The Australian bee bulletin. Vol. 12, no. 2 May 28, 1903

West Maitland, N.S.W.: E. Tipper, May 28, 1903

Registered at the General Post Office Sydney, for transmission by post as a Newspaper

THE AUSTRALIAN Bee Bulletin.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

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

Circulated in all the Australian Colonies, New Zealand, & Cape of Good Hope.

VOL. 12. No 2 MAY 28, 1903 PER COPY, 6D.

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

N. S. W. BEE-FARMERS' ASSOCIATION.

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RULES & OBJECTS.

1. The careful watching of the interests of the industry.
2. To arrange for combined action in exporting honey to relieve local glut when necessary.
3. To advise members as to suitable localities for establishing apiaries.
4. Any beekeeper can become a member on approval of committee, subscription 2/6 per annum.
5. That every member with more than 50 hives shall be allowed an extra vote for every additional 50 effective hives.
6. No member be eligible for office who has less than 50 effective hives, or his subscription is in arrear.
7. The Association to consist of a central body and district branches affiliated with it.
8. The principal officers be such as will undertake to meet each other in committee at least once in twelve months.
9. The officers shall consist of President, Vice-President, Treasurer and Secretary, and Executive Committee.
10. After the first election of officers, arrangements to be made by the Secretary to call for nominations for office-bearers, and issue ballot papers prior to the next annual meeting.
11. Supply dealers or commission agents cannot become members.
12. Members unable to attend meetings or conventions can authorise or nominate any member they know will be present to vote for them on any subject brought forward. Such vote or votes to be in addition to the member's present own vote.

Printed and Published by E. TIPPER, proprietor, High Street, West Maitland, N.S.W.

Registered at the General Post Office Sydney for Transmission through post as a Newspaper.

E. TIPPER.

EDITOR & PUBLISHER

WEST MAITLAND & WILLOW TREE.

THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL

Devoted to Beekeeping —

Circulated throughout the Commonwealth of Australia — New Zealand & Cape of Good Hope

MAITLAND, N.S.W.—MAY 28, 1903.

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

Supply Dealers.

R. K. Allport, Chuter St., North Sydney.
A. Hordern & Sons, Haymarket, Sydney.
The W. T. Falconer Manufacturing Co., Jamestown, N.Y., U.S.A.

Queen Raisers.

W. Abram, Beecroft.
Jas. McFarlane, Lyndhurst, Victoria.
J. W. Miner, Ronda, N.C., U.S.A.
R. H. Jervis, Moss Vale, N.S.W.

Honey Tins.

Chown Bros. and Mullholland, Ltd., Thomas St., Ultimo, Sydney.
W. L. Davey, Plenty Rd, South Preston Victoria.

Miscellaneous.

A. Hordern & Sons, Haymarket only, Sydney.
Allen & Co, 242 Sussex street, Sydney
P. J. Moy & Co., 161 Sussex St, Sydney

A FEW days previous to going to press with our last issue, we received an advertisement with cash, offering an unusually high price for honey. Having some doubts about the matter, we wrote to a friend in Sydney asking for particulars about the firm. A reply came that they were a new firm, and they would send more information further on. Up to the time of going to press, nothing further did come, and so the advertisement got inserted. In a couple of days word came that the address given was an *empty house*. We immediately notified every member of the N.S.W. Bee Farmers' Association, together with a number of others, of such fact. Also communicated with the Sydney Detective Force. Meanwhile a number of communications being received by us asking for particulars of the new firm, we wrote to the said new firm asking for references, &c.; to such we have received no answer. In the meantime another string of evidence had come under the notice of a subscriber to the A.B.B. in Sydney, who also laid the same before the Detective Police. The result was a young man was arrested in Sydney for stealing a bicycle. In his possession were a number of letters and samples of honey from beekeepers all over the colony. He was brought up at the Water Police Court and remanded for eight days.

Mr. J. Trahair and Mr. Geo. Gordon were very active in Sydney, in following the matter up.

We have received several nice letters thanking us for sending warning post cards.

CURIOUS BICYCLE CASE.

At the Water Police Court, before Mr. W. M. Macfarlane, S.M., Frederick James Walsh (19), described as a grocer's assistant, was charged with stealing a Royal Speedwell bicycle, valued at £18, the property of Albert Gallagher, on March 18 last.

The informant stated that on March 17 he answered an advertisement in one of the daily papers, and the next day the accused called at his place to look at the bicycle which witness had for sale. The accused asked if he might try the machine, and after having done so said he was quite satisfied. He subsequently said he would like to try the back rim brake, and getting on the machine again he rode away and never returned.

The accused reserved his defence, and was committed for trial at the Quarter Sessions on June 1.

See that your neighbouring beekeeper takes the "A.B.B."

How few hotels and restaurants place honey on their tables. Beekeepers should look this matter up.

Honey exposed to damp air adds 15 per cent of water to it, so says the Canadian chemist Shutt.

There is an old lady 79 years of age in the United States, who makes her own hives out of goods boxes.

It is calculated the United States and Cuba annually produce 150 millions of pounds of honey, worth ten million dollars.

Mr. J. Anderson, of Hexham tells us he is making a solar extractor that will be an improvement on anything of the kind yet produced.

When bees are removed always put some obstruction in front of the hive to cause them to mark their new home afresh and save them being lost.

A correspondent from Crabbe's Creek has sent his subscription to *A. B. Bulletin*, but not signed his name, so we don't know who to credit the amount to.

Boiled oil and white lead makes a good paint for hives. Your local painter or storekeeper will perhaps tell you of other recipes, in which zinc forms a part.

We have for some time discarded wiring frames. A strip in centre of frame is easier put in, and the frames never sag, a great convenience in extracting time.

A lady recently enquired the price of a 60lb tin of honey in Sussex-Street, Sydney. The reply was 22s 6d. We wonder how much the producer had received for it!

Let shaking be done a good distance from the hive. A new hive on the old stand with a caged queen or frame of larvæ will generally work right.

In pressing out wax if you double your pressure and cut your time in two, you will not get as much wax, but with half the pressure and twice the time there will be more wax.

Mr. Thos. G. Newman first editor of the *American Bee Journal*, died March 10. He was a printer and bookbinder by trade, and a native of Bridgewater, Somersetshire, England.

Nearly all the way from Sydney to the Hunter the ti-tree was in bloom, both broad and narrow-leafed. Its peculiar odour, especially from the broad-leaf, was very distinguishable at one apiary we visited.

A Spaniard claims to introduce queens without any loss by taking the old mother away and giving the bees the new queen inclosed in a cage. The next day he takes the new queen and cage out, submerges it in cold water and lets the queen run in immediately.

Spreading Brood in Spring.—Take an outside comb of honey, bruise it and place it in the middle of the brood nest, and repeat the operation at intervals of seven or eight days till the hive is practically full of brood, when a super can be put on, and the bees as a rule will take to it at once.

Our experience with old comb is that we don't like them to extract from. The bees simply fill with honey but never work them out. They may be right in brood nest, but we think the bees themselves do much renewing to them. When old, black and tough we cut and melt down.

In placing new blankets or ruberoid on for the winter, if the bees of the hive are not enough to fill one box, place such covering top of the lowest box. The bees will cluster and keep warm under it, and in early spring, when feeding commences, and moths are likely to attack the combs, will easily keep such moths in check.

Interfere with your hives as little as possible, except to put blankets, linoleums, or ruberoid on top of frames. Do not have them too close fitting. A little margin at edges leaves room for moisture to escape above. Get ready any hives you may want for the coming season. Also paint same and tar bottoms as a protection against white ants.

Careful analysis has shown that in a laying-worker colony a large proportion of the bees are found to contain eggs. The shaking off the bees at some distance from the hive, so that "the laying worker" may not find her way back home, will thus be seen to have some doubts connected with it. A laying worker will probably find its way back to its home as readily as any other worker.—*Exchange.*

The *Rocky Mountain Bee Journal* says: "Why not sweep away the little protective duty we have on honey, and, out of pure brotherly kindness invite the honey exporting countries of the world to unload their surplus in our markets. Suppose we try it awhile and see how we like it."

[Thanks, Mr. Morehouse, we Australians will be glad of all the foreign markets we can exploit, yours included. But will your beekeepers like it?]

As there may be some whose bees need feeding, we give the following plan that we adopt ourselves:—Make the syrup of sugar, five parts sugar to two of water; a little honey if you have such, all warmed up. A pinch of tartaric acid will prevent granulation. Put empty comb in large dish, and pour syrup on it from a jug about 18 inches or two feet high. Place in vacant place in hive—such vacant place being prepared in midday. Put in hive in evening to prevent robbing.

