it is capped. Honey should always be kept in a dry place, as whenever exposed it gathers moisture rapidly and is then liable to ferment.

If a beekeeper has honey of an objectionable flavour it is a duty he owes to himself as well as to his fellow beekeepers not to attempt to sell it. A few pounds of such honey might set quite a number of people with a dislike to honey, and cause the loss of sale of hundreds of times the amount. He should always put such by for winter feeding his bees; or use it in some other way himself. Comb honey does not seem to be much in favour in New South Wales. The beekeeper says the difference in price of that and extracted is not sufficient to recompense him for the extra trouble and expense. The public are also not aware that *comb honey retains the beautiful natural flavour much more than the simply extracted honey. It is the honey of honeys.* And another thing about comb honey is that it is *bound to be the pure thing and cannot be adulterated.* On the other hand, the beekeeper who raises comb honey cannot be too careful with it, and perhaps this is one of the reasons it has not become popular in Australia. Do not attempt to sell any sections that are not thoroughly complete. Before sending to market always keep in a dry place, and if selling to a grocer or storekeeper ask him to do the same. Use cartons for placing them in. Hold out for a price that will pay you. The grocers object that the honey in them bursts and runs down and messes the shelves. Care and caution on the part of the beekeeper will overcome this. But as I said of extracted honey, so one carelessly marketed section will spoil a whole district for the sale of any more for a very long time.

In marketing extracted honey one object should be that the vessel it is sold in should be as cheap as possible. If the pound of honey is to be sold in a vessel that perhaps costs 4d or 6d, people say, the first time—"Oh yes, that is a nice glass, that will come in handy," but the next time, "I don't want the glass, and so it is too dear." Unless they are people well to do, and like a little luxury now and then. The vessels that are most in favour with successful honey raisers and sellers at present, as far as my observations go, are the pickle bottle (because that is taken for the local beekeepers' product), the 9lb. tin and the 60lb. tin, with the beekeeper's name and apiary on a nicely printed label. Honey properly ripened, of the good qualities only, sell in either of these ways fairly well. But we want honey to take its place on the

grocer's shelf side by side, with, and take the place of if possible, *Golden Syrup*, and a lot of *cheap jams* that are now sold. To do that we must range up in line with them. Two pounds of golden syrup is put up in a tin with a nice showy label and retailed for 7d. Say we put up 1½lb. of honey in a similar tin, with a similar showy label.

At present, the good housewife would shake her head with a quiet smile and say, "made up stuff; I had some once and they don't catch me again." I have a letter which I only last week received from a well-to-do lady at Croydon, stating she knew I kept bees, and would I send her a 9lb. tin of honey, as it was only made-up stuff to be had in Sydney!! Is this true or not?

Again, discretion is wanted as to the time to send honey to market. There are always certain seasons of the year when more honey is produced than others. Those who can in any way hold back should then do so, and so assist in keeping uniformity of price. Honey, unlike butter or meat, will keep for years and improve with keeping. But what we specially want is organisation, with a central body that the public would gradually learn to look up to as that same respectable honey-producer I was speaking of.

And now as to the foreign market. There are millions in England who scarcely know the taste of honey. It is a luxury there. And the people who produce honey there don't want to see our honey placed on the English market. Quite natural, and I don't blame them. It might bring the prices down there. So those who are in the trade there run our honey down. It has a nasty flavor! Don't suit the English palate! They prefer JAMARCA honey! But they will give you about twopence a pound wholesale for it, and then sell it for English honey, and reap the profit themselves!

What we want is true patriotic Australians to go to the centres of population—to go there like the American bookmen came here, or the Sunlight Soap Company—backed up and commissioned by our Australian organisations, to cause this best of all nature's foods to enter the houses of the vast masses there who do not know what honey is, and by so doing bless and give health to millions there, and happy and prosperous homes here in sunny Australia. Already I believe there are such in some of the English centres, but there is room for many more. I believe Mr. John Smith, of Mt. Cotton, Queensland, has for years been sending honey to Birmingham. And I have a letter from a noble Victorian, who talks of coming to New South Wales, offering to give £10 towards the expenses of sending a good man to England to push our honey trade. Would to heaven there were far more like him amongst us. And now to return to the question of increasing our home market (Australian.)

