The Australian bee bulletin. Vol. 4, no. 41 August 24, 1895

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

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

THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

4. No. 41. AUGUST 24, 1895. PER COPY, 6d

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

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

The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—AUGUST 24, 1895.

WORK FOR THE MONTH.

If not already done, 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 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 part of the colonies the moth will probably be at work, so carefully watch your bottom boards and all crevises 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.

The Parliament of New South Wales having met after the general election, it would be well if the Committee of the National Beekeepers' Association, should also meet. It is an old and trite saying, "First come first served." Those who first get the ear of the Government are more likely to get attended to than those who wait till they are overcrowded with business. So if a Foul Brood Act, or a Pure Food Act is to be passed the sooner the Government is approached the better. Re the former Mr L. T. Chambers makes an excellent suggestion in another page re making it a penalty the exposing diseased combs and honey for bees to clear up, which it would be very wise to incorporate with the present proposed Act. Mr. Gaggin in another page, makes a protest on behalf of the beekeepers of the Northern Rivers of N.S.W. We do not say adulteration is carried on to a great extent in Australia, but it will be just as as well to have provision against such and the National B. K. A. Committee should see also to this matter at once. A very strong vote at the late Bathurst Convetion resolved that the Committee be recommended to consider the matter of amalgamation with the Pomological Association. This has also to be dealt with. It will be seen the committee have plenty of work before them. We feel assured, however, it will not be long before we shall be able to report good progress.

AUSTRALIAN HONEY IN ENGLAND.

Some three months ago we sent five samples of Australian Honey to Mr. Thomas Blow, of Welwyn, England, a large manufacturer of beekeeping appliances. We have just received his reply to same, as follows:—

Welwyn, Herts, England,
July 15th, 1895.

Dear Mr. Tipper,—Your letter and samples to hand, two smashed. 2, 3, 5, safely to hand. The price you mention is far too high, though I admit it is splendid honey, and will show same to Mr. Cowan and ask him what he thinks of it before telling him where it comes from. Australian honey is making on Mincing Lane, London, from 19/- to 25/-. We are having a good season in the South of England this year,

but not so good in the North yet. I expect you have had a good season in Anstralia, though I hardly know when your seasons are in full swing.

With kind regards,
Yours sincerely,
T. B. BLOW.

The samples that arrived were from Tamworth, Mulbring, and Glenbrook, Blue Mountains, respectively. The price mentioned was 3d per lb here in Australia with 1d for expenses of transit.

Pease meal, mixed with honey, daubed on top of frames, is an excellent incentive to brood rearing, especially useful at this time of year.

A Good Paste For Labels.—Blend flour and water, put a little powdered alum, place on fire and stir till it boils. A good paste and one that will keep.

We had another visit recently from the Rev. J. Ayling, President of the N. B. K. A. We were very pleased to hear that both Mrs and Miss Ayling have recovered from the sad illness from which they have been for some time suffering, and are at present in excellent health.

We acknowledge receipt, from Mr. H. Nancarrow, of Wellington, of two excellent photos, one of his honey trophy, the other of his observation hive, both of which obtained first prizes at the last show in that town. The first is very neatly and tastefully got up. The second shows that no pains have been spared to make it a really first class and useful observatory hive. May you keep on winning prizes, friend N., and never get weary of so doing.

We acknowledge receipt from the Agricultural Department of New South Wales of report of Agricultural Conference, held in February last. Most interesting and instructive reading. And from the Western Australian Bureau of Agriculture of a work entitled "The Handbook of Horticulture and Viticulture of Western Australia." This consists of 358 pages of fully up to date matter on these important subjects, well printed and illustrated.

We don't like grumbling, but there are a great many of our subscribers in arrears, and we do wish they'd send along. There are a lot of expenses connected with even a modest publication like the A.B.B., and when we calculate we ought to have so much money coming in, and increase the amount of our pages and reading matter accordingly, and then find the relied cash hasn't come in, it puts us somewhat out of the proper editorial mood—putting it mildly. Now, kind friends, take the hint.

We have received Nos. 1 and 2 of *The Southland Queen*, published by the Jennie Atchley Company at Beeville, Texas, U.S.A. It is printed in a nice readable type, and edited by the Atchley family. Mrs Atchley takes a class of beginners, and gives regular lessons to the same, in her well known chatty and interesting style of writing. Willie takes charge of the queen rearing department. Altogether it is a most excellent production, and we most heartily wish success and long life not only to it, but to every member of the Atchley family. The subscription is one dollar per annum.

QUESTIONS

31.—Should the queen be allowed the full use of the hive for brood rearing, or should she be confined to the brood chamber and in what manner?

JOHN A. AYRE.

31.—You cannot answer this with yes or no. It all depends whether you are running for comb or extracted honey. If I was running for comb honey I should put the queen excluder on the lower story giving her the 10 frames, that is as long as the flow lasted, not exactly that either; Supposing you expect a good flow shortly from some tree or scrub, work your bees up as much as possible giving her the full swing the whole hive. Just as the bloom is bursting put your queen down below and all the brood that is in the top story, or as much as you can get, put the queen excluder on and this will do for the time. Now, if it is a good eucalyptus flow it will likely stay seven weeks, at least they stay that long here. Now, when the flow has been running two weeks, contract the queen on five frames, and if there is no flow following the present flow very close, or it be the last flow of

the season, saying the flow lasts seven weeks, cage the queen at the end of four weeks and let the queen go two or three days before the flow ceases. But for extracted honey I would give the queen the full swing of the two stories, you would get more honey. Bees will work with a better will and if it is a good flow and the bees are strong you will want to extract every week. When there is no flow I don't think it does any good to confine the queen to any limited space. To wind up, don't expect to get a crop of honey from half a swarm of bees, and don't cage the queen without the bees are in a high flourishing condition, and if you don't get a crop of honey this way I don't think you will any other. After writing so much I might as well say, Do your last extracting a day or two before the flow ceases. If you don't, look out for what, robbers.

38.—What plan of working would you recommend to increase the production of wax per hive.

F. W. PENBERTHY.

38. I should suggest foundation made from very thin tin plate dipped in wax long enough to get hot, so as to leave on a very thin film of wax, use it in the upper story the first year, in the brood chamber the second, and melt down for wax and put them back into the upper story again the third year. Advantages, wax, strength for extracting, no old combs, healthier, &c. Disadvantages, They may not build on the tin foundation so readily as on wax foundation. I have had bees use the separators for foundation, when they had no starters. I would caution anyone against using the ordinary foundation rolls for tin plate as it may spoil them, it should be steel rolls.

A. E. AYRE, W.A.

38. What plan? Why, put no wire in frames, give them a two-inch starter instead of full sheets, extract and cut all out of frame but two inches; put all these with the cappings in the solar wax extractor, to be run down. Continue this, but never run the bees down too fine. When the flow stops you can mix the honey with water to feed it back. You can keep feeding it back and cutting the comb out every time until all the honey is converted into wax, but I don't think it would pay, as the bee consumes from 12 to 14 pounds of honey for one pound of wax, besides the extra trouble, even if the wax brought 3/6 per pound. I can get a ton a season if some that want it so badly will make it worth my while. I never pay more than 10d for first quality. My time is valuable, and it would take time to look it up.

QUESTIONS THS MONTH.

40.—T. Wall,—Which do you think the most profitable to produce in Australia, Comb or Extracted honey?

41.—G. F. Bray,—What is the best way to send honey to market, both for local and export trade? Tins, small casks or otherwise?

W. S. & H. J. WILSON.

40. Have never gone in for Comb Honey to any extent. Prefer to run for Extracted.

41.—Glass and small tins, holding from 2 to 10lbs for local trade, and strong cans, holding say, 60 lbs for export.

EDGAR F. R. WALLIS.

40. Extracted honey, as in the handling of sections, from here to Melbourne, I would find on arrival that considerably more than half would be broken down, and not one of these in a fit state for sale. I have seen Sections arrive from shorter distances, all broken, and were packed well,

41.—For local I prefer the old style, kerosene tins, but for export I intend trying square or oblong tins to hold two pounds and to be packed in a case similar to kerosene oil.

F. LOW.

40.—I should say extracted honey, without you have better luck than I have. But I have never given comb honey a good trial. The Americans get almost, if not as much comb honey per hive as extracted. In my case extracted honey is the more profitable.

41.—I don't see as we can better tins in Australia. For export I should think two or three lb. glass jars and it would be ready for retailing on reaching its destination without further trouble.

A. A. ROBERTS.

40.—I think to the majority of beekeepers extracted honey will be the most profitable, as I find it requires a good flow to get your sections nicely filled and in good shape for market, and I can get twice as much extracted as comb honey, and can get more for my two lbs extracted than for my 1 lb comb honey. Some may say, you have less labour with your comb honey. I don't hink so. Suppose you have a ton of comb honey and two tons extracted. Which will take the most care and attention and require the most room for storage? The cappings too are no small item with the extracted. I will leave the raising of comb honey to the more experienced and those away up.

L. T. CHAMBERS.

40.—Extracted at 3d lb. pays better than comb at 6d. The difference being accounted for by increased quantity of extracted, equal to fully twice the quantity of comb, sometimes more. In selling comb honey, beside the cost of boxes which are given in, is also given away with every 100 lbs. of honey sold fully 5 lbs of wax, contained in the comb and cappings. Add extra packages, extra freight, extra risk, together with smaller demand, and a good idea may be gained of their relative values to the producer.

41.—Small tin packages, 10 to 25 lbs, for local trade, and these would probably be good

for export. Casks are not reliable and are too bulky.

J. LE M. SCHOMBERG.

40. I should calculate extracted honey the most profitable. Wax can be produced more abundantly by a little process with a great deal less product of honey. The loss of honey would not near cover the value of wax. This is how I take your question.

41. I decline to give an answer as to the best mode of sending honey to market, as it stands with the individual in the quality and style in which he presents it. A bad quality of honey simply spoils the market, but I confess it makes it better for the good presenter. I am working my own trade. Honey put into tins for any length of time is a mistake, as it spoils the flavor, but with a little extra expense tins may be put through a certain process that will preserve the flavor, which I mean to treat them to for exportation.

M. A HOBHOUSE.

40.—The latter I find far more profitable than the former. Some seasons my bees fill the sections very rapidly, but this seldom happens. As a rule, I only produce comb honey for my own family and particular friends.

41.—I always use new tins, with patent leaver lids, and find them cheaper and better than anything else. This season I purchased one dozen sixty-pound tins, with screw caps. Two of these fit a kerosene case, and are always saleable. The honey keeps better in these than in smaller tins, and does not candy so quickly, in fact, with me it is still liquid. My only objection to these tins is, that they are rather heavy to handle. Next season, I propose using tins that will hold about 40lbs., and having boxes made to hold two. This I think will be a useful size for export.