We learn from the *Jamaica Times* that large quantities of beeswax, adulterated, some of it to the extent of 50 per cent., with meal and flour, has been shipped from Jamaica to England, passing through the hands of the Jamaica Beekeepers' Association, the brokers, and in various directions from the London centres, before the flour and meal fermented and its worthlessness found out. It was traced to three men, two of whom were apparently innocent, but the third has disappeared. The Jamaica police have the matter in hand.

We said in a previous number to interfere with your bees now as little as possible, no honey coming in. The least honey or sweets exposed in any place, will attract the bees. A hive opened will at once draw robbers. A 60lb. tin of honey emptied, with only drainings left, and put away without the lid on, we recently found with quite a number of dead bees in the bottom. They had come in crowds to the tins, their wings became smeared with the honey, and the tin being upright they could not get out, they failed to return to their hives when evening came, and were either drowned in the honey, or chilled with the night cold. Hundreds were dead when they were discovered. Spring dwindling is it! or autumn disappearance with no brood rearing to replace them!

VICTORIAN APIARISTS' ASSOCIATION.

EXECUTIVE COUNCIL MEETING.

A well attended meeting was held at the office of Mr. V. R. Davey, on May 7th,

when the following resolutions were carried to be passed on as the executive's recommendation to the Conference :—

I. It is thought advisable to form Branches of this Association in country districts.

II. That the Annual Meeting further decides that members' subscriptions be based on the numbers of hives he may own, at the rate of 2/6 per 50 hives or part thereof.

III. That this Association affiliates with the National Forest Protection League.

IV. The action of indiscriminate throwing open of the land without regard to its legitimate value in timber, meets with the emphatic protest of the Association.

V. That this Association affiliate with the Chamber of Agriculture.

VI. That rules be added " empowering the executive to affiliate with Societies at any time that may be advisable, and defining the powers of the Executive Council.

Resolutions were passed inviting delegates from the Chamber of Agriculture and National Forest's Protection League, and also representatives of the press to attend the forthcoming Conference.

A final resolution decided that the Conference should be called for June 8th and 9th.

W. L. DAVEY,
Secretary.

CORRESPONDENCE.

Messrs. P. J. Moy & Co., 161 Sussex Street, Sydney, write us:—We are very pleased to say that our ad. in your journal has brought us very many consignments of honey and bees-wax from quarters which we would not otherwise receive any from. If you would advise us what day you publish we would supply you the day previously with Sydney Market quotations for honey and bees-wax. Wishing your Journal every prosperity.

[We shall be very pleased to receive such if forwarded not later than 23rd of each month.]

C. E. H., Emu Bay, Tasmania.—Very bad season this year. No honey. Too many late swarms.

D. A., Gormandale, Vic., April 27th.—I have had poor honey year.

J. E. P., Guildford, Vic., May 5th.—We have only had three hives to work on this season. I suppose we must have had the disappearing trick Mr. Beuhne has been troubled with (last season), so we got on very well this season; we got two large tins of honey from what supers we extracted from; we did not take any from the bottom one, and have left a good supply for winter. I may say they had a good supply when they disappeared last year. Also our neighbors has had a good season with the box hives. We hope to increase our lot next season, and have a good return; hoping you will reap a good harvest also.

P. F., Bundarra, Victoria, Ap. 29th.—I desire to express to you my opinion that the A.B.B. is a useful and practical little paper, and I wish you every success with it.

R. L., Taree, Manning River, May 9th.—Poor season again to record here.

B. B., Mathinua, Tasmania, May 9.—Am very pleased with the A.B.B. We have had a very poor season with our bees this year; scarcely taken any honey from them; most of them are black bees, but we are thinking of Italianizing them next spring. What would you recommend, Five Banded or Goldens; or do you think a Cyprian Cross would be preferable.

[There are good of all kinds but our experience is the dark Italians are the hardiest and best.]

F. W. Penberthy, Elsmore, May 20.—Thanks for the caution, hope you did not fall in. Weather mild, plenty of feed for stock. Bees went into winter fair condition; combs bare of pollen.

QUESTIONS NEXT MONTH.

We copy the following extract from the *Melbourne Leader* of May 5th. Will some of our readers kindly give us a few comments on same:—

1 At a largely attended meeting of beekeepers at Dunkeld to protest against the ring barking of timber in the blue blocks, Mr. Thomas Bolber explained how he had made £500 from an apiary occupying only one acre, and he stated that every three square miles of country would easily produce £500 worth of honey each year, whilst the same country growing wool would produce only £75 per year. If ring barking was carried on it would ruin the 30 beekeepers and their employes in the Glenelg district. Resolutions to be forwarded to the Minister of Lands were drawn up. It was decided to form the Western District Beekeepers and Forest Protection Association. A strong committee was appointed, with Mr. J. Scullen as president, and Mr. A. Young as secretary.

Apis in *New Zealand Farmer* says:—

2 In the early part of last month I had the pleasure of meeting Mr. J. L. Chambers, of Melbourne, who is on a visit to New Zealand partly on pleasure and partly on business. Mr. Chambers had been in the bee supply trade for a long time, and is well acquainted with particulars relating to the bee-keeping industry in Victoria. He told me that owing to the long drought and the consequent unsatisfactory condition of beekeeping in that State, many Victorian beekeepers were turning their attention to New Zealand. He had been anxiously asked to make all inquiries as to the prospects of the industry in this colony, with the view to their coming over if satisfactory. He thought that if after investigation he could give them a good report that quite a number of beekeepers would change their quarters to New Zealand.

3 The Bonus for best Eucalyptus honey. Give your opinion on same. See page 14 last issue—also page 40 this issue.

CHAMBER OF AGRICULTURE.

Sectional Committee of the N.S.W. Chamber of Agriculture on Wednesday, May 13: The apiarist sectional committee reported that Mr. W. Hessell-Hall had been appointed chairman. They recommended, owing to so many beekeepers being situated in remote districts, that most of the business of the committee be conducted by correspondence; that steps be taken to create a forestry committee, as the bee industry depended to a large extent upon the preservation of the native forests, and their protection from bush fires; that the blue martin and green kingfisher or bee-eater should be included in the list of noxious animals, their diet consisting almost wholly of bees.

Among other business transacted, Mr. J. J. Miller was appointed organising representative of the Chamber.

The report of the Interstate Commission on water conservation and irrigation was laid upon the table as well as reports from the London Chamber of Agriculture, the United States Department of Agriculture, the "Bee Bulletin" and the "Agriculturist."

Here is what M. Nicholas Kinkoff, the Russian Agricultural representative says. Will beekeepers comment on it?:—

You should get rid of all your eucalyptus trees. They absorb all the moisture from the soil. Replant as much of the land now under eucalyptus by other trees, which give more shade for cattle and at the same time do not exhaust the moisture. The Western Australian farmers proved this. Before the eucalyptus was cleared, the soil was dry. After the land was brought under cultivation, water came underground. I saw myself, two feet of water come in a short time in a hole six feet deep."

PUBLICATIONS RECEIVED.

"Australasian Signs of the Times" Religious Liberty Number.

"The Modern Farmer and Busy Bee," published at St. Joseph, Mo., U.S.A.

HONEY MARKET.

Australasian, Melbourne.—Honey and Beeswax.—Prime clear honey is in steady demand at 3¼d to 3½d. Dark and inferior lots are slow of sale at lower rates. Beeswax is worth 1s to 1s ½d, extra choice white fetching 1s 1d.

Melbourne Leader.—Honey—Sales were reported at from 3d. to 3½d for prime clear garden lots; cloudy samples were offered at from 2d upwards.

Maitland Mercury—Honey firm at 2/6 per 7lb. tin.

Tamworth News.—Bottles 8d each, 7lb. tins 2/4 tin, 60lb. tins 13s.

Daily Telegraph, Sydney.—Beeswax, discoloured 1/-, prime 1/1, extra prime and clear 1/2 per lb. Honey—Choice liquid, 2½d to 2¾d per lb.; special, in single tins, 3d to 3½d; medium quality 2d

South Australian.—The strong demand for honey has led to an advance in value, fine clear extracted selling readily at 2¾d to 3d; discoloured and candied 2½d. Beeswax 1/1.

Honey for Domestic Animals.

A very fine cow of the author's became very difficult to milk after calving, and was for this reason operated on by a veterinary surgeon. Whether insufficient care was taken during the operation, or from other causes, the cow was taken with a severe inflammation of the udders, during which she gave, instead of twenty liters of milk daily, only seven to eight. Movable hard bodies formed inside the udders, which defied every treatment employed. The owner then remembered that he had read somewhere that, in the case of swellings and inflammations, pure honey often brings about very satisfactory results. Therefore, after milking, he rubbed warm honey into the cow's udders until the honey had thoroughly soaked into the skin. Even after the first trial, an improvement was noted: the cartilaginous formations grew smaller, and disappeared entirely after ten days, and the quantity of milk increased to sixteen liters daily.