First, get a good working Executive. Conscientious men that will do their duty to them-

selves and you, and that you can safely trust to do your wishes during the next twelvemonth. Next an Union Registered Label, to be used in addition to the honey-raiser's own apary label. All persons selling the Union's honey to give some guarantee that they will sell only pure honey, and the same to be advertised, and handbills left with them. They could be had for about 5/- per 1000 wholesale. The advert. could be in the *A.B.B.* and the handbills would be slips of the advertisement. Any person found selling glucose or bad honey, such matter to be determined by a majority ballot vote of the Union Executive—to be supplied with no more of the Union labels, and his name be erased from the list of sellers. The registering of the label would possibly make it penal to use it without the Union's sanction.

This is my scheme to increase the confidence of the public and induce them to consume more than 1½ lbs. per head of the population. They would learn to shun those places whose names were not on the list, and feeling confident good honey was to be had at a reasonable cost would gradually increase its consumption.

The inspector's time would not be necessarily fully occupied at first. His energy and the result of his work would make that up in time. More details could of course be worked out by your Executive, who it is your duty to most carefully choose before this convention closes, in a full meeting of members, and not leave to be selected out of a few when the bulk of the members have left for their homes.

I hope my paper has not been too long, that I have not wearied you. I have tried to be practical; I have the beekeeping industry at heart. I thank you for the attention you have given me. There are markets for all the honey that can be raised in Australia, and for a great deal more. There is therefore no need of jealousy or anxiety, but let us all, by hand, head and heart, push on the honey industry of Australia.

HAWAIIAN ISLANDS.

July 3rd, 1894.

Dear *Bee Bulletin*,—I have left N. Z. and have taken up my residence in these Islands. From the last copy of the *Bee Bulletin*, I notice that Mr. Hopkins disagrees with my remarks on the N. Z. bee flora. All I would ask of Mr. Hopkins and Maorilander and other N. Z. beekeepers is to notice very closely the various kinds of flowers to which the bees resort. Some flowers produce both pollen and honey, like the flax (*phormium tenax*), yet I assure you, sir, that having watched the bees working on these flowers, I have had good reason for coming to the conclusion that it is the

pollen so freely produced by the anther of these flowers that attracts the bees and not the nectar, which is neglected. I have watched clumps of flax in flower closely—in fact daily, and I surely have not been deceived. Kowai and Puriri, however are great nectar producers, but I never once saw a bee in the act of gathering it, or even hovering near these flowers. The part of N.Z. where I lived possesses thousands of beautiful Kowhai trees, which attracted the parson birds but certainly not the bees, I can but state what I know and have seen. I do not wish to say anything unkind, but I do not accept any bee-book as infallible even on the matter of bee flora. I admit that in some seasons bees may resort to puriri, and flax flowers, but in the 1893-94 season they certainly did not. The question is, who is right? Bee flora is to me a most attractive study and pleasure, and I have used the very closest investigation on the subject. But then, like the bee-books, I am not infallible. If my letter leads to comparing notes with one another it will have served at least one good purpose. Now to other matters. This is a good country for bees (Hawaiian Islands.) Bees are numerous, principally the black kind, though Italians have been introduced on some of the islands. The honey collected is white, the wax is snowy white. The bees are not able to collect much (if any) propolis, like in N. Z. The honey has a most rich and intensely sweet taste, different to any I have ever eaten. What flower it comes from I cannot at present say, but I am inclined to think the wild cotton and various mimosæ, which are numerous in these islands, produce this most delicious tasting honey. As to the seasons for swarming I am at present in some ignorance, but shall soon know. I have one hive of bees in my verandah and they work from daylight to dusk. I shall have much pleasure in sending you some jottings on bee matter from here, if they are likely to be of interest to your readers.

Yours faithfully,
W. HORSFALL.

[Likely to be of interest! Of course they will be, and really welcome, too.]

SPECIAL WORK FOR SEPTEMBER. N.Z.

Spring is with us again, and the time for beekeepers to be busy in their apiaries is now at hand. With regard to the prospects of the coming season, every circumstance so far points to a favourable one. We have had in the two previous seasons rather poor ones here, and it is not very likely we shall have a third one in succession; at all events, it has not so happened before. In the next place, the season now closing in the Northern Hemisphere has been a very good one, and strange as it may appear, our experience in the Australasian colonies has been that we follow with similar ones in the Southern Hemisphere. I would therefore strongly advise giving the proper attention to the bees. The advice given last month, so far as food and warmth are concerned, should be carefully attended to, keeping in mind that breeding should not be checked in the least, as young bees are required to take the places of the old ones now dying off rapidly, and that the coming season's success depends a great deal on the management during the next two months. As already stated in previous operations, this is the best time of the year for the treatment of foul brood, and when the disease exists it should not be in any way neglected.