A. J. ROBERTS.

41.—For export I think tins before casks. The tins should be well made and of good strong tin (no shoddy) and not to hold more than 50 lbs so that when two are packed in a case they will not weigh more than 112 lbs gross, as 112 lbs weight is heavy enough to handle nicely and not so likely to get damaged as heavier ones. I do not believe in putting honey into second hand tins, such as kerosene and turpentine tins, it looks like kitchen fat going to the soap factory. I think it much better to pay a little more for good tins and send your honey to market in good shape, than to put it into cheap and second hand tins and loose twice as much through leakage and perhaps in price. For local trade we usually use pickle bottles. You can get them up very nicely and they take the eye and help to sell it The better way would be to have a small tank nicely covered from dust, &c., put it on the cart and cart it from door to door about twice a week, and sell from 1 lb up, and I think by this means it would increase the consumption considerably.

H. NANCARROW.

40.—T. Wall. I consider extracted honey best for this reason, that you can only obtain 4d to 5d per lb for comb honey in Sydney markets, and extracted realizes 3d to 3½d per lb. The difference in price will be compensated for by the extra quality that can be obtained by extraction or returning combs to the hives. Whereas if combs were cut out of frames, the time lost by the bees in building up again would only allow of robbing being done once every five or six weeks and in that time in my district we could extract two or three times. Hence the quantity of extracted honey would realise a better price than could be got for comb in the same time.

41.—Small tins of from two to seven pounds is the most suitable, if got up in good style and nicely labelled. Larger tins cost less but are not so easily handled or so saleable on account of bulk. Casks would require to be specially made for honey and would not answer so well here as tins in my opinion. Bottles of fancy shapes are undoubtedly superior to tins, as by their use the quality of the honey can readily be ascertained but until we can get them as cheap as tins or almost so it would not pay to put honey in them, for sale at prices current.

QUESTIONS NEXT MONTH

42.—W. S. & H. J. Wilson,—Are drones raised from a drone-laying queen &c., as good as those raised from a fertilised queen ?

43.—Are you feeding this spring, and if so, what plan have you adopted.

SECRETARIES OF Beekeepers' Associations.

PLEASE forward us your times and places of Meetings. We will make a Special Column for you Free.

H.R.B.K.A.

A meeting of above was held on Tuesday evening, July 5, Mr J. W. Pender in the chair.

A communication was received from Mr Charles Mansfield, resigning the position of secretary. Mr M. Scobie accepted the vacant position, and promised to use his best endeavours to make it again the premier society of the colony.

Mr Robert Pender called attention that notwithstanding that the Railway Commissioners had expressed their approval of "return empty tins being conveyed free, and same may be packed in cases if desired"—see April number *A.B.B.*, page 11—such concessions were not allowed on the Great Northern line.

It was resolved the secretary of the N.B.K.A. be communicated with re the matter.

Conversation ensued re nights of meeting, different places of holding same, and reducing membership fee.

Mr J. W. Pender announced that he had received word that a swarm of *apis trigona* that he had forwarded to a gentleman in England had arrived there in capital condition. The recipient in his letter recommended that superabundant Australian honey should be utilised in the production of metheglin and like beverages.

LACHLAN B. K. A.

W. NIVEN, HON. SEC.

The monthly meeting of the Lachlan Beekeepers' Association was held in the School of Arts, Eugowra, 31st July, 1895.

The President, Mr. N. E. Osberg, presided. Minutes of the previous meeting were read and confirmed on the motion of Mr. D. Chesher, seconded by Mr. Smith.

Correspondence:—Prospectus of the Proposed Beekeepers' Co-operative Honey Supply Company Limited, read.

A paper was read by Mr. Niven on the "Management of Bees for the month of August," being the first of a series of papers which it is intended to be read by various members giving a forecast of the best management of the bees for each month. The paper pointed out the necessity to stimulate bees to early breeding and in cases of weak colonies to unite two together, or to obtain bush bees, and by uniting those with weak colonies, they could be made strong in a short time, thus enabling them to store surplus honey at an early date. Mr. Niven received a vote of thanks for his paper.

Mr. Lynch gave a very able description of the Beekeepers' Conference held at Bathurst, 3rd, 4th, and 5th July. He quoted largely from figures and notes taken during each sitting. He stated 110 delegates were present, a Co-operative Honey Supply Company was started, the National Beekeepers' Association affiliated with the Horticultural and Pomological Association.* A number of useful and scientific papers were read, all tending to the advancement of beekeeping in this colony. All the appliances requisite to successful beekeeping were on view. He considered that those who are interested in beekeeping, should not miss the opportunity of attending the Annual Conference. A hearty vote of thanks was accorded Mr. Lynch for his description of the Convention, on the motion of Mr. Niven, seconded by Mr. Smith.

Proposed by Mr. Smith, seconded by Mr. Lynch that the next meeting of this Association be held in the School of Arts Eugowra, August 28th. The meeting then closed.

*The committee were only recommended to consider this matter.

MUSWELLBROOK BEE-KEEPERS ASSOCIATION.

From the Muswellbrook Register.

The usual monthly meeting of members of the above association was held in the School of Arts on Saturday August 3rd. Mr. Weidman was in the chair, and there was only a fair attendance. The minutes of the previous meeting were read and confirmed, and correspondence was received from Mr Tipper acknowledging receipt of photo of honey exhibits shown at the late show.

Mr. Paul then read the following paper on

SPRING MANAGEMENT.

After the very many able papers read by various members of our association, I am afraid the above subject has not met with the attention

from me that it deserves, being, I consider, one of the most important matters connected with the apiary. The time of year our honey flow commences should rule the spring management, and to know this a knowledge of our locality and the time of year each kind of tree and honey producing plant flowers is necessary, otherwise we are working almost in the dark. Bees must be properly managed in the spring or the crop of honey will be disappointing in any season. If the bees had been provided at the end of the previous year's honey crop with plenty of stores to last them through the winter and until spring has fairly commenced, nothing need be done to them except to see that the covering on top of frames is dry and that the hive contains a good queen. If any are queenless give them one at once. Should any doubt exist that the stores are not sufficient give them a frame of sealed honey. I think I would prefer to feed syrup ; they would then have time to store it in the frames where they cluster, and could the more easily reach it if cold days should come afterwards. But whatever is fed should be in quantity sufficient to last until the warm weather has set in. A thorough examination of the hives is most important, because it is well known that colonies of the same size consume very different quantities of honey through the winter and we are very liable to be mistaken in our estimate of the quantity of honey the bees may have.

Should any fear arise of chilling the brood the hive should never be opened unless the weather is favourable. It is not necessary to expose the brood nest to ascertain the quantity of honey a colony may have ; simply throw back the quilt, or covering if used, and feel the weight of a few of the frames. The general prosperity of a colony of bees in spring depends upon proper care, favourable weather and plenty to eat, the latter condition being absolutely indispensable. A great many beekeepers claim that to get the best results it is necessary to resort to daily feeding whether the bees have plenty of stores or not, but I think the work of the queen depends upon the care and attention the workers give her, and it is certainly conclusive that the bees have natural sagacity enough to feed their mother well when they have plenty in store, whether fresh supplies are coming in or not. Many experts advise not to begin too early if feeding is considered advisable because we are liable to have our hives full of bees which we may have to feed too long before the honey flow commences. I myself would prefer to have my colonies strong a month too soon than a month too late.

A warm, dry, clean hive with an average queen and a full supply of stores through the spring means a strong colony by the time the honey flow begins.

I find a shallow dish filled with syrup placed top of frames and covered with cheese cloth a very simple way of feeding. The following question was asked in one of the leading American Bee Journals lately ;—"With plenty of stores in the hive in spring, should a colony be fed?" Most of the answers are against feeding, while a few recommend uncapping a frame or two of sealed honey to stimulate brood rearing.

What to do with weak colonies in the spring, is one of the ever recurring problems that come before the beekeeper. The old maxim "Keep all colonies strong." may be true enough as a general principle, but it will not always apply. For to do this (make them strong) only two ways present themselves ; To build them up with brood from those already strong, or put several together and thus make one strong at the expense of several. In following the first method you have not increased your bees any, only put your forces in a new position, thereby weakening those hives that were perhaps none too strong, and putting the force substracted where its only use is to support the poverty of its adopted home, without any results as to alleviating it. If the other course is followed you have destroyed half your recruiting force by destroying the queens of those united with the others, and furthermore, the chances are largely in favour of your united colony being no stronger at the end of two weeks than any one of them were at the beginning. It is well to bear in mind that all the bees brought out in spring are old and their term of usefulness is limited to days or weeks at the furthest, and no amount of uniting will save them from this fatality. One hundred bees in one hive will die just as soon when their time has come as they would in 10 hives.

The cause of weakness is usually the queen, but not always. She may be a drone layer by reason of age, or have passed her time of usefulness, or by reason of being raised too late in the season to meet the drones. In either case the only course is for the apiarist to destroy her and give her bees to some other colony.

Other queens may be all right but able to lay only a small quantity of eggs in a day. It is of this kind that you will probably find most. Where the former treatment would be suicidal, simply let them remain, crowding the bees on just sufficient frames that they can cover, and do not disturb them until a few days before the honey flow, except to see that the queen has room to lay. At this time, if you have observed the proper conditions as to food and warmth, each colony will have increased perhaps from three to five frames. These of course if left to themselves would not amount to much as honey colonies in their present shape, for it would take about all the bee force to maintain the heat of the hive, etc , but by uniting the working force we can get even from this unpromising material some surplus. First look your colonies over and ascertain just how many frames of brood there are in each, and mark them in some conspicuous place with that number, selecting the best for your honey colonies, then from the

others take frames of sealed brood with adhering bees and fill these honey colonies full of brood, putting the removed frames into the colonies from which the brood was taken. Just how many to leave in the robbed colonies will depend on the weather, if warm all but the eggs and unsealed brood may be taken, for their will be returning bees enough to care for them. Of course it hardly seems necessary to say, "Do not carry away the queen, and mix the bees well in their new home." This is easily done by mixing the frames from different hives, not putting two from the same hive, side by side. With this plan it will hardly ever be necessary to cage the queen. By this plan you have not increased your bees by one, but you have put them where they can do your work better and their own housework will not suffer materially. You have now a number of fairly good colonies ready for the honey harvest, whereas by building up the weak from the strong only weak forces would have been at your command, and the return scanty. You will now have a few weak colonies to care for. They will have increased some by the time swarming commences, and are worth looking after. The swarms will come from your strong colonies very soon after honey commences to come in, and now is the time to use your judgment. Remember that increase of the number of hives containing bees is not necessarily an increase of bees. Our maxim now should be, "Allow no increase until all hives are full."