Results just as surprising were gained by a teacher who used honey for his fowls, about which he informs us as follows:

A very fine white turkey, which had always had a very good appetite, suddenly lost the same, always sought the coop, and let his head hang. He had, according to all signs, a high fever. When one opened his beak, it was full of slime. After the owner had waited four or five days for an improvement, he remembered his honey-pot, which had already been of service in the sick-room in case of fever and catarrhal troubles. He thought that what is healing for man ought to help the beloved bird, and his hope was fulfilled. He brought some bits of candied honey, and, while his wife held open the patient's beak, he pushed in three or four pieces, one after another. Some hours afterward he went again into the coop in order to repeat the treatment. He had this time taken a piece of brown bread with him, and dipped small bits of it in fluid honey. After he had pushed down the first piece, the turkey snapped at the second, but was either too awkward or too weak to swallow it without assistance. After three or four pieces of honied bread had been given to him in this way, he regained his old appetite, and—thanks to our honey cure—completely recovered.

A short time afterward, the teacher noticed that one of his Minorca hens, which he had raised himself, refused to eat, and every few minutes emitted a sneezing sound; the head was also somewhat swollen. At the same time he found out that a rooster of his neighbour's had had the same trouble for several days. In the latter case the head was so swollen that the fowl had not been able to open its eyes for several days. He shut his sick hen in a cage, therefore, and began his honey cure. Three days afterward it was possible to let her out in a healthy condition. The next day another fowl was taken sick with the same symptoms. Then he said, "It is high time that I take to my well-tried cure." He put the end of his finger full of honey several times into the bird's beak, and when he paid his patient another visit in an hour and a quarter the sound in breathing had totally disappeared, and the sneezing stopped also in a few days.

"I am firmly convinced," said the teacher, at the close of his communication, "that in the case of catarrh, and in the first stages of diptheria in fowls, no

better medicine exists than honey, to be given every two or three hours, and I should like to advise every one to use this simple and cheap cure in such cases." —W. A. M'Kellip in *Gleanings*.

Lucerne or Alfalfa Cutting.

When we express results in percentages we do not give the actual amounts produced per acre unless we also state the weight of hay produced. This is an important factor, and one which we must take into account. We usually assume that this is thoroughly understood, and that it is accepted as a fact that the crop increases in weight from the time of budding till it reaches or slightly passes full bloom, and then decreases. The amount of this increase will vary with a number of conditions; but the following figures, based upon the results of observation, may serve to give a definite idea of how much this increase amounts to. If we cut enough alfalfa in bud to make 100 lbs. of hay, the same alfalfa would make 126 lbs. if allowed to stand till in half bloom, and 145 lbs. if allowed to stand till in full bloom. If allowed to stand longer it would decrease. If the question were, "When shall we cut alfalfa in order to make the most hay?" the answer would be, "When it is in full bloom." The question as presented to us is, "When is the *best time* to cut alfalfa?" This time is evidently that at which we shall have, not the largest yield of hay nor of the best quality, but the largest yield of digestible food ingredients. This answer considers two factors — composition and digestibility. Every feeder will mentally add, "But there are other things to be considered," which is true, but it is assumed that the animals will eat the hay of which we are writing, and will relish it.

We have given the amounts of hay which the same quantity of alfalfa would give when in bud, in half bloom, and in full bloom, using the figures obtained for our Colorado alfalfa. The 100 lbs. of early-cut hay will contain 15 lbs of albuminoids and 1.5 lbs. of amids; the 126lbs. of hay, alfalfa cut in half bloom, will contain 15.8 lbs. of albuminoids and 2.9 lbs. of amids; the 145 lbs. of hay cut in full bloom will contain 19 lbs. of albuminoids and 2 lbs. of amids. Leaving the value of the amids of the question, for they are assumed to have only a small value as compared with albuminoids, and reducing these figures to the basis of a pound, we find the relative values to be 1. 16 for the early cutting, 1. 00 for that cut in half bloom, and 1. 08 for that cut in full bloom. Or, stated otherwise, 86. 2 lbs. of alfalfa hay cut in bud, or 92. 6 lbs. cut in full bloom are equal in value, using the albuminoids as the criterion, to 100 lbs. of alfalfa hay cut in half bloom, so that alfalfa hay cut in half bloom is inferior to that cut in full bloom, and still more inferior to that cut in bud. In this statement we assume that the albuminoids are equally digestible at the three different stages of development here specified. If this be true, the largest amount of digestible proteids would be obtained by cutting in full bloom; for while the relative values of the hay cut in bud to that cut in full bloom is as 100 to 107, the yield is about 100 to 145, leaving an advantage of 38 lbs. of hay on each 145 lbs. of hay cut in full bloom. These figures refer to the first cutting.

The feeding experiments are decidedly in favor of the early cutting, calculating the value on pound for pound of hay produced. But if we calculate its value in terms of beef produced per acre, we come to the same conclusion at which we arrived from the consideration of its chemical composition and the relative crops produced at the respective periods. Mr. Mills summarized the results of his three seasons' feeding as follows: That to produce one pound of gain, beef, it requires 18. 21 lbs. of hay of the early cut; 33. 44 lbs. of the medium cut; 23. 97 lbs. of the late cut (p. 11, Bulletin 44). But we have seen that the relative quantities of the early, medium, and late cut are 100, 126, and 145. Accordingly

we would obtain for the values of the respective cuts in terms of beef, 5. 4 lbs. for the early, 3. 8 lbs. for the medium, and 6. 0 for the late cut. We would, therefore, answer the question in so far as it pertains to the first cutting, that the best time to cut alfalfa is at the period of full bloom, for at this period we not only get the largest amount of hay, but also the largest return in pounds of beef per acre.

The results of feeding experiments with the second cutting lead to the conclusion that the best time to cut this crop is what Mr. Mills designated his medium cut. I conclude that, after allowing for a little latitude in the use of the terms "half bloom," "full bloom," "late bloom," etc., the time to cut alfalfa in order to get the greatest value per acre is at the period of full bloom, and that there is a period of about a week during which its value is essentially constant.—Bulletin Kansas Agricultural Station, via *Gleanings*.

Co-Operation among Beekeepers.

For the purpose of disposing of their honey, this seems to be uppermost in the minds of many, as gleaned from numerous articles in different bee periodicals. Perhaps a move of this kind is alright, and may result in good, as regards the producer, if successful. From my own standpoint, with conditions as they surround me, I see no need of it whatever. I try to produce what is wanted, and sell it for what I can get for it. Producers of other articles of food are situated precisely as I am, and do as I do. If by co-operation we aim to distribute our product evenly, the general public would be benefitted; but if our aim is to control prices, keeping them up or raising them, the move will be decidedly wrong. Many writers are of opinion that honey is low, or too low, in price. They dwell upon the subject. It is my opinion that honey is sold at a higher price, comparatively, than other things—too high to encourage and increase consumption. Twenty-five years ago honey sold for not materially more, although a very fancy, lace-trimed lot brought me, f.o.b. here, 15 and 16 cents. At this price the bulk honey sold in New York (on commission) in 1876. In 1886 it sold in Philadelphia at 14 cents. Since then prices ranged between 12 and 15 cents, according to the supply and demand. The farmers' wheat, 25 years ago, brought here 1½ dollars per bushel. He did no better at that time than he does now with 75 cents. per bushel. The farmers' income has been reduced to one-half, while the bee-keepers' income has almost held its own, during the same period. He ought to do well. The greatest obstacles to co-operation are to get the beekeepers to co-operate; and lack of available capital.—F. Greiner in A.B. Journal.

To make a salve for chapped hands take an ounce of yellow beeswax and olive oil and melt them together slowly on the stove or in the oven. Pour into a couple of egg-cups which have previously been wet with cold water. When the salve is cold turn it out and it will be ready for use.—"Health and Beauty" Department, Daily News.

Only the man who rears queens for sale, and so can not rear a sufficient number during swarming time, needs to take the extra trouble to rear them at other times. For the up-to-date bee-keeper, however, it's not the best thing to trust to swarming-cells. Take your colony with best queen, build it up *very strong* by adding brood from other colonies, then unqueen it, and you'll have a lot of cells as good as swarming-cells, and *all* from best stock.—Dr. Miller in *Gleanings*.

Comb honey will not granulate as soon as extracted honey, on account of the latter being so agitated in the extracting process, and mixed so much with the air. Lucerne honey candies quicker than almost any other honey. Is it, being grown mostly on alluvial flats, there is no acid in its composition?

GRAZIERS VERSUS BEE FARMERS.

VICTORIAN APIARISTS' ASSOCIATION SPEAKS.