QUEEN REARING.

Where beekeeping is carried on extensively, queen rearing should be a prominent feature, as without good queens there cannot be prosperous colonies. The amateur beekeeper however, would find it more profitable to purchase rather than go to the trouble of raising one or two queens, unless perhaps for experimental purposes. It will be unnecessary here to give the whole process of raising queens, as full directions are given in all standard works on beekeeping. I may state here that this is the month to start by stimulating one or two of the strongest colonies for the purpose.

TRANSFERRING.

About the end of this month or beginning of next is the best time to transfer bees from old boxes to movable frame hives. Warm, settled weather should be chosen, and the bees should be storing a little honey at the time the operation is performed. There is no need to give details of the work here, as any good text book on beekeeping supplies full information. However, as Heddon's method is a departure from the old plan, I have given that.

HEDDON'S METHOD.

If the Heddon plan is adopted it will be necessary to wait till near swarming time, when the weather will be tolerably warm. A hive should be got ready by filling all the frames with foundation, and as soon as the box hive has been removed place the former where it stood. Drive the queen with the majority of the bees into an empty box, as in the former case, and shake them down at once in front of the new hive. Next set the box hive with its combs the right side up on a stand a foot or two back from its former place, with its entrance turned in the opposite direction. In twenty one days all the brood will have hatched in the box hive, and the young queen, if there be one, will not have commenced to lay. The bees should now be driven as before, and they can either be hived with the former lot (after killing the queen if there should be one) or they can be utilised for forming a new colony. The honey in the old hive can be extracted and the combs melted down. In case it should be decided to make two colonies when transferring by this plan; the old box hive should be put on to an entirely new stand after the first drive. Care must be taken that the brood does not get chilled after the bees are driven out; to prevent which it is a good plan to cover the box with sacks for awhile.

FOUL BROOD.

Now is the time for detecting disease. If there is foul brood in a colony it will very plainly show itself at this time of

the year by killing the brood. Combs with unmistakable signs of the disease will be found. If it has not got a very strong hold, there will be a few brood cells here and there in the centre combs, perhaps a dozen or more in each, the cappings of which are rather darker than the rest and somewhat sunken, instead of the plump appearance they have in their normal condition, and most likely there will be seen minute holes in them. If one of these cells is pricked with a pin the remains of the larvæ will be seen on the bottom wall, a putrid dark colored mass giving forth a sickly stench, though not always detectable at a distance. If not checked the number of diseased cells quickly increases, until scarcely any brood emerges, and as a matter of course the colony dies out in a very short time. Remedies should be applied as soon as the first sign of the disease is detected.

STARTING AN APIARY.

Those who think of starting an apiary this season will do well by making early arrangements with some reliable person for what bees they may require. I would not advise beginners to buy bees in box hives, as the chances are very greatly against getting hold of healthy colonies. The best way is to go to a practical beekeeper and order early swarms. You are likely to pay a trifle more for them but you will get value for your money, whereas in the former case a beginner especially does not know what he is buying, and in most cases the vendor knows as little about what he is selling you. In the meantime the hives should be got in readiness for the bees before the swarming season sets in.

CO-OPERATION AND OTHER MATTERS.

I was looking forward with pleasure for your July number to learn the outcome of your "Beekeepers' Convention," but I see I shall have to wait for the next number to get a report of the whole proceedings.

The latter half of Mr. Patten's paper on "Co-operation of Beekeepers" is very interesting. The proportion of 17½ ounces of honey *per capita* consumed per annum certainly seems very small, but I am inclined to think it quite equal in amount to that consumed in any other country, that is for table and ordinary purposes. In Europe there is a very large quantity used in the manufacture of biscuits, confectionary, wines, &c., and if we could only induce our manufacturers to use honey for like purposes we should find all we could do for a long time to supply local demands, and there would be no need to hunt about for foreign markets. I am afraid, however, that manufacturers are as hard to move out of the ruts they have been accustomed to run in as other people. Some years ago, I tried hard to persuade a manufacturing confectioner to make up some goods with honey as a trial parcel, and even offered up to a cwt of honey for the purpose free, but I could not get him to move in the matter although he admitted the probability of such a departure being successful. I look upon this manufacturer as being a fair representative of his class.