Having this always in mind one can readily see how to arrange those weak colonies. Allow the swarms to issue in the good old way, which to my mind has no equal. Hive them on their old stand, which is a small job if you have the queen clipped, as you should. Give them a new hive with two frames of unsealed brood taken from the old hive, and fill out with empty combs or foundation, and honey gathering goes on at the old stand in the old way, but with much more vim.

Take your frames of brood which you have left from the old colony and adhering bees, and put them in your weak ones, cutting out all queen cells, and by time the honey flow is well on they will be strong. If you think the queens of any of your weak colonies are poor, put a frame containing a queen cell in the hive, and you will soon have a new queen. After all colonies are made strong in this way, and if swarming continues, you can get all the increase desired by making nuclei of the brood instead of putting it in other colonies. This, I think, will be found a very good and easy principle to work on.

Spring dwindling is one of the greatest enemies to the beekeeper. I do not know whether to style this a disease or a condition of things that come naturally during cold and backward springs. I should incline to the latter were not its ravages so uncertain: that is it seems to affect one part of an apiary and not another part. At times it will go through one apiary, while another a few miles away will be entirely free from it. It is very certain it affects weak colonies more than strong ones. Warm weather is about the only cure I know of. Several instances have occured where whole apiaries have been almost entirely lost through the disease, but of late years it does not appear to come in such a severe manner. A good deal more might be said on this subject, but if the apiarian pays attention to his work and follows out the above ideas, more especially that of keeping his colonies strong, he will have very little to trouble him when spring approaches.

Mr Ellerton moved that a hearty vote of thanks be given to Mr Paul for the very able paper he had read. He was very pleased to be present to hear the paper read, as several of the matters in it were new to him. One of them referring to weak colonies, he would put in practice.

Mr Grant seconded the motion. He was very pleased with the paper and thought it a very able one, and, like Mr Ellerton, he confessed that some of the ideas were new to him.

The following also supported the motion, and spoke in very complimentary terms of the paper, viz., Messrs Clarke, A. A. Roberts and the chairman.

The motion was carried, and Mr Paul suitably replied.

The Treasurer stated that the amount of funds in hand was 15s. At this stage Messrs Ellerton and Grant gave a very interesting account of the Bathurst Convention, at which some admirable papers had been read.

It was proposed by Mr Ellerton, seconded by Mr Clarke and carried, that Mr Grant be asked to read a paper at the next meeting on "swarming." This concluded the business and the meeting terminated.

IMPORTANT.

BOMBUS.

Sir,—I hope you will not think me presumptious, but I would like to point out to the readers of your valuable widely circulated little paper a thing

which struck me as very peculiar and is no doubt of vital importance to all beekeepers, except queen raisers, &c., as it affects—well their pockets and consequently their living. I have not been a subscriber long, likewise I consider myself quite a novice in beekeeping, having kept bees only some three years, but when on opening the June number of A.B.B. I saw that " Mr. Gale is still on the warpath, having addressed a number of beekeepers at Millthorpe, the result being the formation of an association," I said to myself, that is quick work. It seems to me, that wherever Mr. Gale lectures, he leaves in his wake a number of budding beekeepers.

I wish you to understand distinctly, that I am not casting any reflection upon Mr. Gale ; he is paid by Government and I daresay only does his duty.

But it is with the result of these lectures I wish to deal. Now we will suppose a lecturer speaks on beekeeping ; it is very interesting to even an amateur, but when that amateur hears from the lecturer that a certain man in a certain locality obtained 750lbs per hive on the average, that amateur gets excited and wants to keep bees right away. I remember attending a beelecture in a small inland township in winter, the following summer out of 16 boys in the 5th class at school, 14 had procured hives, some one or two, others a good few. Will not grown up people do likewise and more so ? A passage in a lecture about enormous profits in a certain line strikes the people, if they forget everything else, the lecturer said " They will not forget THAT little item."

In my own limited sphere of observation, I have people come to me almost daily to get information as to management, boxes, &c. If I furnished that information, I should have all the people around here beekeeping and be driven away to look for better country, so in common self-protection I have to deny them and if I told them that the district would only hold a certain quantity of hives they would not believe me, but starve my bees and their own too, sooner than not have a go at it. So I just let them find out things as I did. But when 20 or more people round a little township take to beekeeping at once, the thing becomes serious, and I have no doubt that in another 10 or 15 years quite five per cent of the male population of Australia will be beekeepers, that is, if there is still a profit in the business.

This brings me to the commercial side of the question. There are a number of associations, each with a lot of members, but by far the greater majority of those engaged in the pursuit do not belong to any association. Their number is increasing daily, and so is the output of honey per annum. Added to this is the wholesale initiation of novices into the art or science in every town and district where lectures are being delivered.

Presently we shall raise enormous quantities of honey, and then comes the cry "WHERE can we sell it ?" and "WHAT can we get for it ? "

I notice even now, that people send their honey anywhere in the world on the off chance of getting an extra penny per lb for it, and with all that we have a paternal government, which instead of fostering our industry, cuts its throat, by easy stages so to speak, as it has taken or is going to take the duty of 1d per lb offimported honey, and likewise appoints a man, to show, vulgarly speaking, the tricks of the trade to anybody who like to ask for the information, with the result that both the number of producers and the quantity of the product are increased enormously, and I fear, that at no distant date there will be either over production or else beekeeping will have ceased to be a profitable avocation.

I may be accused perhaps of looking too far ahead, but I am sure the things I pointed out will come to pass, if something is not done to cope with the evil. How, I am not at present prepared to show as I fear that I am trespassing on your valuable space already, but at some future time perhaps, I shall place a scheme before your readers for their comment.

It is not for a moment to be supposed

that everybody will agree with me. In fact some people will say, that it is a most selfish letter, and I expect that the queen raisers and appliance manufacturers will feel slightly antagonistic, but to them I would say: Sell less queens and appliances and get a better price for your honey. My motto is, "The greatest good to the greatest number," and I fancy that those who keep bees solely for the honey they produce are in the majority.

In the meanwhile I invite the opinion of any brother beekeeper, as I think that a momentous question like this ought not to be passed over in silence.

THE PROPOSED "FOUL BROOD BILL" UNJUST.

J. R. H. GAGGIN.

In your report of the Convention as published in last *Bulletin*, I fail to see any mention of my humble protest against above-named Bill, and my openly expressed objection to joining the National Beekeepers' Association, on account of said Bill forming one of their principle measures *in prospectu*. Allow me, therefore, to now give my grounds for this.

I cannot join, nor do anything but try, as far as I am able, to weaken this association, so long as this proposed "Foul Brood Bill" is, perhaps, the most prominent item in their programme, for the following reasons. The passing of this specimen of legislation (as the draft of it at present stands) would entail the appointment by government of a "Foul Brood Inspector," and perhaps, an assistant; their combined salaries with travelling expenses amounting to say £600 per annum. To raise this amount a tax would most assuredly be laid on beekeepers alone, as the class solely benefitting by appointment of such officers. According to Mr Coghlan—the goverment statistican—there are now about 35,000 colonies of bees in New South Wales; therefore to raise the inspector and assistants salaries, amounting to say £600, beekeepers would be forced to pay a tax of something over four pence (4d) per annum for every hive they possess.

Now, Sir, if beekeepers in the districts of this colony subject to the ravages of foul brood, imagine that the eagle eyes and nose (or noses) of such a paid officer (or officers) would check this disease, I have not the least objection in the world to their contributing to the treasury 4d per hive or indeed ten times 4d for the realization of their notion. But what I *do* most strongly cry out against as iniquitous and unjust is the imposition of such a tax upon *all beekeepers throughout the colony without discrimination*, as this "Foul Brood Bill" would allow.

Foul Brood is altogether unknown on the Richmond, Clarence and Tweed districts, and is altogether unlikely to ever occur there, the climatic conditions being unfavourable. California, Cuba, Jamaica, and the other West Indian Islands, Chili, etc., are all close to countries absolutely (as far as beehives are concerned) stinking with this disease, and yet no case of it has ever been reported from the former countries, simply—it may I think be very fairly presumed—on account of their subtropical climates —much the same as that of our northern rivers—being unsuitable for the development of the disease.

Why, therefore, should beekeepers of the Richmond, Clarence and the Tweed Rivers, be required to put their hands in their very slack pockets to pay this tax, which would not only fail to benefit themselves in the remotest degree, but would also mean the propping up and sustaining by them of their rivals the beekeepers round Sydney and the southern and western districts of the colony? I use the term "rivals" deliberately, for may they not fairly be regarded as such when they resort to the mean device of abusing our northern rivers honey? (some of them even going so far in their unblushing mendacity as to term it "unfit for human consumption."

It is nothing less than disgraceful to the framers of this proposed bill to shift a great part of the burden of the taxation resulting therefrom on to the shoulders of the north coast beekeepers, to whom the scheme would mean (as I have already implied) an oppressing tax with no earthly compensation or benefit from it whatsoever. It seems to me that the beekeepers of the districts infested with foul brood (who alone are urging forward this bill) and acting in this matter like a lot of lazy parasites and worse, are just wanting to thrust their hands unawares into their unsuspecting neighbours' pockets.

If the promoters of the bill disclaim any such intentions, then let them prove their sincerity by introducing a clause in this proposed "Foul Brood Bill" exempting the Clarence, Richmond, and Tweed districts at least from its operations, and consequently exempting the northern rivers beekeepers from any taxation on this account, thus they will show themselves fair and honest men. But till such a clause be added, or the proposed bill finally rejected by parliament, the north coast beekeepers generally will not, I am convinced, if they possess any common sense, and can recognise a barefaced act of plunder when it is pointed out to them, join, and thus keep to strengthen a selfish localized association striving its uttermost to get any utterly unjust tax laid upon them.

[Re your protest at the Convention, we were unavoidably detained one morning, and relied on the local press, of which there were three representatives present, for the report, but not a word was said by either. Your protest must have been made at that time, as we did not hear it while we were there, and we were there all the rest of the time. Re the proposed bill, as a member of the N. B. A. Committee we were not aware that the northern rivers were free from foul brood, and it had never been there. The proposed F. B. Act was inserted in the *A.B.B.* of October last, was also submitted to the various B. K. Associations, and but very little suggestion made till your protest now appears. If the N.B.K.A., in drafting the bill, exempted one district from taxation, on the same grounds they should exempt those districts from the advantages they obtain through proper representation as cheaper rates, opening up markets, free tickets to conventions, etc.