Sir,—During the past month a report under the title of Graziers versus Bee Farmers has appeared in a number of newspapers, and this seems to make the present a fitting opportunity to point out that no attempt has been made, or is ever likely to be made, to have land reserved for bee farming solely in the way implied. There is no need for conflict between the two industries of grazing and honey production, as both can be carried on at the same time, without detriment to either sheep or bees. The conflict, if such it may be called, that is forced upon beekeepers, is one against the selfish and ruthless destruction of most valuable honey yielding trees. Whether this is carried on illegally or under the sanction of a "permit" from a State department—whose readiness to grant them to the grazier on the slightest pretext, notwithstanding how any other industry or enterprise may now or in the future be involved by such destruction—it displays a shortsightedness and onesideness of administration, or an ignorance of tree value all round, that any one would hardly credit in responsible State officials, whose aim and duty one might expect to have been to encourage, not only grazing, but every other enterprise that will produce wealth from the land and aid in the prosperity of the country districts. But such an apprehension of their duty in a fostering care of younger and struggling industries is far from being manifested by those in whose hands rests the administration of the lands of this State.

Still possessed of the old ideas that, no matter what the soil poverty may be—and knowing not and caring less what the values may be relative to the soil value in any particular case—grazing must be the most important, or, rather, the only thing worth considering at all, they yield to the grazier's application for permission to destroy the trees on his leasehold without any scrutiny worth the name; not deeming expert opinion "on the trees, on the fitness of the place for other pursuits in conjunction with grazing," as worth obtaining. Let a grazier but wish to "ring-bark," and a permit will in most cases readily be given without, apparently, a moment's consideration being given to, say, a bee farmer having capital already invested, employing labor and producing hundreds of pounds' worth of produce from those trees. Without the opportunity of self-defence or of opposing the destruction of the trees upon which his industry depends being given to him, the bee farmer is sacrificed, and in a week or so the trees are for ever beyond the possibility of producing aught but a good "burn." Should any Crown lands officer be asked to report on the trees at all, it will be only as to the ultimate value in the distant future for "sleepers" or such like, when once, and once only, they can be turned to account; but of their value for yielding produce year by year in honey and beeswax—a value that exceeds on many poorer grazing districts by double the value of the wool production on those parts—no note is taken; and when evidence on the point is proffered by those who are actually drawing handsome yearly returns it is quietly ignored, and the ringing continues. Hence it is, Sir, that beekeepers may in one sense be said to be in conflict with graziers, and, unfortunately, mostly are (rightly) at conflict within their own minds—even if too weak to do much to oppose—with the old time Conservative and unsympathetic way in which their industry is regarded by the officials of our paternal (?) but partial Lands department.

But there are, apart from those aspects of the matter which more directly concern bee farmers, issues at stake which should raise the question to one of national importance, viz, that in paying to the Crown a munificent annual rental of 1d. per acre for their leaseholds they have in

some way thereby become in effect as good as owners of the trees, with some right, title or interest therein—a delusion which, coupled with ignorance and grass hunger, will lead them to sacrifice the national property, in trees—the "asset of a careless and slumbering landlord"—without a qualm, and with trees may go every other enterprise, present and prospective, that depends upon them. Yes, even rainfall and shelter are in the eyes of some of these "patriots" a mere bagatelle compared with carrying another sheep or so to every 10 acres. Forest preservation, which in other countries, is considered of such great importance, is by the majority of our people only looked upon as a hobby or pet theory of certain cranks. Certain it is that in days to come, and not far distant, tenants of the Crown will be found for the trees as readily as for the grass, and a double rental, besides dues for milling rights, splitting rights, and such like, will swell the Treasury. Even at the present stage of our small industry many beekeepers would be willing to pay rent per square mile for the grazing rights of the flowering trees, without reserving in any sense to themselves or detracting from the ordinary sheep grazing capacity of a district. Proposals of this nature have only to be sympathetically worked out—a definite future policy announced that in suitable bee farming country the timber shall not henceforth be destroyed, and so a continuity of bloom be assured—to induce numbers of men and women to invest their capital in this business.

Let the principle once be clearly enunciated that grazing leases confer no right upon the trees—that they are an asset separate and distinct from the grass, and may be sold, let or reserved, irrespective of the rental paid for the grass; and let it be, above all else, declared that no application for the destruction of this asset shall be granted by the "yes" or "no" of some technically unskilled or subordinate occupier of a stool in a government office, but shall be heard for and against in an open land board, and only after full investigation of all interests involved decided upon—then, Sir, and not till then, will there be permanency and progress in those various industries which are capable of adding (though termed "minor" ones") very materially indeed to the population and production of our country.

We are certain that in country such as the "Glenelg Blue Blocks," recently thrown open, were a policy of this sort to obtain, and only judicious thinning of really worthless trees—worthless to bees as well as to others—allowed, a population fully equal to that which sheep will support, and an investment of capital and employment of labor far exceeding that which the graziers will bring in, would result from bee farming. Thus two industries could, and should, thrive upon the one area. As proof of the value of this region, there were 100 hives of bees put down near by the blue block thirteen or fourteen months ago, and these have yielded their owner something like 40,000 lb. of honey and beeswax, worth over £500. Had 200 hives been put on the same spot £1,000 would have been the possible result, and this could have been repeated at intervals of three miles or so over most of that country. Roughly calculating that a sheep to eight acres would produce £20 per square mile—that is to say, it would take 50 square miles of this poor grazing land, or pretty well the total area of the blue block, to yield as much as one good sized bee farm will produce. If this be so, what justification can there be for Mr. Traverner or anyone else, when such statements are before him, to ignore them, and in his desire to place people upon the land in one way, and thereby cut off the means in another way of so richly augmenting the settlement upon and prosperity of the district. On behalf of the apiarists of Victoria,—Yours, &c.,

THOMAS BOLTON, President; W. L. DAVEY, Secretary, Victorian Apiarists' Association.—*Melbourne Leader.*

UNITING BEES IN SPRING.

"Good morning, Mr. Doolittle. Nice morning for the first of March."

"Yes, this is a nice morning, Mr. Smith. Soon be time for active work with the bees again. Think the few I have out may possibly fly a little before night. They will if it keeps still and clear as it is at present."

"The most of my colonies are coming out weak, I fear, and I came over to have a little chat with you about them. What shall I do to get the most comb honey and also a little increase?"

"Had you asked me this question some years ago I should have said, 'Unite these weak colonies as soon as possible in the spring;' but from later experience I will now say, leave each colony in its own hive till June."

"What has caused you to change your mind?"

"Later experience has proven to me that, where two or more colonies are so weak that they will not live till summer, if left in their own hive without reinforcing, they will not live through till summer if united, no matter if as many as half a dozen such colonies are put together. And I am not alone in thus thinking, for my experience has been the same as that of nearly all of those who have tried the same thing and reported in the matter."

"Deciding that it is not best to unite weak colonies in early spring, what shall be done with them so I can secure comb honey from them?"

"After trying every thing recommended in our different books and papers, and not being pleased with any, I finally worked out the following after much study and practice. All colonies which are considered too weak to do good business alone are looked over, about the time pollen comes in freely from elm and soft maple, and each shut on as many combs as they have brood in, by means of a nicely adjusted division-board, so that the heat of the little colony may be economized as much as possible; and, also, seeing that each has the necessary amount of honey in these combs, or within easy reach, to last them at least three weeks."

"Why is it necessary to have so much food on hand?"

"If we would have brood-rearing go on rapidly in any colony in early spring, and especially in weak colonies, the bees must not feel poor in honey, nor have any desire to economize what they have. Such weak colonies can send only a few bees to the field for nectar even when the flowers are yielding plentifully; hence, if we would make the most of our reduced colonies we must give them so much food that they are willing to use it extravagantly."

"How long should the colonies be kept shut up this way?"

"These colonies are to be kept shut up on these combs till they have filled them with brood clear down to the bottom corners, before more combs are added."

"Why is this necessary?"

"Because breeding will go on faster with the heat, and cluster kept in compact shape, than it would if both were spread out over more combs. In no case do we allow more than half the number of combs we use in our hives; and if any colony in early spring has brood in more than one-half of the combs, the same colony is good enough to take care of itself without confining it with division-boards."

"When these combs are all filled with brood, what then?"

"Then the stronger of these has a frame taken from it, taking the one having the most nearly mature brood in it, this frame being given to one of the next weaker colonies, or, say, to one which lacks one frame of having half that the hive will contain."

"Why don't you give this to the weakest?"

"That is the question I used to ask; but don't make this mistake, which many do, of giving this frame of brood to the very weakest, hoping to get it ahead

faster. The answering of the question is this: The weather has not yet become steadily warm enough so but there is danger of losing the brood by chilling, as well as injuring the brood they may already have, should a cold spell occur, as I did several times while I was experimenting. By giving it to a colony nearly as strong as was the one from which it was taken, both are benefited, and both can furnish brood to another colony which is only a little weaker than the second, in a week or so. I think you see this part now."