I notice there was considerable discussion on Mr. Roberts' paper re "Civil servants running apiaries. There seems to be something very peculiar about beekeepers and beekeeping. Wherever the modern system has been introduced each beekeeper for the first few years has been so enthusiastic over the business that he has been eager for everyone else to become beekeepers. He has not only invited others to keep bees but he has helped them to start apiaries, taught them the business, and laid all his own transactions publicly open in bee journals and other papers. What has been the consequence? He has built up an opposition which he kicks against now. Don't say "I didn't do so;" we have all done it, we are all guilty. We did it out of sheer good feelings at the time, but now that it touches our pockets the good feelings seem to have blown to the

winds, and left in their place others of discontent. Never mind, things will mend themselves by and bye, you will see the industry gradually drop into the hands of specialists, into people's hands who will devote the whole of their time and talents to it, when others who can only devote a portion of their time to the work will find they cannot compete with the former and in consequence will gradually drop out of the business, at least so far as raising honey for market is concerned. This seems to be the experience in other countries and I can answer for New Zealand. Our trade is nearly all—I should not be far out if I said *all*—in the hands of specialists now, but we went through exactly the same trouble as yourselves. I don't see how you can alter your present conditions much and I doubt whether you would succeed if you tried. It would certainly not be fair nor just to try to stop any person from keeping bees, poultry or any other animals that were not a nuisance to his or her neighbours. I note your comments to my last on Co-operation and hope your "Co-operative Honey Supply Co." may have better luck than we had, though I fail to see as you infer that the principles of your scheme are very different to what ours were. The object in both cases, viz., the extension of the honey trade, is exactly the same. The details of working are somewhat different, but in this the difference is more apparent than real. I fear the expenses and want of complete unity will be a serious matter but I sincerely hope my fears may prove to be ill-founded and that the scheme may turn out an unqualified success. I am sure if the promoters do not meet with success it will not be their fault. I am, &c.,

I. HOPKINS,
Auckland, N.Z.

TASMANIA.

Dr Mason, Longford, Tasmania, writes—Recently from England I received a number of catalogues and some

bee journals. The style of hive mostly in use seems needlessly cumbersome and costly. I do not think we can do better than follow after and get ahead if possible of our American cousins. The experiments with Carniolan queens in super over strong colony, separated by a wooden diaphragm with a perforated portion in the centre, and slide thereto, as described by Henry Alley in his pamphlet, "Thirty Years among the Bees," was a success. I placed brood and combs in super, and drove up as many as I could from the lower brood nest, then shut slide for 24 hours. Then I re-opened it, having formed an entrance from the super, and fixed on an alightment. I closed the entrance to the lower brood nest, thus forcing all the bees to pass through the perforated portion of honey board into super, and out at new upper entrance. After a few days, when most were abroad foraging, I moved the lower brood nest to a new stand, and put a closed up empty one in its place.

I wish you would suggest to those of your readers who have, or know those who possess artistic talent, to suggest designs for a bee association flag. The principal colour should be blue, as Darwin discovered that to be the favourite. No doubt you have read his experience, and those of Sir John Lubbock. The yellow banded and the steel-grey Carniolan, and the old brown German might be worked into a white centre. Square hives I think are best left to the imagination, unless old Sampson's lion could be introduced.

Have you heard any complaints of honey granulating when left for a few days in extractor, uncapping can, and honey tanks, stopping flow of honey gates? Mine did last summer, and I had to excavate the stuff with a strong butcher's knife. For next season I am having a hot water tin made to fit below the honey tank, kept hot by a pipe communicating with tin boiler outside tank, but in the room. This last is heated by a small kerosene stove. For the extractor and uncapping can I have had made a

galvanised iron shallow bath, 6in. deep, into which I can place them singly over the kerosene stove on a light stand of iron. My honey extracting room is on the south side of bee house, as I could not have it on the north. This would no doubt partly account for the granulation. The bee cottage is low, of weatherboards, pine lined, floors of tongued and grooved pine and iron roof, heats quickly and cools quicker.

I had a photo taken of my apiary, and will send you a copy shortly.

[We shall be very glad to receive same, as well as the apiaries of other beekeepers. Re the honey granulating when left for a few days in extractor, we have had no personal experience of such. What plant was the honey from?]

QUESTION.