PORT ELIZABETH, CAPE OF GOOD HOPE.

J. STERLING.

Just a few lines to see if any of your bee friends can explain. A week or two ago, in examining one of my hives I found it had dwindled down to a couple of handfuls. To-day, I intended to amalgamate three swarms into one, when what was my surprise to find that one portion of the hive was populated with very small bees about half the size of the ordinary bee. They are the prettiest and the smallest bees ever come under my notice; they are mixed with the other bees. Can any of your experts explain this matter, they are yellow striped and good workers? Have no inclination to sting. Will watch their progress with interest. We have had two days' rain which will freshen up the flower gardens and gum trees now in bloom. Honey is scarce, but procurable at present. Swarming will be very late this year.

(About those small yellow bees is interesting reading. Could you post us a few in a cage.

G. F. H., Cal.—The best inside lining for a solar extractor of small size is Russia iron. Zinc and galvanised iron would darken the wax, and besides would reflect back too much of the light. Of course, if you can get an asphaltum that will not be affected by the heat or the wax it will make no difference what metal you use. The asphaltum used by photo-stock dealers for painting developing trays would be about the thing. For large-sized extractors there is nothing better than matched boards of some wood that will not shrink much. These, of course, should be painted black.

THE QUEEN BEE AN HERMAPHRODITE.

From a lengthy article headed as above by Mr. R. Helms, in the N.S.W. *Agricultural Gazette*, in reply to a paper read by Mr. Ed. Metzger, at a large apiarian gathering in Germany, we make the following extracts :—

Though hermaphrodism of the queen may not be considered impossible it seems to be improbable from the fact that hermaphrodism and sexuality are in this case asserted to be combined in one and the same individual, which is a phenomenon that stands unparalleled in nature.

For the better understanding of such peculiar and unique phase of double sexuality it is, perhaps, desirable to give an outline of the development of hermaphrodism as it has been observed in the ascending scale of animal evolution.

Its simplest form occurs among the sponges and polypi. These animals are structurally composed of layers of membranes, on the inner one of which cells of opposite sex are at times formed in close proximity, which, when they are ripe, become detached and fuse, and in this manner form the embryo of a new being.

At a higher stage, as in certain seashells, a special gland occurs which produces both elements of sexual germs. These germs pass into a duct where they coalese, but in some cases, as for instance the land snails, a separate short duct carries the different germs to the duct in which they fertilize.

In others again, *e.g.*, the fluke, separate glands make their appearance for the development of ovula and sperma, with the ducts leading to the common duct in which they coalesce.

All the animals possessing either of these forms of hermaphrodism are enabled to exercise self-fertilization, but probably this does not often take place, for, as a rule, these hermaphrodites mutually fertilize each other, because nature being adverse to self fertilization, provides for cross fertilization by maturing the male and female elements at different times.

In some beings, the leaches for example, the ducts of the different sexual glands lead both to the outside of the body, and in this way self-fertilization becomes impossible.

These stages of complete hermaphrodism gradually merge into forms of incomplete hermaphrodism, in which case one or the other of the sexual organs becomes reduced, and ultimately rudimentary, when almost the next step leads to perfect sexual individualism.

Nature knows no leaps and bounds—everything progresses by steady gradation which fact would be in itself sufficient reason for the correctness of the theory of the sexual descent of the individual from ancestral hermaphrodite conditions, but we also find among all classes, even as far as the higher animals, man not excluded, the reversion to hermaphrodism which verifies their descent from original bi-sexual types. However, such reversion to ancestral conditions is almost invariably futile, because such exceptional hermaphrodites are infertile. The hymenoptera are sexually differentiated, and, therefore, if the queen bee were an hermaphrodite she would be of a reversionary type, which speaks against her being fertile, more particularly to the extent she is found to be.

Spermatozoon, *sing.*, spermatozoa, *plur.*, from sperma, seed, and zoon, zoa, animal, animals; the name given to the motile parts of the spermatic fluid, because when first discovered they were, on account of their vivacious and independent movements, considered distinct animals. It is now proved that they are specialised cells, which are among the smallest known. They are found to vary in shape, but the predominating shape is that of a pin. Spermatic or sperma fluid is the secretion of sexual glands of the male, and contains, besides the spermatozoa, a more or less transparent, or sometimes opalescent, mucous substance.

Cell, scientifically, means the ultimate unit on which all organisms are composed. The origin of the word, " a small enclosed space," conveys its meaning well enough regarding the vegetable cell, which is more or less uniform and limited by a vestment. In animal organisms they appear in the most varied shapes and sizes, and are more frequently naked than invested.

Since nature abhors self-fertilisation, even among the lower types of animals, as is proved by the ripening at different times of the distinct sexual elements, as well as the impossibility of its occurrence through the ducts of sexual glands leading separately outside of the body, we may expect this to be still more evident with distinctly sexual insects of a highly organized order. The ultimate action of the spermatheca, is, under any condition, mechanical, whether it be considered a receptacle of sperma or a sexual organ. The extrusion of the fertilising elements must, in the end, be caused by muscular action; whether these are stimulated by a nervous induction of the queen's mind alone, or by a special excitement of a sexual nature. It is by no means improbable that the extruding impulse of the passing egg may cause a special excitement of the complicated nervous system with which the fertilizing organ is surrounded, and set up a reflex action. This would appear mechanical, in the manner of a man walking, who makes step after step without the need of the brain exerting itself to a separate will impulse for each step. That the fertilization of the egg, however, is really at the command of the will of the queen when she is in normal health is very certain from the fact that she makes no mistake in the choice of the cells into which she deposits her eggs, it is only when forced by artificial contrivances that she can be induced to lay worker eggs in drone cells. She is evidently aware that it is wrong, and, therefore, resists it as long as possible because she knows the cells are intended for drones, and these are not wanted, and the worker eggs which she ultimately deposits in these cells require fertilisation, consequently she has command over her fertilising apparatus.

The theory of parthenogenesis does not excluds the conception that the action of the spermatheca is in some respects glandular; on the contrary it is generally acknowledged that a secretion of a mucous fluid takes place, which may already be found in that of a virgin queen. All that the theory of parthenogenesis, in my opinion, excludes is the *sexual* character of this organ.

It cannot be denied that the spermatozoa found in the spermatheca after copulation are sufficient for a few seasons, even at the lowest calculation. Why should not the sperma retain life for a longer time? Since the fertilization of the eggs of the bee is not direct during copulation as with other beings (in which cases the wasted spermatozoa die soon after the act of coition is over), and, therefore, a special receptacle is provided for the storing of the sperma, in which it certainly retains life for a considerable time, I cannot see any reason why the duration of the life of the sperma should not extend to the length of the life of its owner. The spermatheca secretes a mucous fluid that seems to be intended to nourish the spermatozoa. Moreover, it is acknowledged that the quantity of the fluid differs according to the activity of the organ, and during certain periods the spermatozoa becomes almost inactive or dormant, which may be conducive to their longevity. The dormancy of the sperma depends upon the surrounding fluid, which is quite in accordance with the observations made regarding the principles of organic life, which proves it to hinge upon a sufficient supply of moisture as much as upon nutrition. With some organisms life may be suspended entirely for months, and even for years, by the abstraction of moisture, and by the application of it again be renewed. Similarly the reduction of the secretion of the spermatheca may act upon the spermatozoa, which, during their dormancy, will not waste their vitality.

It is probably an erroneous assertion that the spermatheca could not hold the enormous quantity of sperma necessary for the fertilization of the many eggs a queen may lay during her life, and this impression seems partly to be based upon the observation that the spermatophora of the drone never contains such a mass of sperma as is afterwards found in the spermatheca. Although the spermatozoa of the bee are among the longest known,

they are still only about 1-100th of an inch long, and at their greatest width, near the so-called head, 1-30,000ths of an inch wide. This extreme minuteness makes it difficult to calculate the probable contents of the spermatheca, and the estimates are therefore at great variance. Cheshire says: — "The spermatozoa yielded by the drones are, probably, not usually more than 4,000,000 in number. It is of course extremely difficult to make a calculation; the very highest estimate I have ever reached was 12,000,000." Leockart's estimation is much higher, for he considers it probable that the spermatheca may at times hold as many as 25,000,000 spermatozoa.

The supposition that after the infusion of the spermatozoa the spermatheca attains the power of reproducing the same is incomprehensible to me; at any rate, if such were the case there appears to be no need whatever to charge this organ with the admittedly enormous number, because a single spermatazoon would suffice to produce this effect. Nor would there be any need of keeping such a quantity in store, because it would be more natural that the production of the spermatozoa kept pace with the development of the eggs and would cease temporarily when the laying season is over. But there are always a large number of spermatozoa present during winter when the ovipositing has entirely ceased; and, besides, it has been frequently observed that queens at a comparatively early age became drone-breeders, which would indicate that the spermatozoa are exhausted before the ovaries, which is decidedly in favour of the theory that the spermatozoa were stored at the time of coition, but in such a case most probably in too limited a number.

That the spermatheca of infertilised queens and that of old drone-breeders contains a fluid and probably cells as well, need not be disputed by any one, but that these cells possess the fertilising power of producing males only may justly be doubted, even on the presumptive proof that such cells were found upon the drone eggs. The assertion that the spermatheca originally represented a teste is not supported by any biological comparison or proof; it cannot be doubted that it is the homologue of the spermatophora of the drone which is simply the receptacle of the spermatozoa and not the reproductive gland of these cells.

To be concluded in our next.

THE BEEKEEPERS' CONVENTION AT BATHURST.

MY VIEWS ON SOME SUBJECTS.

By Loyalstone.