"Yes, I do understand. But what about the colony from which you took the brood?"

"I now give this a comb quite well filled with honey, which is set in the place of the comb of brood taken. This stimulates this colony to greater activity, and causes the queen to fill this comb with eggs almost immediately, thus turning the honey into brood very rapidly. If the honey is sealed, the cappings to the cells should be broken, so as to cause the bees to remove it at once. This is best done by passing a knife flatwise over it, bearing on enough so as to mash down the sealing to the cells"

"What do you do next?"

"I keep working the brood from the very strongest down, step by step, as the bees advance and the season progresses, till the time the weakest colony (one having, say, only two combs filled with brood by this time) can take brood enough, without danger of chilling, to make it of equal strength with all."

"You now have all of the weakest colonies, which were shut up with division-boards, with five frames of brood—that is, supposing that your hive holds nine combs."

"Yes; and having them thus we are ready to unite, which should be done about two weeks before the honey-harvest comes, that the best results may be obtained."

"Please explain minutely about this uniting, so I may fully comprehend how it is done."

"To unite, go to No. 1 and look over the combs till you find the one the queen is on, when you will set it, queen, bees, and all, out of the hive, so as to make sure that you do not get the queen where you do not wish her, when you will take the rest of the combs, bees and all, to hive No. 2. After spreading out the combs in this hive, set those brought from No. 1 in each alternate space made by spreading the combs in No. 2, and close the hive."

"Why not set the combs in all together? It would be less work."

"The alternating of the frames is so that the bees will be all mixed up, and, thus mixed, they never quarrel, as each bee that touches another is a stranger. Bees often quarrel, and a lot are killed where no precautions are taken."

"Thank you for telling me this. Now what next?"

"The colonies are now allowed to stand thus for a few days till they are strong enough to enter the sections, when they are to be put on; and if your experience proves anything like mine you will have a colony which will give as much comb honey as would that colony which was called 'the very best you ever had in the spring.' In this way you will have half as many colonies in excellent condition to work in the sections as you had weak colonies in the spring; and if the season is at all good, you will secure a good yield of comb honey; while, had you united in the early spring, or tried to work each one separately, little if any surplus would have been the result, according to my experience."

"How about any increase?"

"These united colonies will be nearly as likely to increase by swarming as other colonies considered good in the spring. If you wish more increase than this, the comb with brood, bees, and queen, which are to be put back into hive No. 1, together with an empty frame and one

partly filled with honey, can be built up to a fair-sized colony for wintering. This little colony will build straight worker comb for some time; and as soon as it ceases to do this, take the worker combs built by another colony just like it, and put them with No. 1 till the hive is full, and you have as nice a colony as you can get in any other way."—*Gleanings.*

REARING GOOD QUEENS.

[L. STACKELHAUSEN.]

1. I take 5 or 6 brood-combs without bees, from some other colonies, and hang them in an upper story over a queen excluder and over a strong colony.

2. Eight or ten days afterwards nearly all of this brood is capped, many young bees are hatching daily, and as no young larvæ are present a surplus of chyle is prepared, and the colony is in proper condition for queen-rearing. Now I remove the hive to a new place, but the upper story with bees and all is set on the old stand. Soon this colony will show all signs of queenlessness, and now (in 2 or three hours) I give the brood-strips (Alley's method) between two brood combs.

3. Twenty-four hours afterwards this hive is arranged, that is, the hive with the queen is set again on the old stand, and on top of it, over the excluder, the story with the now started queen-cells.

Sometimes I manipulate differently. I may give this queenless colony another set of queen cells and remove the first lot to another upper story prepared 7 or 8 days before. Or the first lot of queen-cells may remain in this queenless colony until they are ripe and can be used in nuclei, as this is the easiest way to prepare a queenless colony for cell building, if such a one should be preferred. Probably it would be better to set this queenless colony with the entrance closed in a cellar and keep it without open brood for a long time, that is, to give the brood-strips later.

Some scientists believe that the youngest bees prepare the richest chyle, what we would call royal jelly. If this is so, hatching brood should be present in the colony which rears queen-cells, and this is secured by the above plan Mr. Alley takes away from a strong colony the queen and *all* the brood, and gives the brood strips after some hours. Hereby we have the necessary surplus of young bees, and they are in proper condition, but this method could probably be improved by giving some capped brood at the same time with the brood-strips.

It is considered as very important to select larvæ for queen-rearing at the correct age. If the larval food for queen and worker larvæ (less than four days old) would be the same in the same colony, as some believe, any larvæ under this age would be good enough; but if the food for the young worker larvæ and the royal jelly is different, as the analysis as yet seem to indicate, we should select larvæ as young as possible. To decide this question it would be necessary to analyze larval food taken from queen cells and worker-cells from the same hive and at the same time. This was not observed in the analysis mentioned above. Besides this, we see one other difference —the queen-larvæ are always floating in an abundance of food, the young worker-larvæ, too, as long as they are small, receive more food than they consume, but later not so much food is given any more. For this reason very young larvæ are preferable under all circumstances. If we use Alley's brood-strips we can select quite young larvæ, not larger than the eggs, or we can select even eggs lying flat on the bottom of the cells, which are very near to hatching.

Artificial cell-cups will not produce better queens than natural ones; their advantages are that we do not need to cut any brood-combs or to destroy any larvæ as with the Alley method; they bear rougher handling, but I cannot see any necessity for rough handling. The disadvantages are: We can't transfer quite young larvæ, just hatched from the egg; as some royal jelly is necessary for

this method we must destroy some queen-cells already started, the whole process taking more time and labour than the Alley-strip method. The Alley cells must be started in a queenless colony; with the Doolittle artificial cups this is not necessary, but the most queen-breeders do it, so one of the advantages of artificial cells is lost. Grafting the cells takes more experience, and is more difficult for the beginner than to prepare the brood-strips. What method a bee-keeper will prefer depends entirely upon how great or little he estimates the different advantages and disadvantages. After trying all the different methods I went back to the Alley strips, and can't help believing that if the artificial cell-cups are preferred it is merely a case of fashion.

If the cells are nearly ripe, they are generally introduced to nuclei, or we let them hatch in a nursery and introduce the young virgin queens. If the latter plan is used, the queen should remain in the nursery as short a time as possible—the younger the queen the easier it is to introduce her safely, and a young queen kept in the nursery for some days is always spoiled more or less, and sometimes she will be a dead queen. For these reasons I use the nursery as little as possible. I would rather form new nuclei, if I happen to have more good cells than I need.

The nucleus should have at least 2 or 3 of the regular frames and enough bees to cover these frames. On the other hand, the nucleus should not be too strong. In a two or three frame nucleus the queen is found at once; if 6, 7 or more frames are covered with bees it takes sometimes, considerably more time and labour. If my nuclei are getting too strong I divide some of them, and if I should get more than I need for queen rearing I unite with some other one, or strengthen them in another way, and work them for extracted honey production.

To get the queens fertilised in an upper story over an excluder does not work satisfactorily even if a double excluder is used. When I expected the young queen was laying eggs I found she was missing. As far as I know the plan is abandoned. If we use a wire cloth in place of the excluder, we have in fact a separate nucleus which could just as well be placed on another stand. The only advantage is, that this nucleus is warmed somewhat by the strong colony in the lower story, and both can be united at once, if the nucleus is not needed any more. For this reason the plan seems good in a northern climate, if queens should be reared early in the spring.—*A. B. Journal.*

THE BEE INDUSTRY.

[BY E. TIPPER.]

(Read before the N.S.W. Chamber of Agriculture.)

Away back, back, in the earliest historic times, we read of bees and honey. The Bible is full of passages relating to same. Heathen writers, the Greeks, the Romans, even the antiquities and ruins of these old countries have their say and references to the bees. Passing on to modern times, in Italy, in Greece, in France, wherever the Catholic Church has held sway, bees have been studied, and may we use the word cultivated, more for the sake of the wax than anything else, as only pure wax candles could be used on the churches' altars. And at the close of the honey season the practice was to sulphur the bees, and so in a simple and cruel manner, to take both honey and wax at the same time.

Some 100 or more years ago, certain men of a scientific turn of mind began to study their habits, and gradually since then a most valuable lot of information has been gained. Many suggestions, and different modes of working have been experimented with, and many of them to

become discarded. Gradually the systems of working have been reduced to a very small number. In some countries primitive modes still exist as were followed hundreds of years ago. The Germans have the Berlepsch hives—and English and Americans adopt what is termed the Langstroth system, though slightly different in some particulars. In Australia it is mostly what may be termed the American Langstroth method.

And now as to honey production. In Austria, Germany and other European countries, there are thousands of beekeepers. Germany has 1,900,000 hives, Spain 1,690,000, Austria 1,550,000, France 950,000, Holland 240,000, Russia 110,000, Denmark 99,000, Belgium 200,000, Greece 30,000, Switzerland 17,000.