25.—(By Thos. R. O'Grady, Grafton)—Whether is the mild bee that seldom uses the sting, or the intractable one that is a bit vengeful, the more profitable to keep?

CHAPMAN BROS., Nailsworth.

We think there is no fixed rule with regard to this question, that in many instances both the docile and the more vicious bee is equally profitable.

D. G. GRANT, Muswellbrook.

Cannot say for certain, but the colony which gave me by far the best return last season could not be handled without plenty of smoke and plenty of stings.

W. ABRAM, Beecroft.

Temper is a character entirely distinct from the character of industry. A quiet tempered stock may be energetic and industrious, while a distempered one may be lazy and loafing, and vice versa. Other qualities equal, the good tempered one is the more profitable.

CHARLES CASIMIR, Mudgee.

What little experience I have had, I find the hybrid, although not always so tractable as the pure Italian, has the advantage as to the quantity of honey gathered; but I think that the extra time and unpleasantness in handling them counteracts any advantage they may have in this respect.

CHARLES HATCHER, North Shore.

I should certainly say the ones that are a bit fierce, because they defend their hives from robbers better, and ought, I should say, to be better honey gatherers than the quiet ones. They might be a bit harder to handle, but a judicious application of smoke would soon bring them to a proper state of obedience.

J. D. G. CADDAN, Windsor.

Until I imported from Doolittle I decidedly found good hybrids good stingers and good honey gatherers and equally profitable to pure breds. Doolittle's strain I find not only pretty bees, but gentle and equal to any for honey gathering, and I intend to keep only Doolittle bees, for I can always handle without smoke or veil, and they fill the combs. Am quite satisfied with the bee Doolittle (do-much I prefer) has produced.

E. E. BUTTSWORTH, Cessnock.

I do not think that the stinging propensities of bees cause them to be more expert at gathering honey. I have had bees which were exceedingly savage gather plenty of honey, but some of my quiet swarms have done equally as well. I am strongly in favor of the mild bee, for they soon settle down to work after being disturbed. Such is not the case with the vengeful bees, for when disturbed they go prowling around for some time before settling down to work. They irritate the other bees and sometimes start robbing. Sometimes they are so savage that smoke makes little impression on them, and then the beekeeper finds he has an unprofitable job on hand.

WM. PACEY, Maitra.

As far as my experience goes, by observing this question at issue, I believe that good honey gatherers are to be found in the two extremes. I have had bees that would not let me within five or six yards of their hives without my getting stings wholesale, which would make the blood visible; very severe, but good honey gatherers. And again, I have bees that are very quiet; whatever obstruction that is put in front of their hives does not seem to irritate them, but they keep working away just the same. They also are good honey gatherers. The vindictive bee is not very pleasant to work with, unless well fortified against with veil, &c. Therefore I am in favor of the mild bee that is not so much inclined to sting. Of all classes of bees that I have had to do with so far, my choice is the leather-colored Italians, they are not much inclined to swarm, and if there is any nectar in the flower they will fetch it. The wax moth gets no quarters in their hives. They are the bee for business.

GEO. COLBOURNE, junr., Cave Creek.

That depends on circumstances. To answer this question aright we should know whether Mr. O'Grady asks it from the standpoint of a queen breeder or honey producer. If the former, then most decidedly the mild bees are the most profitable to keep, as persons buying queens do not want bees that will use their stings whenever the hive is opened. Although in many instances the most vindictive bees are the best honey gatherers. I once had a colony of hybrids that were veritable tigers, smoke had but little effect on them, and yet they were the best bees to gather honey that I ever had. And again, we