Not being able to get away to the Convention till the third day, I am only competent to talk about that day, and will leave the first two days for some other apiarist to comment on. I arrived in Bathurst the night before. Upon getting up in the morning, I found Jack Frost laying heavy on the ground. To give an idea of the severity of it, the water in the taps at the hotel where I was staying was frozen and they could draw no water till 9 a.m., nothwithstanding the application of hot water on the taps. After breakfast I strolled up town and the first thing I saw was a milkman (going his rounds), with a large beard which was a mass of icicles. Poor bees! What a cold night they must have had. Arriving at the Grand Hotel I saw a small crowd gathered round and in the sample room of this hotel. I walked in and was much pleased to see the splendid array of implements used in the art of bee culture displayed by Messrs Hebblewhite & Co., and Mr. Trahair (who was in charge) seemed to have all his work cut out explaining the different appliances to enthusiastic beekeepers. I noticed Mr Seabrook there with his hive of the future, viz., The Combination Hive. While on the subject I may mention that this hive, or any hive on the "long idea" principle is the only kind which seems to suit the Carniolan or Carni-Italian bees and prevent their swarming propensities. Put them in any other hive and swarm they will. But with the Combination or "long

idea" hive swarming is practically under control and large yields of honey is the result. I am an admirer of the Carni-Italians, though I have more Italians than them at the present time, but next season things will be reversed. I am of opinion the Carni-Italian is far ahead of any other bee as a honey gatherer. They are more prolific than Italians and there is no spring dwindling about them, which I cannot say for Italians. They are strong and bring in honey at the beginning of the season, when the Italians are only cleaning up after winter. Why Carni-Italians are not popular is because they are not as handsome as the Italian, Every one seems to go in for prettiness and not honey gathering qualities. It is thought something to have queens "golden to the tip" or to import a beautiful yellow queen from America Away with such importations, say I. We can breed queens here equal to any imported, and when we want a different strain, go to the fountain head, Italy, where all important breeders in America import from. To return to Carni-Italians, any doubter as to their honey gathering qualities let them try them in a long idea hive, against their best Italians also in a long idea hive in a good locality, and see who will come out top at the end of the season. I also noticed being exhibited a Higginsville ventilated cover, which I do not admire as the timber used in it is too thin to stand the hot climates, and to make it of thicker wood it would be too heavy and clumsy. Nothing can touch the flat cover with a covering of galvanised iron, leaving a space of two inches between the cover and the iron, cool in summer and keeps the hive thoroughly dry in winter. While looking round the room I noticed about eight frames of comb honey which I was asked to taste. I did so, and exclaimed, "Its boiled honey!" The reply was, "No, but honey gathered from the tea-tree, which though very clear and to all appearances A1 honey, has this disagreeable flavor." So thinks I "You can't judge honey by looks." After another glance round I thought it time to have a look at the Convention held in the School of Arts. I suppose when I entered about 80 people were present, and Mr. Helms was reading his admirable paper, and after listening to another gentleman's paper discussion followed. Not being present during the whole of the Convention, I did not feel competent to join in it but will tell you my idea on some things. Re the discussion about spraying fruit trees being hurtful to bees. All who spoke seemed to be in favour of spraying, that it was necessary to keep the codlin moth in check. I am against spraying in any shape or form with poisons. It is absolutely dangerous for the inexperienced to meddle with it. They said you spray when the fruit is formed and so don't hurt the bees. Did they forget about the late blossom on different trees when you are spraying them. How many colonies of bees have been destroyed in America through the absurd spraying of trees. Now fruit growers, don't spray your trees but try my plan, and if you dont exterminate the codlin moth in a season in your orchard well I'm a Dutchman—that's all—but being an Australian I give you the "straight tip" and I do not speak without experience. Now to the plan. Keep youp orchard clean, no prunings or old sticks lying about, have the barrels of the trees free from old bark, etc. When the season approaches bandage your trees with old bagging, calico, etc. Put the bandage about six inches from the ground round the barrel of the tree, and let the bandage be about four inches wide, and examine every ten days throughout the season. Lanterns hung here and there with a dish of soap suds underneath will trap a large number of moths. Is any fruit-grower aware that codlin moth has a desperate enemy in the shape of a mottled kind of fly or moth which lays its eggs on the chrysalis of the codlin moth, and which on hatching eats out the codlin moth grub and utilises the shell to spin its own cocoon in? Swarming was discussed. Many seemed op-

posed to ringing a swarm down, and the President ventured to state that the idea of ringing probably came from a man long years ago running after a swarm ringing a bell saying "This is to certify this swarm of bees is mine, etc." However I am a believer in an old kerosine tin and thump it with a good big stick, it brings a swarm down quicker than spraying water among them or throwing dust. I always succeed with the kerosene tin, but the best plan is to clip all queens wings,and though you may loose the queen you do not loose the bees, and further, swarming out of the same hive is easily remedied. The discussion re-robbing many gave th black bees the palm, but I reckon Italians will go farther than the blacks and rob. I have known Italians to go a mile and rob blacks, but never knew blacks to go more than half the distance to rob. The Convention of 1895 ended with the discussion of spraying of fruit trees, though a meeting was held later on re the Co-operative Supply Company, which looks as if it was going to be a success this year. I mean to take a few shares and so help the thing along. If it fails this time it won't be the fault of those who are at the head of it. Before closing I may mention that Mr. Pender had a display of appliances in the School of Arts, showing his pet, "The Heddon Hive." The hive is all very well for the man that has money to buy them, but to make them himself is too much labour, and they are not a whit better than my pet "The Long Idea," which anyone can make with ease. I noticed your exhibit, Mr. Editor. I admired your labels. You can count on my giving you an order for some during the coming season. Now what's my opinion about beekeepers at a Convention.—Fair, Mr. Editor, only fair. I would like to see at future conventions more discussion. A lot go to the convention, sit there, look on, never say a word. What's the reason? Are they shy? Why don't they stand up boldly and give their views on the different subjects and not leave it to about a dozen or so to do all the talk? Perhaps they are afraid of being "sat on" by more experienced beekeepers, like I saw Mr. Taylor jump down a beekeeper's throat for daring to express an opinion about clipping queen's wings, where he had only tried it for one season. But when Mr. Pender started to give his opinion Mr. Taylor had nothing to say against him. Now fellow beekeepers bear this in mind. At future conventions, come to it with the determination that you will have a say on different matters, no matter who's there, or who attempts to sit on you. When the conference broke up, beekeepers who were silent were now all talk. I heard of some large yields of honey last season. Notably one beekeeper at Albury who averaged 350lbs of honey from each hive of which he had considerably over 100. I think a few will be pegging out claims in this locality next season. If a man gets a big yield in a certain locality in future there will be a rush to the spot, for the season, much to the disgust of the over-talkative beekeeper's blowing about big yields. My goodness, Mr Editor, some of them do blow. I felt inclined to say to a few "I am a bit of a liar myself, &c." I will close by hoping the next Convention will be as successful as this last one. I can see plenty of room for improvement yet.

SWARMING.

Paper read by Mr. W. Shaw at the Bathurst Convention.

Swarming is the natural result of increase in the honey-bee. It is by such means that this wonderful insect is prevented from becoming extinct, and perhaps in no other section of animal life are the wonders of creation so strikingly and so beautifully exemplified as in the precints of the beehive. Under the obsolete box system actual observation was almost out of the question, but, with the introduction of the bar frame hive, everything can be brought vividly before the eye. In this paper I propose to deal with swarming chiefly in regard to beginners, as I feel certain that from the want of a little general knowledge in this respect many valuable swarms are lost annually by those making a beginning in beekeeping, and it also happens sometimes even the experienced apiarist

watches with dismay and regret the departure of a fine swarm from his apiary. Swarming in this colony usually commences about the end of September, and terminates in March, but in the months of November and December very few swarms issue. The earliest swarm I knew of issued on August 25, and the latest March 26, but of course a great deal depends on the season. Taking the past as a criterion, there should be some very early swarms in the Mudgee district the coming spring. As the swarming season approaches hives should be got in readiness for the young swarms that are shortly to issue. It is better to have the hives waiting for the bees than the latter for the hives. Swarms may be expected at various hours during the day. I have seen a swarm issue at 7.15 a.m., and another about 5 p.m., but it will generally be found that most issue between 9.30 and 1 p.m. It is not difficult to tell when a young swarm is issuing at many places where bees are kept, the ringing of bells, beating tins, &c., being very suggestive as to what is the matter. Such a course I consider unnecessary, as only once during my experience have I known a young swarm to fly direct away from the parent hive. They invariably settle from ten to thirty yards away. Several methods are in operation as to hiving swarms. One is to have the hive on the stand on which it is intended to remain. Shake the bees into a box, take them to their new home and shake them out in front of the hive, having previously placed a sheet there. A cheerful hum generally indicates that all is right, and once the queen enters the bees will soon commence operation, but sometimes, after remaining for a time, say one, two or three days, will decamp, and all attempts to stop them generally end in failure. After experimenting for some years, I consider the following plan the best. Hive the swarm in any box large enough for the purpose. If it has a few holes and cracks all the better. Let this be done at once, as it is a dangerous practice to leove the swarm hanging for any length of time, as it may depart for the woods. As soon as shaken into the box place it on a sheet and leave one end or side of the box up for a few minutes so that the great majority of the swarm may enter. Then tie the sheet round the box and place same in a dark room till the sun is about setting. Having their new hive ready, and placed a frame of brood inside, shake the swarm over the top of the frames, and they will soon settle down. Next morning the bees will commence working, and everything will be all right. Never hive a swarm in an airtight, new box, as when the sheet is tied round, the bees will have insufficient ventilation, and will consequently smother. If the swarm cannot be hived at once, a good plan is to sprinkle same with water, which will delay their flights. This system of hiving also answers well when several swarms issue on the same day, especially seconds or small swarms, as two or three can be dumped together, and thus all colonies kept strong. I am an advocate of natural swarming only, in a general sense, as I feel sure the best results are secured. It shows bad taste on the part of a beekeeper to keep a lot of small and next to useless colonies in the apiary, as they yield little or no profit. What is the experience of one may be the reverse of another, but if the manner of hiving young swarms is given a trial which I have suggested, I feel certain it will give satisfaction as the cost will be extremely low. A dark room may not be available in many instances. In such a case I would advocate the hiving of the swarm as soon as it settles, at the same time inserting a frame of brood from another colony, which induces the bees in many instances to commence work at once.

SWARMS.

Paper by Mr. Henry Lord, read by Mr. G. Bloxham at the Bathurst Convention.

Mr Chairman, Ladies and Gentlemen, I have been asked to write a short paper on bees and have chosen for my subject "The ownership of a swarm of bees."

A few months ago a case came before a N. S. W. Magistrate, where a swarm of bees having swarmed from a hive belonging to A. settles in a garden belonging to B. B. having refused to allow A. to take possession was summonsed, when the Magistrate *advised* the parties to come to some arrangement as the law was not quite clear on the subject. A. and B. eventually agreed (out of court.)

I have been unable to find the N.S.W. law on this subject, but I find the French possess a simple law on this subject which we might copy with advantage.

The French law of the "28 September 1791, Part 1, Section 3, Article 5" says :- "The owner of a swarm of bees has the right to claim it, and take possession of it so long as he has not ceased to follow it, otherwise the swarm belongs to the owner of the land upon which it settles."

Hence the custom in such cases (in France) to make a noise to *notify ownership when following a swarm*, and not as is often supposed to make the swarm settle.