In Great Britain the land owners and country gentry are doing their best to encourage small apiaries by cottagers, and discounting the value and quality of all honies imported into Great Britain.

Canada is working hard to secure the English market for their honey and they have this advantage—theirs is a clover country like Great Britain, and the British people like the clover taste, and so the Canadian honey finds more favour than Australian. New Zealand comes in the same category.

Her moist climate and rich lands give abundant clover. The West Indies and other tropical islands yield abundance of honey, and the United States bee-keepers are in a ferment at the present time, as to how much the now vastly increasing production in Cuba will affect their markets, quite an exodus of large bee-keepers having gone there from the United States.

Brazil and other of the South American Republics send large quantities of honey to England and the Continent of Europe.

Nine or ten years ago people in New South Wales were told the honey trade was going to exceed the butter trade; a hive of bees was a more payable concern than a gold mine; a man that happened to be a little successful, told everyone else what he had done; and thus hundreds of beekeepers and apiaries were started all over the Colony. Last year I could have bought hundreds of empty hives in all parts of the Colony, the results of failures and disappointments.

Our honey on the coast (except on the Richmond and Clarence Rivers, where much rainfall and large crops of maize and clover give a honey suitable to the English taste) the coastal honey is as a rule not of a good quality—being dark and bad flavoured. The interior and box honeys' are of a beautiful flavour and great density, but the British taste has not become accustomed to it. To raise it in quantities require experienced men, who can tell where to pick suitable places, can go largely into it by having several apiaries. They must have capital and experience. These are the men that want State assistance. The Government pettifogging that goes on now is worse than useless.

Amateur and disappointed beekeepers, who do not realise anything but a pocket money concern, injure the market of the practical man, who has invested money and time in it.

Among things antagonistic to the prosperity of the practical beekeepers are the continual destruction of the natural forests for grazing or cultivation; the smallness of our own local market; and the failure of the repeated efforts both by Government and by private enterprise, to secure foreign markets.

Our remedy is state assistance in the shape of a bonus on honey of the best quality exported. A trade thus encouraged and supported would mean that our good honey would be put say on the English market at a rate that would force itself on the masses, who would then acquire a taste for it, and cause it to be preferred, as we ourselves prefer the Western or box honey to the coastal or lucerne honey, and when that taste had once conquered our market and good prices will be assured as well.

To place a large quantity of best honey on the British market and keep the supply up at a loss till the victory was won and they learnt to love and appreciate our strong flavoured honey — and in time they would be bound to do so, and prefer it as we ourselves do, would not be attempted by any private individual? In no other way but by a bonus to help and encourage individuals can it be done. Bonuses are not a new idea. France and Germany have adopted it, and are adopting it. The destruction of the West Indian sugar plantations was one result of their working. Under such our best honey is bound to win its way, and every penny given as bonus will return four pennies or more to Federation.

In our small home market if some of the millions of money that leave our shores annually were spent here for what we ought to produce ourselves, the labour in which it would be spent would so cause our population to increase by the creation of homes and families instead of homeless tramps and unmarried women that our honey market as well as every other market would be thereby benefitted.

It is the man who starts beekeeping away in the bush that wants every encouragement, not Government pettifogging in or near towns where no great quantity of honey can be raised.

I trust this influential Society will see its way to assist the industry on the lines I have pointed out.

And at the same time I would ask all who feel an interest in the beekeeping industry to support the Australian Bee Bulletin, which has always advocated the interests of the industry, and is now established over eleven years.

The honey produced in all the countries I have given the number of hives and beekeepers in being densely populated countries, must necessarily be mostly from agricultural lands. Our box and ironbark honeys from our interior forests must be superior to it, as it is superior to the coastal and agricultural lands of New South Wales, and ought if matters are properly worked to command as good a name and price as the Narbonne and other special honies that have done so in the past.

Let the bonus be for good honey only, and under Government inspection only; I will say the box and ironbark honey only.

To Make Candy for Feeding—Heat extracted honey, being *very sure* not to burn it, and stir it into the sugar till it seems quite thick, and take it from the fire. Then pretend you're kneading bread dough, with sugar instead of flour. Have the sugar on your bake-board, put the sugar-dough on it, and knead all the sugar into it you can. Let it stand a day or two, and then knead some more sugar into it until it is quite stiff, unless it is already quite stiff.

The *Irish Bee Journal* says the past honey season has been described as the "worst in living memory.'

Bees 6,000 Years Old.—At the International Apicultural Exhibition, Vienna, there is to be an exhibit of perfectly preserved specimens of mummified Egyptian bees, estimated to be 6,000 years old.

The first and greatest essential in queen rearing is a nurse-force of *young bees*. Furthermore the presence of old bees is a detriment. Size of nurse force is a relative quantity. The second essential is, eggs, or larvæ under three days from the egg. And, third, the presence of pollen, and honey or syrup readily accessible to the nurses. To explain: Young bees do all the nursing. Old bees, when present with them, sometimes help themselves to "pap" which should go to the development of larvæ. This is particularly so in inclement weather.—*Exchange.*

Beeswax and gasoline make a good stove blacking. Rub it on when stove is cold.

Preserving fruit in honey, boil both together.

BEE-FARMING & FOREST PROTECTION.

AN ASSOCIATION FORMED AT DUNKELD, VICTORIA.

A meeting of beekeepers and others was held at the Mechanics' Institute, Dunkeld, on Saturday afternoon for the purpose of forming an association for the protection of the beekeeping industry. There were present—Messrs. T. Bolton, Frost, D. Kearns, A. Young, H. Womersley, E. Fisher, F. Kearns, Scullin, T. Fisher, Dug. M'Leod, Taylor and Tait.

Mr. Bolton read the notice convening the meeting as appearing in the *Spectator*, and Mr. Frost was then appointed chairman.

In thanking the meeting for appointing him chairman of a gathering called together for such a significant purpose, Mr. Frost said they all knew what returns and profits arose from the beekeeping industry. He would not go into the destruction of trees generally by the ringbarking process, but would allude to one or two matters bearing on the industry that had come under his notice. It was well known that where he had his distillery was the property once belonging to a gentleman, who, though it was covered with trees, considered it as his fattening paddock, and the grass was so long that he could not see his cattle lying down. That timber had all been rung, and it was now one mass of scrub. Kill it they could not, and it seemed to him that as soon as they cut the trees down there was nothing but one forest of young trees. Sheep would not eat it down, but instead there was a regular forest of young suckers where the ring was put round the trees, so that it was shown that even ringing the trees did not tend to give a greater amount of grass.

Mr. Bolton remarked that he did not think he need say much that day on bee-farming, but if there had been a better public audience he had intended saying something about the industry. There were various means by which they could endeavour to secure their objects. There was the purely selfish way of endeavouring to gain honey at the expense of everybody else, but there were better ways of looking at the subject than that. It fell to them, as the pioneers of a new industry, the importance of which had not yet been published very widely, to bring new ideas on certain subjects before the public. Though few and feeble, they had a great principle to contend for, and the sooner other people were enabled to see things in their true light the better for the bee-farming industry and the State. At the present time a great deal of attention was being drawn to the need for rural industries; two or three had occupied attention, but they were in the position that they could show their fellow countrymen the way in which a good rural industry could be established, and in doing what they could to establish beekeeping they were accomplishing something for their fellows as well as themselves. There were a number of young fellows in the city who would like to leave the office and the desk, and who would like to go into the country to earn their livelihood. They were not robust enough to take up and work a selection of land, but here was an industry (beekeeping) that was suitable to many such men, provided they had a natural taste for the work. The industry provided a way for them, as well as for the sons of farmers in the district, to earn a living, without in any way molesting those who had already occupied land for grazing, or without reducing the value of the land for the carrying of sheep. Misrepresentation through the press had made it appear that bee-farmers wanted to keep the land locked up for their own use, but he thought all engaged in the industry could say that bee-farmers never had such a thought, and that it never mattered to them who had possession of the land so long as the bee-farmers were not molested. They also had to combat the idea, prevalently held for so many years, that as