will see bees that are mild to handle still good workers. It is my belief that if we put as much energy into breeding for a combination of gentleness and honey gathering, as we do for golden banded and yellow to the tip bees, we would soon have a race of bees that would make veils and gloves an unnecessary encumbrance. I have one colony of bees in my yard that never offered to sting me all last season, and yet they are as good honey gatherers as any that I have. Although the bees in the colony just mentioned never offered to sting me, yet let a robber come near their entrance, they would dart out and catch him while on the wing and sting him to death as coolly as possible. I thought one day that I would test them thoroughly, so I caught a large spider (which had his web spread between two hives) and dropped him on their alighting board. He had scarcely touched the board when a bee caught and stung him. The spider fought bravely for his life, but the bees surrounded him and eventually killed him, but not before he had killed three or four bees. I then hunted around the garden until I found another spider of the same kind and as nearly the same size as I could get, and carried him to one of the hives where the bees were very cross and dropped him at the entrance. And how do you think they treated him? Why, they ran up to him as if they were going to kill him at once, but when he stretched out his long legs and tried to catch them, they just turned round and run away. It was quite amusing to see them. They would advance to within two or three inches of him and then turn round and fan their wings at him, apparently trying to frighten him with the sound of their wings. Not one ventured to sting him. I consider the above as a clear proof that the docile Italian if carefully bred, will defend their hives from vermin and robber bees much better than the hybrid or blacks, while at the same time they are far pleasanter to work with, and if carefully bred, i.e. not sacrificing honey gathering qualities for gentleness, they are equal to any as honey gatherers. Therefore, I think we may safely say that the mild bee that seldom uses its sting is the most profitable to keep, whether we are queen breeders or honey producers. At the same time we should keep honey gathering qualities foremost, and then breed for gentleness; and if we can have golden bands along with the other good qualities so much the better.

ASHTON CLARKE, Bulga.

I always notice the more wicked ones are the ones that have the most honey to defend; seem to have more energy in each case; consequently, they are apt to stir yours up a bit to.

Mr. W. D. Russell, Fyan's Creek, Victoria, in answer to questions from Mr. C. Mansfield, supplies the following answers:—

1. From what trees, etc., do your bees get

their honey crop? From yellow box, black or grey box, red gum, almost exclusively.

2. When do these trees flower? Yellow box and red gum in the good seasons such as next will be; black box this season in April.

3. Do you get a good crop every season? No; only in the alternate seasons.

4. If not, do you get any on the off season? If so, how much (about)? A little, perhaps 50lbs. per hive.

5. When do your bees usually swarm? About October.

6. What time does honey usually start, and about when stop? Good years from December to April; bad or off year, March and April.

7. Is the land fertile? Land very poor about here.

8. Of what formation is it? Mountains rocky and covered with scrub, not honey producing to any extent, but good honey at foot of mountains, say two miles off from hills.

9. What has your weather been for the last five weeks? Storms almost incessant, high winds, frost and rain.

10. Is there foul brood anywhere about that district? Very much foul brood.

SPECIAL SUBJECT FOR AUGUST.

What are the bees now gathering honey from in your own immediate vicinity?

W. ABRAM, Beecroft.

From an abundance of small native scrub.

H. L. JONES, Queensland.

Largely from spotted gum, also from ironbark and blue gum.

J. D. G. CADDAN, Windsor.

My bees are busy on fruit bloom and several varieties of wattles.

J. TAYLOR, Maryvale.

Our bees are doing well at present gathering plenty of honey from white box. It is the only bloom here at present.

CHAPMAN BROS., Nailsworth.

At our Nailsworth apiary—garden blossom, dandelion, and another weed commonly known as sour sob. At our Houghton and other apiaries—gum and scrub blossoms.

D. G. GRANT, Muswellbrook.

My bees are gathering from spotted gum and fruit blossoms at present date. Bloom of former very backward owing to dry winter. Caught first swarm of season (a small one) yesterday, Singleton Show day, August 17.

E. E. BUTTSWORTH, Cessnock.

Bees have been gathering honey from spotted gum for some time, but that supply is nearly over, as only a few of those trees are now in bloom. A great many flowering shrubs are coming into bloom in the scrubs. The white thorn and five-corner are visited by bees.

C. HATCHER, North Shore.

They have just finished camellius, and are starting on early fruit trees.

Wm. PACEY, Marrar.

They are gathering honey from yellow and white box-trees, also red gum, which have been blooming all the winter; and to all appearance there seems to be a good prospect of a good honey flow in the ensuing spring from this source. The rainfall in this vicinity has been very regular through the winter up to the present, which is an unusual occurrence in this dry part of the country. Queens laying right through the winter here; brood in all stages. The hives are pretty well filled with honey, mostly sealed. I had to extract from some of my hives to give the queens room for egg laying, as there was no room for that purpose in the hive on account of nearly all the combs in the brood chamber being filled with honey, and mostly sealed over.

CHARLES CASIMIR, Mudgee.