The French Civil Code articles 1382 and 1383 says :-"Moreover the owner of a swarm may follow it and retake it wherever it may be, without requiring any Magistrate's order, but should he do any damage in exercising his right, he is held responsible for such damage and has to repair it."

In some (French) districts *local custom* allows half value to original owner and half to owner of land upon which the swarm settles.

In other (French) districts *local custom* .allows $\frac{1}{3}$ to original owner, $\frac{1}{3}$ to the follower of the

swarm, and ⅓ to the owner of the land upon which the swarm settles.

According to this *custom* the original owner of the swarm puts a price on the swarm and the owner of the land where the swarm settles has the option of accepting his share in money or keeping the swarm and paying ½ or ⅔ to the owner as the case may be.

This very short paper is read before the beekeepers Conference simply to call attention to the law or want of law on the subject in N.S W. feeling sure that the Conference will act on the subject, to the best interests of the N. S. W, Beekeepers.

BEEKEEPING FOR LADIES.

We take the following from Professor Cook's admirable "Beekeepers Guide." —Said "Cyela Linswik" in a paper read before the Michigan convention in March, 1887 : "I would gladly purchase exemption from in-door work, on washing-day, by two days labour among bees, and I find two hours labour at the ironing table more fatiguing than two hours of the severest toil the apiary can exact" I repeat that apiculture offers to many women not only pleasure but profit.

Mrs. L. B. Baker, of Lansing, Michigan, who has kept bees very successfuly for four years, read an admirable paper before the same Convention, in which she said: "But I can say, having tried both (keeping boarding house and apiculture) I give beekeeping the preference as more profitable, healthful, independent and enjoyable, * * * I find the labours of the apiary more endurable than working over a cook stove in doors and more pleasant and conducive to health. * * * I believe that many of our delicate and invalid ladies would find renewed vigour of body and mind in the labours and recreations of the apiary. * * * By beginniug in the early spring, when the weather was cool and the work light, I became gradually accustomed to out door labour, and by midsummer found myself as well able to endure the heat of the sun as my husband, who has been accustomed to it all his life. Previously, to attend an open air picnic was to return with a headache. * * * My own experience in the apiary has been a source of interest and enjoyment far exceeding my anticipations." Although Mrs Baker commenced with two colonies of bees, her net profits the first season were over 100 dollars ; the second year but a few cents less than 300 dollars; and the third year about 250 dollars. "The proof of the pudding is in the eating;" and such words as those above show that apiculture offers special inducements to our sisters to become either amateur or professional apiarists. At the present time almost every state has women beekeepers, whose success has won attention. True it is that in neatness and delicacy of manupulation, the women far surpass the men. The nicest honey produced in Michigan, year after year, comes from the apiary of two ladies hom I believe are peers of any beekeepers in our country.

SWARMING CELLS, &C.

Mr T. Bolton, Victoria, writing to *Gleanings* says :—In that valuable article by E. France, in *Gleanings*, Dec. 15, on out apiary management, he puts the key to this plan of swarming time management by periodic visits in a line or two of print, and it is a pity, seeing the amount of work and care involved in following his instructions, page 934, viz., "*Be sure* no queen cells are left in any colony," and, further, down, "Leave no queen-cell in the old colonies," to let it pass without comment. It is truly good sound advice; but with the L. frame and hive how laborious! how risky ! all hinges on *not one cell being missed* in the work of destruction. A mere cup with an egg in it, accidentally overlooked, means a swarm issuing before the 10th day comes round, and with it the apiarist. This plan of getting the swarming-date of a number of colonies on the same day, so dispensing with a watcher, is one I have carefully studied and followed in my out-apiaries for three seasons past. But I give them now but nine days between visits; and when there, instead of destroying cells one by one, I turn each of the brood

cases upside down, which effectually and positively destroys all embryo queens, and none can escape, and the colony is safe for nine days. This colony is swarmed on next visit; also all others like it previously inverted. The other colonies are inverted if strong, or likely to swarm; and if they have cells *sealed* next visit they are swarmed in their turn; but if they have young cells, or none at all, they are inverted again, and are safe till next visit, and so on with all hives as they advance to swarming strength every nine days for the two or three months of our swarming season. This inverting has other advantages that have been set forth by other writers, including Mr Heddon, whose hive, or a modification of it with hanging frames, I use in my out-apiaries; but I have not seen its superiority in this respect, and the rapidity and certainty which with it the cell destruction essential to such a system of periodic visits can be accomplished, set forth anywhere. Any easily inverted hive would have the same advantage over non-invertible as the Heddon type has. Inversion is not a mere fanciful and pretty idea; it is to me the key of out-apiary success, and does away with all need of swasm catchers, and hivers and traps and appliances outside the hive itself.

SULPHURING HONEY.

G. M. Doolittle, in reply to a question that some have trouble in sulphuring honey on account of turning the combs and wood of the sections a yellowish green. How do you prevent this? Says *Answer.*—This is one of the nice points, and one of which I did a good deal of experimenting in the past, after nearly ruining the first lot of comb honey I tried to sulphur; for at that time no one had given any caution regarding the matter. Honey should be stored in a small room where the temperature can be kept high, so that it can ripen out after the sections are taken from the hive. The sections should be stored on scantling, placed in such a way that the fumes from burning sulphur can pass between the sections all through the whole pile, if signs of the larvae of the wax moth are found. The right quantity to burn to kill the larvae I found to be, after many trials, three-fourths of a pound to every 200 cubic feet contained in the room. Put some ashes in an iron kettle, and on the ashes a few live coals; pour the sulphur on, shove under the pile of honey, and close the door. Now leave for about fifteen minutes, when the door should be opened and the smoke let out. If two much is used, or the room left closed too long, we are sure to have the sections and combs discoloured. Really the best plan is to hove a window in this honey room, so that, when the door is shut, you can go to this window and watch the flies, which will collect on it as soon as the fumes from the burning sulphur begin to fill the room. One by one they will begin to get stupified, and from in eight to twelve minutes the last one will have ceased to move. I used to wait two minutes after the last fly was lifeless, then open the door and window, so as to cause a draft and let the smoke out quick, and after thus working I never failed to kill the wax-moth, nor did I ever have any combs or sections coloured. That you may not take in the fumes of sulphur yourself, the window should be made so as it can be opened from the outside as well as the door. Some seem to think that a redhot iron dropped in the sulphur gives better results than pouring the sulphur on the coals, as given above; but with me the coals do good work, and are always handy from the cook-stove, as we burn wood in the summer season.

J. & E. Thacker,—On every fine day our bees are out, so I suppose they are getting a little honey. The season so far has been very mild. The buds on the trees and shrubs are very promising. I beg to say that we approve of your questions, they give so much information.

JUDGING.

H. B. MC FARLANE.

Sir, —Now that the almost interminable discussion re judges and judging has come to an end (a discussion in which as one of my correspondents remarked "Honey seemed to turn into gall and wormwood in some beekeepers hands" I should like to direct attention to the rank absurdity of the present system of awarding prizes for queens.

The sole value of a queen (excepting perhaps in the eyes of professional queen breeders) is for the honey her progeny will produce, and prizes should be awarded upon this basis. But what practice do we find prevailing at the present time? A queen and bees (they may be her progeny or not) are sent to the show, and they are judged by the size and appearance of both, the finest looking taking the prize, though these bees may not be worth their salt for honey production, the whole affair degenerating into a mere beauty show. Of course as the competitions are at present conducted, no other system of judging is possible. But of what value is this test? And is it likely to tend to the improvement of the breed for honey production?

This system of judging would be on a par. with awarding the Derby to the best looking horse, without having any race at all.

It is true that prizes are awarded at Agricultural Shows to horses and cattle on their appearance only, but then the capabilities of animals can be judged pretty accurately by the size of their limbs, breadth of chest, &c., and we find even here that the tendency is to judge by trials only, the milking test for dairy cows to with. The nearest analogous case is that of awarding prizes to hens without testing their egg-laying capabilities. But this is no reason why beekeepers should follow a bad example.

To my mind the only satisfactory method of awarding prizes to queens would be by testing them for honey production, and it appears to me there would be no difficulty in carrying out this.

The queens entered and a certain number of pounds of bees should be forwarded in the spring to a central point in Sydney to a person appointed to receive them, who would transfer the bees from their own hives to others of indentical pattern furnished with frames of foundation only with one comb of honey, the hives to be marked with a number only, which is to be entered in a book against the owner's name, the whole of the colonies to be then sent to an apiary which is within handy distance of one or two other apiaries. (Such a locality exists at North Shore.) Then two or three beekeepers to act as judges, all the colonies to be worked by the apiarist as if they were his own, and all in precisely the same way.

The bees to be tested, first for quickness of building up, by examining them at stated intervals and the amount of brood measured, quick building up being of great importance when the crop is secured in the spring. When honey comes in freely, every comb that is extracted to be weighed before and after extracting, and the nett weight booked to the particular colony. The trial to extend through the entire season. and the queen which has produced the most honey combined with the quickest building up to be declared the winner. Points might be awarded on this scale,—honey production 9, quickness of building up 9, beauty 2.

The hives to be kept sealed up and only opened in the presence of the other judges.

The only difficulty would be the liability of some of the colonies to swarm, and this might be got over by returning the swarm after a fixed interval, or the swarming might not be allowed to affect the result, as the swarming tendency would be against honey production and that queen should suffer.

It may be urged that the expense is against this scheme, but really the expense would be very little, the principal work would be done by the apiarist who would retain the honey, and again the different societies allotting prize money

for queens might be induced to throw the money into one fund and thus make a national affair of it. And yet again is not this work for the Beekeepers Union to take up?

WESTERN AUSTRALIA.

JOHN A. AYRE.

Dear Sir,—It is now a good bit since you heard from me, and I think it is about time I had something to say. We did not have such a good season here this last season on account of it being so dry. We did not have any rain all summer, but are getting splendid rains now. We have every appearance of a late spring, and that with us, as far as my experience in W.A. goes, means a good flow for 95-96 season. I believe last season was a bad one all over Australia. I see by June number of A.B.B. that a Mr M. C.S. Victoria, wants to know about W.A. as a honey-producing colony. I can only give my experience there, as much firewood has been cut in the neighborhood of Perth (as one of your correspondents assert). In the season 93-94, I landed in Freemantle in the latter part of August, and took possession of about one hundred colonies of bees, and they were in a poor state. Well, I fixed them up, and had swarming on me before I had time to provide for it, but it is sufficient to say I had a lively old time of it for about three months. Swarming over, I divided my bees into three lots just about Perth, and from the 100 hives in the year I took over eleven tons of honey —that don't speak bad for Perth in a good season. We have good seasons and bad seasons in all parts of the world, and I believe 94-95 season was one of the worst, inasmuch as I had double the quantity of colonies, and did not get a quarter so much honey, although I fared better than any other beekeepers in W.A. I am in a good location now, called Gin Gin, 50 miles from Perth, on the Midland railway. If W.A. got seasonable rains it would be a good honey producing colony, but we don't, so we trust to providence. I may say there is a good market for honey here, in the face of 2d per lb. duty, which our colony has put on honey. They have to import at present.