soon as a man took up a grazing area he was practically the owner, and that the country had no right to interfere with the property, which really did not belong to him. This idea graziers were thoroughly possessed of, and it was a principle they (the bee-farmers) had to fight for—that lessees of Crown lands had no right, legally or otherwise, to the trees on the land, which belonged to the people of the country. He hoped that through the agitation of the beekeepers and through their leagues they would be able to educate the people up to the idea that the State had a valuable asset in the trees of the country, and that lessees had no right or title to destroy them. Another force they had to combat was the Department of Lands, which for years had seen nothing of value in the trees of the State except what value they would give when cut down and brought to the sawmill. If they had spoken to any of them on the subject they would have found that the idea of there being any value in the tree tops was quite new to them, but he did not think it was quite so new now. The value of the trees for milling purposes was an old idea, and they (the beekeepers) ought to fight for the newer idea that there were many parts of our country where there was more wealth to be produced out of the tops of our trees than in the wood underneath, for there were lots of trees which were not quite good enough for milling purposes, but which were quite good enough to yield an abundance of honey. This value could be realised at once. If they valued a tract of country, or the timber on it, for its milling uses they would apprise it at its value at some future date when it would be cut up once, and once only, but if they could get the Crown lands officials to take a proper estimate of bee-farming they would find that the trees had a value that could be realised every year. He (Mr. Bolton) had challenged the attention of the Minister of Lands to statements which he could prove. He had given facts and figures for the sake of forcibly drawing attention to this matter, and in calling that meeting together it was his idea that they might represent these facts in some forcible way, as a meeting, to the department of Lands. Hitherto it was only a single handed fight; he had written letter after letter, and had waited upon people, but except for his private efforts it had been a one-handed matter. He, therefore thought it was time they combined to make the needs of their industry known, and to impress upon those who were responsible the value of the trees, such as yellow box, iron bark and red gum, for honey-making. They must induce the Department of Lands, in face of facts, to give some thought to the matter. Hitherto they ignored what was said; they were so wedded to the idea that only graziers were of importance in the land that it was very hard to get them to take an interest in the way of protecting any other industry, and it was only by co-operation that they could hope to stir them up. Mr. Bolton quoted a relative estimate of the value of sheep-farming and bee-farming to a given area, and claimed that, allowing for poor seasons, the production of honey to the square mile would yield £75, as against £25, while if the Government average of one sheep to ten acres was taken as a basis the return to the grazier would be considerably less. By this comparison it would be seen that the bee-farmer got more from the land than the grazier. Then again, they heard it argued that if the Government gave so-and-so leave to destroy the timber there would be an increase of grazing capacity which wonld make that destruction justifiable. The majority seemed to think it was only a matter of small gain, but a gentleman, who was in a position to judge, had informed him that he would not ring his land, as he did not think he would gain anything like it would cost. The gain to graziers was small, and the ringing for a slight increase of wool was carried out to their loss as bee-farmers. By allowing ring-barking to continue, the whole future

of the bee-farmer was absotutely sacrificed, and the whole timber value of the land for milling at any future time would be sacrificed also. With bee-farming it was the only thing that would be worth much in the future, and by preserving the timber and developing that industry there would be a population with twice as much capital and labour as now. When the motions were put to the meeting it was for all the bee-farmers to say that the Government should conserve all the good bee-farming trees.

Mr. Scullin expressed his pleasure at the number of bee-farmers present, and voiced his faith in the facts and figures as quoted by Mr. Bolton. He had been in that portion of the country under discussion for ten or twelve years, but not being an expert grazier, he could not swear to the value of the country for grazing; he could say, however, that he had not seen much grass of any account there yet. The country was clothed in five or six different species of eucalypti trees, and in the event of the "blue blocks" being leased. the Government might grant licenses to ring the trees, which would be to the disadvantage of the bee-farmers and the whole community generally. He believed the day was not very distant when a good many people would take an interest in bee-farming. Mr. Bolton had shown what it was possible for a well-managed apiary to yield, and he thought they could all make a decent living out of that particular country if the timber was left alone. If however, the Government allowed the "blue blockers to destroy the timber they would practically starve the beekeepers out. There was a lot of timber there which should not be destroyed, and he hoped everyone present would emphasise the necessity for prohibiting ringbarking in that country.

Mr. Dug. M'Leod being invited to speak stated that he had never seen the Glenisla country. He had some little experience in beekeeping, but not being acquainted with that particular country he could not say anything that would be of weight to the meeting.

Mr. Bolton: Do you as an agriculturist, think the timber should be sacrificed for the grazing?

Mr. M'Leod: Not knowing what the country is like, I cannot say. If it is first-class country, I would certainly say sacrifice the trees for the sake of the land; but if the country is what you represent, inferior land carrying one sheep to ten acres, I think it would be better to protect the trees.

Mr. Bolton: I think all beekeepers agree with you.

FORMING AN ASSOCIATION.

Mr. Scullin moved: "That this meeting of bee-keepers and others interested in forest conservation is of opinion that the time has come for beekeepers to form themselves into an association for the protection of their interests, and for the preservation of forests."—Seconded by Mr. Young, and carried.

On the question of name, Mr. Bolton suggested that it would be wise to frame it so as to embrace those who were interested in forest conservation, and yet who were not beekeepers. Accordingly, Mr. Scullin moved that the association be called "The Dunkeld and Western District Bee-farmers' and Forest Protection Association." — Seconded by Mr. F. Kearns and carried.

On the motion of Messrs. Bolton and E. Fisher it was decided that the membership be 2/6 per annum.

Mr. Frost moved that Mr. Scullin be elected president.— Seconded by Mr. H. Womersley and carried.

Mr Frost was elected vice-president, on the motion of Messrs. Bolton and Fisher.

It was resolved that the committee consist of eight members, four to form a quorum, besides the president, and Messrs. Bolton, D. Kearns, A. Young, H. Womersley, E. Fisher, F. Kearns, Frost and V. Womersley were elected.

RECOMMENDATIONS TO THE LANDS DEPARTMENT.

Mr. Scullin moved that this meeting of beekeepers and others interested in the bee-farming industry desires respectfully to draw the attention of the Minister of Lands and of the Forests' branch to the growing importance of bee-farming in the north-western district, and to request on behalf of the number of young men and others who are entering upon this pursuit that bee-farming, as an increasing and valuable adjunct to rural prosperity, may receive more careful recognition of its claims, and that, in the future, when applications for permission to ringbark trees upon Crown lands are made, a report upon the suitability of the timber for honey production should be obtained from some competent person or persons, in addition to the usual report as to the value for saw-milling purposes of such trees, before the granting of such applications be decided on.—Seconded by Mr. F. Kearns and carried.

In speaking on the foregoing motion, Mr. Bolton said he was responsible for drawing up that and the subsequent resolutions, his idea being that if they were to fight against the old conservative tradition in the Lands office as to grazing they might achieve what they formed themselves into an association for. At present there was no consideration paid to the beekeeping industry, but because a man was a grazier and a Crown tenant, he got permission off-hand to ring the trees; there was nothing to stop him. The great object they must persistently fight for, as the *Argus* told him to do, was to get the people in the Lands Office to think of something else as of value besides grass. At Bepcha a man had obtained permission to ringbark somewhere about 1,000 acres, and on going up to the land he found that several hundred acres of rich yellow box and ironbark had just been rung, the leaves were withering, the flow of honey was stopped, and the immediate result was some two or three hundred pounds' loss to him (Mr. Bolton) and he had to begin discharging men and shifting bees straight away. There was nothing to prevent other graziers on either side obtaining similar permission, and thus destroying the industry. The injustice was that that they allowed the trees to be destroyed without hearing what the beekeeper had to say; he was sacrificed without having an opportunity of speaking in his defence. When a man applied for a permit to destroy this valuable honey-yielding timber, that application should reach the l nds office and be communicated to the bee farmers in the vicinity, and let both parties appear and give their views on the questions. That was only British justice, and on it hinged their industry. Hundreds of pounds would be put into the business if the Government would so secure the timber that everything would not be sacrificed, but at present there was no encouragement to a man to spend his money when at a moment's notice all his interests, time and money would be lost.

Mr. Young moved the second resolution as follows:—"That in districts suited to bee-farming, and of recognised poor grazing capacity, and where beekeeping is already being carried on, this meeting considers that common justice should demand that before a permit is granted to destroy the honey-yielding trees, beekeepers, whose invested capital and labour for many years past may be at stake, should be notified and should be given fair opportunity to show what effect such destruction will have upon their enterprise. This concession on behalf of this industry would lead, this meeting considers, to a feeling of confidence and assurance as to the permanency of bee pasturage that would greatly encourage the development of and the investment of capital in the industry, with consequent opening for many men who have neither the land nor the physical strength to engage in other branches of agriculture." — Seconded by Mr. D. Kearns and carried.

Mr. Womersley moved and Mr Scullin seconded: "That this meeting further desires to state, in support of the two previous claims to consideration, that it is a proved fact – 1. That in many areas bee-farming is capable of yielding more value in produce than grazing. 2. That the permanent establishment of a well-conducted bee-farm involves a greater outlay in buildings and plant and a larger employment of labour than is involved in carrying on a grazing area. 3. That the national asset in trees (together with such other gains as it is claimed result by competent authorities) is conserved by the preservation of the red gum, yellow and grey box and ironbark trees, so essential to bee farming. 4. That the gain in wool produce (if any results) from ring-barking is altogether out of proportion less than the loss of this industry, and the country at large thereby caused. 5. That because bee-farming can be carried on simultaneously with grazing, the fostering of the first-named industry in any such regions as the upper Glenelg, the "blue blocks," and others, where bee-farming thrives, leads to an increased population and a doubled land production.—Carried.