The white box trees have been in bloom all through the winter on the ridges, but the weather has been so severe and unsettled that the bees have had very little opportunity to get out until the last few days, which have been fine and warm. They are now gathering from the white box which is still in bloom. The acacia or wattle are now in full bloom, and the bees are revelling in the golden blossom. If you are within a hundred yards of a wattle you can hear a regular hum. The stringy bark trees are loaded with buds and will soon bloom, and a kind of white gum, commonly known as cabbage gum, are covered with buds, and on the whole there is every appearance of a good honey season here.

SPECIAL SUBJECT FOR SEPTEMBER.

Artificial Swarming.

BEE VEILS.

Miss Emma Wilson, writes for *Gleanings*, a description of the kind of veil she and Dr. Miller uses: "We use a bee-veil with an elastic cord around the bottom. In the centre of the front of the veil, at the lower edge, we place a large safety pin, catching it through the hem of the veil, over the elastic cord, so there will be no danger of tearing out. It is always left hanging to the veil

when not in use. When we put our hats on, the pins are there, ready for use. I usually fasten my pin by catching it through a button hole; if not, I pin it to my waist. Dr. Miller pins his to one suspender when wearing neither coat nor vest. One pin is all that is needed and the hand can be easily slipped under the veil when necessary. I pity the poor men, who cannot pin their hats on with a hat pin. However, Dr. Miller thinks he gets on very nicely by tying his hat on with strings, when it is very windy. But, then, he doesn't know the comfort of a hatpin."

In the *American Bee Journal* two weeks later, she gives the following further particulars:—Around the wide rim of a straw hat sew a piece of black bobinet, having it extend below the hat about two feet. Then hem in around the bottom of the bobbinet about two feet of rubber cord. Slip this lower end of the veil over the head, bringing the rubber cord around the neck, and place the hat on the head. Then with a safety pin through the hem at the left of the front, draw it directly down to or near the waist, and pin it. This stretches the rubber cord rather tightly across the breast, so that no bees can possibly get under it while you are working with them; and if you wish to get to your face for any purpose, just raise the rubber cord with one hand, and with the other you can remove your spectacles, if necessary, or, if desired, you can lick off any honey that may be on your fingers."

Mr. Hatcher, North Shore, writes:—Re that pimento that I asked you about, I have been told it is called "petrostum" also; that is the pronunciation of it, no one knows the way it is spelt. Which it is I do not know. If I had had any doubts about it before, I would not have written to you about it. I have sent you a piece of it almost in flower. I like the idea of your monthly questions very much, and will try to answer some of them.

[The proper name of the plant is *Petostomum*, of which there are many varieties.]

QUEEN REARING.

MRS. ATCHLEY,—I notice by the *Australian Bee Bulletin* that you gave one of our Australian beekeepers some hints on queen rearing. Would you mind telling me what steps to take to secure good drones? And is it desirable to prevent young queens from mating with drones from the same mother? Yours truly,

ARTHUR AYLING,
Survey Office, Dubbo,
N.S.W., Australia.

May 7th, 1894.

Friend A.,—I will take pleasure in telling you how I get good drones. I usually pick out my drone mothers the same as I do my queen mothers. That is I use queens that have been thoroughly tested and that prove a No. 1 in every respect. Then if honey is not coming in I feed till the colony is stimulated to the point where I know the queen will deposit drone eggs. I then give a drone comb right in the middle of the brood nest, and soon it will be full of eggs. Then as soon as I see I have all the eggs I wish in the drone comb, I remove it to a stronger queenless colony, and they will take care of the eggs, and no danger of being destroyed; while if left in the hive where the queen is, a rainy day or cool night may cause them to destroy all drone larvæ and eggs, and a queen breeder could not tolerate this, so to make sure of them I have the eggs taken care of by queenless colonies. But when honey is coming in freely, and while natural swarming is going on, the drones will be taken care of by the bees with a queen as well as by queenless bees. Then, just about the time your drones begin to hatch, take the hive they are in to your mating yard, as far from other bees as possible, or three miles anyway, and there have your young queens mated to your select drones, and you will likely get the majority mated to your liking. If you cannot put them out away from other bees, put drone excluding zinc on all the entrances with undesirable drones. In short, do not allow any but good drones to fly where you are mating your queens; and if you will be careful you can soon improve your

bees to the highest notch of excellence. This plan of keeping up our bees to the standard of superiority is done by continually making selections from the best, and breeding from them. In regard to the queens mating with drones from same mother, will say I would not do it, if I wished to improve my bees and be sure of an improvement. It may not make much difference for several generations; and may be not at all. But I have a leaning towards keeping down inbreeding the same as with chickens and other stock, still I am not prepared to say that it is injurious to let bees line breed, or what we call inbreed. I trust you may have a good honey year in 1894 in your faraway land, as I believe your spring or bee season begins in the fall, or August.