Another strange feature in Western Australia. At and beyond Geraldtown the honey bee is quite unknown. All our great Nor-west country there never was a bee in it except a little native bee. Strange is it not. I shall certainly explore it next fall, to see whether the honey bee will live there.

I see that Mr J. B. Kline drops you a line now and again. He is a jolly nice fellow, and I hope he will live as long as ever he likes, and till he has found time to pay me another visit. And any beekeeper who happens to drop over this way will be always welcome at Mel-Bonum apiary, Gin Gin. Don't be jealous, Mr Jones; I am sure my apiary will do yours no discredit. I have seen yours and can say there is no finer apiary in Queensland. Mr Editor, I am sending you a sample of my honey. I want you to pass your opinion on it if you please. I see Mr J. A., Vic., is troubled with the black spider with a red stripe across its back. I have the same, but never found them on the bottom board; my bees would never allow them there. I have gable roof covers, so they get there. I don't think there is any remedy for killing them wholesale, only kill them as you come at them. They destroy a lot of bees if not looked after. Mr J. E., Armidale, must have some pugilistic bees; they want reprimanding a bit. Was it a starved-out swarm that united with them; if not I should do something to stop them—set them in active work; if they have got honey brake it or extract it, mix it and feed it back. Anything to prevent them from committing acts of such injury to one another.

Barktown writes—Since my advent as a subscriber to your commendable venture, *The Australian Bee Bulletin*, I have often thought that some of our oldest beekeepers might have come to the front with more liberal views, and spreading broadcast their experience. Surely some have a good education in this re-

spect, or have we now only woke up from a long sleep. Like the photographers of old, who would not allow one to even see the door of the dark room—so with the old practical beekeepers, who will not let us see under a cover. By this narrow-minded self-conceit science has not made such rapid strides as she should have done. But the amateur comes upon the field, determined to rise or fall in his desire to get even with the old fellow. What has been the result? Perhaps a great deal has been sacrificed, but the gain has been tremendous. The old fellow has been outdone with his conservative and selfish habits, and has actually sneaked out and sought the man he ridiculed, obtained from the open-hearted fellow (amateurs have no secrets) how he succeeded; then goes home, tries his hand, is successful, and then by contemptible means claims to have had the brains to have made the discovery. This conclusion I have arrived at by keen observation and experience, thus shewing the old fellow will not experiment, while the don't care style of the amateur forced him to study scientific ways. One sees in the A.B.B. time after time of the experience given by men of this class. Some are disconsolate, others jubilant, while the old fellow keeps in the shade and offers no assistance, merely chuckling at disaster, and calling the jubilant one a trespasser upon his domain. I am not a disappointed beekeeper, but claim to be an experimentalist, and as such claim to be a neutral subject, having no secrets, but have a desire to advance the science of beekeeping.

This communication reached the office while we were away at the convention. It concluded with some seasonable recommendations as to work at the Convention, but as that event is over, their publication is now too late.

THE FOUL BROOD ACT.

Mr. L. T. Chambers, Melbourne, writes :—I have been looking up the matter of F. B. Bill from various points, and am under the impression that the draft of bill you present for acceptance is deficient in one very important item, viz: that of exposing diseased combs for the bees to clean up. This is really the source of all the trouble and apparent danger.

The working out of this measure must be done, I think, through local agency. Goverment inspection as we know it is of little use. It is of no use to introduce drastic measures of compulsion, but a little showing of the power of law might be of use to beekeepers. Our South Australian friends have an act but are powerless to exert it. I think a clause to this effect would be necessary: "No person shall knowingly and wilfully expose to the access of bees any honey comb or honey which has been robbed from any colony of bees either kept in hives or in wild state in forest trees."

CAPPINGS.

From American & other Bee Journals.

Dr Miller says:—From what little experience I have had, bees breed better all in one story than in two seperate ones.

Ant Preventive.—A string kept saturated with coal-oil and tied around the hive will prevent ants from nesting under the cover.

It is computed that a linden tree during its lifetime yields over 70 dollars worth of honey, while its timber is worth about 10 dollars.

Editor *Gleanings* says:—I am afraid color has already had a rather detrimental influence on the real bread-and-butter side of beekeeping.

Railroads in England have "agreed that bees in hives sent in truckloads to the moors during the heather season, should be conveyed at 6d per truck per mile, station to station, owner's risk with a minimum charge of 7s 6d."—

J. E. Smith, says :—Sow scarlet clover with buckwheat, Alsike next, or on wheat or with oats. The bees get the scarlet first, Alsike second, buckwheat third, etc. Now if you have any land left, sow sweet clover.

"Of all those in my vicinity who have kept bees, and have taken no bee papers, I cannot think of one who has not failed; while those who have taken a journal have nearly all succeeded. I think this needs no comment." —H. R. Boardman in Gleanings.

Mr Henry Alley proposes to meet a demand by a large number of beekeepers for a simple, practical and cheap device for either hiving or catching a swarm of bees when it issues, by an ordinary Alley trap, the upper compartment of which has been enlarged to take a large swarm and hold it for a day or two till the apiarist can give it his special attention. Or with a hive on top to which the enlarged trap leads, the bees permantly hive themselves.

The tariff on honey in Germany is at present a little over two cents a pound. Germany consumes annually over 77 million pounds, of which from 46 to 48 millions is produced at home. In 1893 over eight million pounds were imported of which over two millions were from Chili, over one million from Mexico, over two millions from the Spanish Antilles, and nearly one million from the United States, nearly 65,000 pounds being exported. Last year the imports were increased. There are some discrepancies in these figures, which are given by a Herr Seust. They may possibly be accounted for by the "artificial honey" listed in the tariff.

M. J. Kistler says in A.B.J.—There is a good deal said in the bee-papers about dividing colonies to prevent swarming, so that each colony will do well. The best way I have tried is to rear my own queens, and when colonies get strong, say about the last of May—November in Australia—I take an empty hive and place it on a new location; then go to a colony, open its hive and take out a frame of brood, bees and all, being careful that the queen is not on the frame, which I put in the new hive and give an empty comb to the old colony, and close up its hive. Now go to another colony open its hive and take out a frame same as before, always leaving a queen in the old hive; and so on till you have eight frames in the new hive, then close up the new and give them a queen, and your work is done. In this way the new colony is just as strong as any in the yard, and will work right on like the rest. When they get stronger than necessary, I would make some more colonies in the same way. This will prevent swarming, and keeps them strong, so that they will store more honey.

Mr G. M. Doolittle says:—An experience of more than twenty-five years has proven to me that bees cannot be depended upon to build worker comb during the first week after being hived, if there is any completed comb in the hive at the time of the hiving of a prime swarm. With second or third swarms the case is different, as bees are more apt to build worker comb with a queen when she first commences to lay, and only unfertile queens accompany these later swarms; and in this case the queen does not commence to lay till the bees are fully accustomed to their surroundings. But with an old or laying queen, she seems to adhere to the combs placed in the hive when the swarm is hived, going but very little on the new comb then building, the result of which is the building of store comb for honey, which is always of the drone size of cells. After the bees have built a frame or two of drone comb, and the queen recovers her normal egg laying powers which she had before the swarm issued, then the bees will go on and build worker comb; but we have worker and drone comb all mixed through our frames, which is a condition an enterprising apiarist does not like, and one which, if allowed to remain, results in a diminished crop of honey each year. My advice to all is, use only starters in the frames in hiving swarms, or else fill all frames with foundation, or give all frames filled with combs. Frames filled with foundation mixed with those containing combs do much better than frames having only

starters when used with combs; but even this is objectionable, on account of the bees lengthening the cells of the combs given while they are working out the foundation, so that the combs are very thick when completed, while those on the foundation are correspondingly thin.

O. J. W., Bloomfield, writes:—I have to thank you for your valuable little paper, I have gained much valuable information from it.

R. M., Bell View, writes—Bees are wintering very well so far, and the spring promises to be early, so we are in hopes of a better season next.

J. E. S., Teralba,—I have been very busy planting trees and putting up a honey house. I have shifted all my bees from Teralba and the old place with the loss of one colony that got smothered. Bees have plenty of stores but there is no blossom out now.

W. N., Garland,—Last year was not a good season in this locality, I did fairly well with mine. The trees this season are too forward in bud, and some trees have been in bloom in the depth of winter, this was owing to the excessive dry autumn last.

F. G. V., Bathurst,—You see we are a dead and alive lot of beekeepers here, as every one of us thinks we know more than our neighbours, but if they all take to the A.B.B. they will see there is a lot of handy hints that I am sure they do not know practically.

E.A.B., Wellington, N.Z.—I brought three colonies over with me and have them located at Kilburnie, a suburb of Wellington. They are working during fine weather on gorse, of which there is a great quantity on the hills all around us. The summer forage appears to be ti-tree, a little white clover and imported shrubs of all kinds. I met a honey dealer lately who said my bees will die here, as many others are doing at present from the severe frosts, but I suspect it is starvation, mine are lively enough. When I am settled I will try and pick up some bee news for you.

W. J. B., Camden Haven,—I did well with my bees (30 boxes) last year and got 18 cwt of honey, but I had to sell out through loosing my crop four years with flood. I am starting out here and think it is a good place for bees, as no one out here keeps anything but blacks and the moth is very bad.

W. F., Bungowannah, writes—The past season has been a favourable one for honey in this district. From 42 hives I got 6,000lbs honey, an average of 143 lbs per hive. 30 of them were 10-frame hives, and averaged 158lbs per hive, and 12 were 8-frame hives, which averaged 105lbs per hive. I use two-story hives with zinc-excluders between the stories.

R.L.S., Boggabri, writes—We have had a remarkable winter here—blossoms right through, and the bees are working now as strong as in the summertime, the drones flying in hundreds, and we should have very early swarming. No rain last four months, but if rain falls shortly expect a good season for bees.

J. A. H., Oaklands,—I am not doing much in the way of beekeeping at present, as I have not long taken up a selection and have scrub to fall, etc. I think this will be a very fair place for beekeepers as there is more or less of a honey flow at all seasons and we never suffer from drought. With every good wish and my thorough appreciation of your worthy and successful efforts with A. B. B.