GENERAL.

Mr. Bolton moved that the following resolution be forwarded to the Maryborough league, "That this meeting of beekeepers and others interested in forest conservation desires to express its warm and hearty appreciation of the formation of the National Forests' Protection League, and purposes to assist in every legitimate way the objects of that league." The mover advised those present to join the Forests' League, the subscription to which was 1s. The motion was seconded by Mr. F. Kearns, and carried.

As a hint to the bee-farmers, Mr. Frost said that an acre of Chinese lavender would give a ton of honey, which had been tried and proved at Sorrento, quoting as his authority the late Baron von Mueller.

Mr. Frost said he knew of a lot of young men in Dunkeld and other districts who were making application for the "blue blocks," and he thought it would be advisable to pass a resolution to the effect that those who were bee-farmers should have the preference for their industry. If they were fortunate in getting a holding, they would in the desire to protect the industry, also protect the trees.—Mr. Bolton heard that these blocks were to be balloted for, and in that case there would be no preference for bee farmers possible.—Mr. Scullin was of opinion that it was usual to select a number of candidates, and ballot afterwards.—Mr. Bolton said there would be no harm in passing a motion that bee-farmers should have the preference.—Mr. Scullin said that anybody could say they were bee farmers.—Mr. Frost remarked that they would have to guarantee that. He moved that this meeting considers it advisable that preference be given to all bee farmers who are making application for selection on the land thrown open, and termed the "blue blocks."—Seconded by Mr Bolton.—Mr. Scullin suggested that the motion should read "those who are making their living out of bee farming," and this being agreed to, the motion was carried in the altered form.

Mr. Scullin moved that the various resolutions passed should be forwarded to the proper quarters, which was seconded by Mr. D. Kearns, and carried.

A Whole Bee-keeping Family.

A Mrs. Laws writes to the *American Bee Journal*—I always enjoy the writings of "Our Bee-Keeping Sisters," and since this department has been started, the American Bee Journal has become doubly interesting. I often wondered how much interest was really taken by beekeepers' *wives* in their *husband's* business.

I regret to note that those sisters who write seem to be "paddling their own canoe," and there is no husband connected with the business. Now, please record that here is one sister who is trying to be

a "helpmeet" to her husband, especially in the busy season of the year. For eight months our four children are in school, therefore at that season we do not have much time for bee-work, neither is there a necessity for a great rush in the bee yards. Yet, on Saturdays we make and wire frames, paint hives, put together nucleus shipping-boxes, &c., and always manage to find something we can do profitably that might have to go undone later.

I must say it is a pleasure to spread the paint on nice, clean, new hives, and I have painted a hundred in one day, and manage, by the help of our girls, to keep up our housework, too. With 500 colonies of bees in seven yards, from 4 to 20 miles out, there is hustling when the honey-flow begins until ready to be taken from the hives.

In this delightful climate camp life among the hills is delightful, with a wagon loaded with extracting and camping outfit, plenty of "grub," tents, bedding, &c., the wagon going ahead, we follow in the carriage. Best of all we have a negro cook who tends the team, helps about the heavy lifting, and does the odd jobs, and is much appreciated.

We usually reach the yard next to be worked in the afternoon. Tents erected, supper prepared and over, we spread our beds for the night, and early next morning we are ready for business. Husband and our eldest son, Huber, age 16, will remove the honey from the hives and bring it to the extracting tent, while myself, and Alice, 14, and Kate, 12, will extract the honey and cut out the nice white combs and pack in screw-cap cans ready for the market.

Are we afraid of stings? Yes, some—and stray bees brought into the extracting tent sometimes annoy, by crawling around too familiarly.

Our girls insist that it is more cleanly and comfortable to wear boys' overalls while working in the extracting house, hence they have their papa to buy them large, roomy overalls, which are drawn on over their clothing. Of course, visitors are not expected.

We have never kept a record of a whole day's work, but I think myself and two girls can extract, cut out, and pack, a ton of this bulk-comb honey in one day, with sufficient help to do the lifting.

Making Soft Candy.

1. Into a brass preserving pan, or enamelled iron one put 7 lb. of sugar (fine granulated), 1½ pints of water, and 1 tablespoonful cream of tartar. 2. Put on a brisk open fire, stirring constantly to prevent burning, until it comes to the boil. 3. When at the boiling point, cease stirring. Withdraw slightly from fire to prevent boiling over, until the mass begins to settle down to boil, which is readily known by the frothiness leaving it. 4. Have ready a teacup of cold water, and, with a teaspoon, lift out a little syrup, and drop into the water. If it mixes readily with the water, it is not boiled enough; but if it lies at the bottom of the teacup, so as to lift like very thick paste, or putty, it is just right, and ready to be removed from the fire. If too much boiled, the syrup will be hard and crisp in the water, which can be remedied by adding a little water to the syrup after it has been taken from the fire. Two minutes' boiling is sufficient for the above quantity. 5. Next have ready some shallow plates, or, preferably, shallow tin dishes; returning to the pan, which may be placed in cold water, or, better still, in a running stream to hasten the cooling process. Then stir the mass constantly until it begins to get greasy-looking, gradually getting whiter and stiffer. Lastly, pour into the dishes and allow it to cool. The result will be a very fine-grained, moist, soft candy, that will cut readily with a knife. To the above I may add that the sugar should be dry and finely granulated, the cream of tartar free from damp and fresh, and the fire as strong as possible.

I find the ordinary kitchen range much too slow, so that an open fire, with an arrangement called a "swee" in some parts of Scotland, to withdraw the pan when boiling from the blaze, is the best. I usually make about 40 lb. at one boiling, and find it takes from seven to ten minutes' boiling briskly for that quantity. Whatever candy is not required for present use should be kept in a dry place, as it is liable to be affected by the different changes of temperature.—*Bee-keepers Record.*

CAPPINGS.

From American and other Bee Journals.

There is an old saying, we must go from home to get news. We clip the following from the *Irish Bee Journal.* It will be seen we are regarded as "foreigners" :—

Foreign Competition.—The Australians are talking of flooding the English market with honey at 1½d. per lb., free on board at Sydney, and selling at 3d. to the consumer. The freight to London, from Sydney, is 50s. per ton. It costs 46s 8d. per ton to send Irish honey by ship direct to London from Dublin. In London last year, when several tons of Federation honey were being sold, buyers produced samples of excellent Australian honey at 6d per lb. in glass jars It is not easy to compete with Australia at 1½d. and practically the same freight.

The occasional crystallization of one jar of honey which granulates, while the others remain bright and liquid, is accounted for by the fact that the bottle either contains a small portain of grit, or is slightly rough or irregular in some particular part of the inside, which lends a starting point of crystallisation to the sugars which are contained in the honey in what we will term a state of super-saturation. An experiment (on crystallisation), using sulphate of soda for the purpose, most beautifully illustrates this theory. If we take a quantity of sulphate of soda, dissolve it in a minimum quantity of hot water, and whilst warm tie over the neck of the vessel in which it is contained a parchment paper and allow it to cool, we can at any moment cause the solution to crystalise by the puncturing of the paper with a needle, or by keeping the bottle air-tight we can retain it in solution form. Again, we can make solutions of chemicals, and can manipulate them without any signs of separation, but the introduction of a further small crystal of the same, or some other substance, will spontaneously cause the crystalisation of the whole, and I feel assured that the granulation of honey can be accelerated by the addition of a very small crystal of the ordinary cane-sugar.—W. Shortland in *British Bee Journal.*

In rabbiting and fishing there is always something to do. There is more spare time in "Birding." But in all of them there are little tricks, by which, if not too lazy, one can add a few shillings to the stocking. Fancy getting a sovereign for a kerosene tin of honey. It weighs 60lbs., and not long ago one could get 4d a lb. But "we" got that out of one tree, and 5s for the swarm which we captured next day. You don't get it now, because no one has the sov. And we had six or seven bottles for ourselves, and six pounds of beeswax. So many got at the game that bee trees were cut down when there was no need to do so, honey was carelessly rendered, and now, unless well got up and from known bee-farmers, it is only valuable as a camp luxury or necessity if you have no sugar. A good snake's skin, well pegged out and dried is saleable at half-a-crown to five shillings.—The Wrinkler, in *Geo. Wilcox & Co's. Review.*

Doolittle breeds from queens whose workers give largest yields.

Candied honey in paper bags is recommended by one Aiken in America. The bags are very cheap. A pen knife runs two or three slits in the paper, which is then easily peeled off, leaving the lump of granulated honey on the plate like a brick of butter, and which is cut from and placed on bread same as butter would be.