MRS. JENNIE ATCHLEY.

Mrs. Jennie Atchley, Beeville, Texas, writes:—July 18th, '94. Dear Friend, Mr. Tipper,—I herewith send some copy for *A.B.B.* answering some questions on your side of the water. I had a heavy loss on July 2nd, caused from intense heat; nuclei melting down. I have a heavy shipment of queens that go to Australia by this mail, and I anxiously await results. We *must* perfect some plan whereby we can safely send queens to Australia.

Mr. Ashton Clarke, Bulga, writes:—In reading the report of the N.S.W. Convention in last *A.B.B.* re civil servants keeping bees, Mr. Pyeman said he paid £50 and Mr. Munday £80 rent for their places. Such large sums must secure far more land than is required for bee farms; consequently, must obtain a return beyond the honey. If so the quotation is not a fair one. But in either case I think the Land Act might be altered for the benefit of beekeepers by foregoing the residence clause for out apiaries. The best sites are to be found in the most out-of-the-way places and fit for nothing else; still a man cannot occupy them by selection without family residence, which is an impossibility,

though he ought to be made improve and stock up to say fifty hives in a given time. I feel sure it would be the making of the industry in a few years. Take for instance the stock route from here to Colo River, 80 miles or so in length. By keeping near the road only it would keep a large number of colonies of bees; and very little is any use for stock, let alone agriculture.

Mr. C. Arthur Lee, Tenterfield writes:—We are having a good spring so far, although rather dry, the past winter having been very dry and cold. I think we may expect a fairly good honey season this time.

Mr. Wm. Pacey, Marrar, in a communication dated 18th August, says:—"Dear Friend Tipper,—The recollection of our visit to you is always a pleasing incident for us to think of. I hope the *Bulletin* is progressing by having subscribers who pay up. The Convention I think was fairly successful, considering the bad times, that we are passing through. I hope the shares in the new proposed Association will be taken up, and let us see what can be done by trying this experiment. I have hopes that the required number of shares will be taken up to start with. The weather here has been very unsettled, a deal of rain has fallen, but the last two days seems like the starting of spring weather. I examined my hives to-day and find drones are hatching out as well as worker brood. Hives are in a prosperous condition. I have started a few more "Novices" with a full measure of the bee fever, I hope by and bye to have an order for the A.B.B. from them.

Mr. A. J. Brown, Parkville, writes:—During the present winter I have been quite surprised, when watching the progress of events in bee life around here, by the unusual strength of a few colonies belonging to myself and two of my neighbours. Although the weather lately has been very cold, owing to the close proximity of snow, and the mornings at present showing very white jack-

frosts, some of these colonies are equally as strong as they were during the summer months. Three in particular I will mention as being a little stronger than others. Two of these are hived in 10-frame Langstroths; the other in 10-frame Munday. Each have a second storey on and are completely full to the lid with bees, brood and honey. The bottom boxes are fully occupied by the queens and their brood, and from the top ones the honey is taken regularly, which could not be done with other than strong colonies, owing to the short days and frequent changes of weather. When the lids are raised, to notice the thousands of workers, and some drones too, one would almost think it is midsummer instead of midwinter. Each of these queens, and others too that are doing excellent work were bred by me last season from some imported Ligurian queens, and I think are no discredit to their parents. Those I sent out to my neighbours were with one exception untested, so that the present owners are not at any loss.

Mr. E. E. Buttsworth, Cessnock, reports—Most of my bees are strong, and have a good supply of honey.

Mr. Richards, Cook Town, writes:—Am beginning to feel just a bit slighted because you do not put the blue pencil mark on, or I have not seen it, so I am sending along 5/6 for another year. I like it (the A.B.B.), nay, I love it next to my pets; and here let me thank you for the regular way in which you send it. I am a poor writer, and do not feel up to writing articles, having only two years' experience; and I think only those who are well up should write—and you have a fair staff, and I should like to thank them through your paper for the good services they have rendered me by their contributions. As to yourself, you are a dear old friend, who though I have not seen, yet feel present. I try to spread the A.B.B., but this is a small town.

[Thanks, friend Richards, and we all feel grateful for your appreciation.]

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AUGUST 23, 1894]

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