G. J. R., Narellan,—We have not escaped the severity of the winter here, it being the coldest experienced for the past 25 years, but for all that it has not been so trying to the bess as many seasons when the weather was not nearly so cold. I have not had to feed this winter, in fact honey has been coming in slowly all the time, and the stringy bark are just bursting out in bloom now and will continue for some time; red gum, iron bark, and box (yellow) will follow in succession as all are showing buds freely now. Is the quality of the honey from these trees considered first class or otherwise?

(Yes all are good, but especially the yellow box.)

K. R. D., Cudgel Creek,—I received the labels safe at hand on Saturday, and I assure you I am really proud of them. I ought not to have much trouble to sell my honey with those nice showy labels on the tins and bottles. My bees have wintered very well, I only had to double two to save one.

G. G., Plumpton writes:—The winter is a fearfully hard one here, a regular succession of heavy frosts which keeps them clustered till about 10 a.m. Box stringy and iron bark, are well in bud. If we could only get plenty of rain we might get plenty of blossom. Can you inform me through A.B.B. the amount of sub. to the N.B.K. Association, I see the Victorian is in the reach of all.

(The sub to N.B.K.A. is 5/- per annum.)

Mr. George O. Nicholson in the *British Bee Journal* says:—I have hit upon a little contrivance for imbedding foundation which can be made by anyone at the cost of 2d., and answers the purpose equally as well as the various "embedders" costing from 1s to 2s. I use an ordinary bradall, and file a v-shape groove in the point, which being heated and run along the wire, acts in the manner desired.

H.G., Albion Park.—I could not do without the *Bulletin* now, and I look forward to its issue every month with pleasure, as there is always something to learn in it. My bees are doing well; one hive was very bad with paralysis and had dwindled away to only a few frames full. I smoked them with sulphur and sprinkled dry sulphur on their combs and now they have got quite strong and well as ever again. They ceased dying immediately I sulphured them.

Mr. I. Hopkins, Auckland, N.Z., writes:—Last month and this so far have been the worst for rain ever I remember in N. Z. before, wet, wet, wet, every day and night too Goodness only knows how the majority of the bees are doing. I expect to hear of a large number dying this winter. I mean those that have not been looked after properly,

F. L., Mc Laren Vale, S. A. writes:—Bees are just beginning to work on the wattle, the wattle is splendid here for giving the bees a start in the spring, they gather honey from the stem of the leaf now and later on they gather pollen from the blossom. The honey comes just before the blossom or the most of it, and as McLaren Vale is a wattle growing district, it gives us a good start in the spring, and sends along brood rearing all right.

R. B., Garfield, Victoria, writes—Dear Mr Editor, The Victorian Convention has come and gone—the most successful held so far. I am glad the A.B.B. is now the paper of our Association. It is a step in the right direction. The next convention I hope to see attended by representatives from your side of the Murray, and we will retaliate. I for one intend to make the acquaintance of the craft on your side, if circumstances will permit it, next season.

J. C., Waverly, writes:—I find the *Bulletin* is much beyond my expectations of what it would be by hearing of it, and seeing that you give the privilege of asking questions would you kindly answer the following. 1. How can the presence of foul brood be detected in extracted honey? 2. How can it be rendered fit for feeding if infected, having bought some honey for stimulative feeding and fearing it may be infected.

[It would need the use of a microscope to detect foul brood in honey. Such honey is not unfit for human food, but to feed bees with the safest way is to add an equal quantity of water and let it boil for three hours.

A. C., Spring Vale,—I have gone through another winter with the small loss of one colony out of 107, although we have had some very severe frost about here, but bright warm days. The bees have been gathering honey all the winter and most of my hives are full now and I look forward for a good time in the spring. This is a splendid place for bees, as there is bloom of some kind all the year round. They are very busy now on sheoak, as it is in full bloom. I

think there ought to be steps taken to have a close season for bees, as it is a scandalous shame the way bee-nests are taken in the winter time. Around here alone there are some hundreds felled, the honey taken from them and the bees left to die. Trusting that some abler pen than mine will take this matter up.

J. H., Cockle Creek,—Just a few lines from me to let you know my bees are doing well at present. There are plenty of flowers in the bush here, such as the swamp mohogany, white gum and wattle. The stringy bark is heavy in bud, the tea-tree will be coming out about the end of next month. At this place the weather is very cold. Very heavy frosts destroyed a great many trees, and they are looking so bad as if we had had a bush fire. I started to keep bees in 1892. I bought 4 hives and accumulated to 17 hives that season. Not knowing the state of the place I was living in at that time I kept my bees in the lower ground in front of my house in the paddock. The first heavy flood that came in March 1892, swept my bees away, losing all. In the following season got five hives. At swarming season I got them to 14 hives, this season I increased them to 41 hives. Hoping that the coming season will be a prosperous season for honey, &c.

F. M., Scone,—I have received the last three issues of your *Bee Bulletin* and I like it very much. I have five acres of an orchard and I would like to have your opinion as to the best spray to use to kill aphis, one that will be effective, and not injure bees. I started with four hives of Italians last spring and I now have sixteen. I extracted ½ ton of honey and sold every lb of it. I left my top boxes on all winter together with frames, the latter covered with bagging and brown paper. I took the hint out of your B.B. which alone I consider worth a year's sub. The top boxes are all full of honey and capped. Would you advise me to extract now or leave it later? A neighbour of mine has had a very bad time with his bees. He had 16 at the beginning of winter and they are all dead but three swarms. They lose the use of their legs and wings and roll off the board on to the ground in spade fulls. Whole swarms die out in from two to three days. My bees have been bringing in pollen all the winter and I couldn't think where they got it, but find they get it from local flour mills.

Re spraying, note what "Loyalstone" says in another page of this issue. Personally we cannot give experience. You are certainly to be congratulated on your success. Did your neighbour try sulphuring his bees? Also did he rob them too close in the fall. Our bees were in the same position as yours—a lot of hives with no room for the queen to lay and honey steadily coming in. We extracted carefully last week to give room.

J. J., Herbert, Otago, N. Z.,—Seeing your invitation in A.B.B. to consult you on any matter, I make bold the following. I am a new chum among bees and no one about here can tell me any more about them than I know myself, so I have to depend wholly upon books and your valuable paper, which I value very high. I only became a subscriber in April, so that I missed all Vol. 3. the index of which I see in April number. From it I see I have lost a lot of information which I mostly wanted to know, re foul brood. I see it has been discussed to a great length. I am sorry to bring you over the old track again. What is the best way for an inexperienced person to tell if it is in his hives and what is the best preventative against it. Could you tell any plan for saving the bees out of box hives when taking the honey out of them? There are a large number of bees smoked here every year in box hives and I was thinking that if I could save them I could build up my hives fine and strong for the winter. The people gave me liberty to try and save them. I tried to smoke and drum them up into another box, but I could not get them to leave the combs. I then tried to half smoke them but with very poor success, as the half of them died, so I would like if you could give me any other plan for working them. When is the best time to introduce Italian queens into my hives so that I

could rear queens from them the same season.

(Foul Brood is known by a little hole in the centre of the cappings. The larvae underneath is of a brownish colour. If you prick it with a pin the matter will draw out like indiarubber. The best way to cure it is to put the bees into a fresh hive with starters, and burn the old hive, frames and all. Or at any rate see all the wax, brood, and honey in it burnt, and the frames and hive well scorched, then exposed to the air for a few weeks. Re saving the bees: Turn the box hive upside down, smoke the bees into one corner, and cut the comb out piece by piece. Now is a very good time to Italianise.

J. Le M. S., West Tamworth,—The yellow box is now in bloom here, which is giving us an excellent winter for our bees. We had a bee lecturer up here a short time ago, stating that 172 lbs of honey had been taken from a hive in a week, I guess it must have been a mighty big hive. I have a very large hive which I calculate to hold about 250 lbs. of honey, but am very lucky to get from 80lbs to 1 cwt out of it in a year, small hives I find do better. The lecturer also stated that 3 tons odd had been taken from thirteen hives. I take this yarn like one of our own in this locality, who had extracted over two tons of honey before the season had hardly began, but on a little cross examination he proved himself to have only about 24 kerosine tins full, and he had 7 or 8 of them to fill to complete the dozen. He must have reckoned three or four tins to a ton. We can hardly come up to the Americans in their honey flows, for I have heard them say, if the honey flowed from the trees all at once in one season it would flow three inches thick on the ground and I think some of our Australian apiary yarns can top it. There are many complaints about school masters, clerks of the court, bankers, and other goverment officials that get high salaries for little or no work are spoiling the honey trade, but this is a free country, and citizens can almost keep what they like, a little retrenchment and a little extra work might check it a little In regards of bee conferences in getting foul brood acts and employing idlers to gad about the country as inspectors, we have three times too many laws as it is in the country. The country would go on smoother if three parts of them were taken away, and the foul brood is only a scientific problem for the apiarian to work out without any law. But we could have licensed honey dealers that would check rubbish and imposters in the market and would also give the apiarian a chance.

J. F. McG., Queanbeyan,—Our past season here was very fair, especially during the month of February which was dry, and gave the bees a chance to take advantage of the splendid eucalyptus bloom which then prevailed. I have 20 strong colonies of Hybrids and pure Italians; from these I took 15 cwt of honey with a one frame slinger extractor, besides storing about 5cwt of honey in comb, the weather having suddenly turned cold, making the honey too thick to admit of extractor. During the season I reared about 20 queens, most of which were purely mated. This was my first attempt to queen rearing, and, as the season was good, I had no trouble in keeping my nucleus hives in good order. I found two queens, (probably a mother and her daughter) in four of my hives; three of these hives were blacks, and, as I wished to Italianise they caused me a little annoyance. for when I had caught and killed one queen I thought I was right, and straight away proceeded to introduce one of my young Italian queens by the "*Colbourne quick method.*" On the same comb, and in the same spot where I found her black Majesty I placed my young Italian queen. The workers did not seem hostile to her, so after watching their behaviour towards her for a few minutes, I put comb and all back into the hive again and left them. Next morning, to my surprise I found my young Italian queen dead at the entrance. I suspected something was wrong, for I had previously introduced several queens by the Colbourne method and never lost one, so I gave the hive a good looking over, with the result that I found a second black queen, the one that did the

mischief. Having killed her I placed another Italian queen on the same comb and in the same spot where I found the black, left the comb standing beside the hive for half an hour or so, then placed it in the hive and all went well. The above instance was the only one in which I lost a queen by the method given by Mr Colbourne, and failure in that case was the fault of the beekeeper not the method. I have not heard through the *Bulletin* if any other new-chums have tried it, I would like to hear if they hive, and with what success.