The Australian bee bulletin. Vol. 3, no. 30 October 28, 1894

West Maitland, N.S.W.: E. Tipper, October 28, 1894

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THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

OL. 3. No. 30. OCTOBER 28, 1894. PER COPY, 6d

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E. Tipper.

Hunter River Bee-Keepers' Association.

MONTHLY MEETINGS.

TUESDAY, NOV. 13.

Subject for Discussion—"Does it make any material difference the way frames are arranged in a hive, either for the benefit of the bees or the convenience of the beekeeper? Which way do you prefer?" and "Our Honey Resources."

TUESDAY, DECEMBER 11th.

C. MANSFIELD, Hon. Sec.

The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—OCTOBER. 28, 1894.

SWARMING is now the order of the day, if not artificially, naturally. The apiary must be well watched during the middle of the day. If the queen's wings are clipped, much trouble will be saved, but if there is much grass about she may get lost. It is well to have some low shrubs or fruit trees convenient to the apiary. We know of apiaries with such, that swarms have invariably alighted on one particular branch of such tree or shrub. If not attended to now they will take a second flight, and this time a long one, probably getting lost. The hive intended for them should be placed as near as possible, under, and the bees brushed into it. A frame of brood and a few sheets of foundation will greatly facilitate such. We saw a lady, a few days ago, place hive containing such on her head, near the bush where the bees were clustering, and it was a pretty sight to see the bees flock in at the entrance. The hive was light at first, but gradually the weight increased, and she was glad to place it on the ground.

If you want increase, it is well now to select the queens you wish to increase from. You have doubtless found some of your bees are excellent breeders and honey gatherers, but very little inclined to swarm; others are great swarmers perhaps you have a fancy for some particular queen, her colour takes you, and her other qualities are also good. Now is your time to rear queens from her.

Honey will now be coming in, in most localities, and care should be taken to see there is ample room in which to store it; supers should be placed on. See that your extracting house is in order, that you are provided with extractor, uncapping can, and vessels in which to store the honey as you extract it. See that the house is bee-tight, as well as ant-tight. To be bee-tight, cover the window with wire cloth on the outside, to several inches above the top of the window, leaving a bee-space between the extra length of wire and above the window space, so, the bees that happen to get in, can get out. They get out that way, but have not sense to come in that way, preferring to beat against the wire gauze in the centre of the window. To make ant-proof, the four posts of the room may be inserted in galvanised iron or perhaps cement vessels, in which kerosene or water can be placed, about a foot above ground, effectually stopping the upward march of the ants.

Full sheets of foundation are essentially necessary. Not only does it give the bees time to gather honey instead of making comb, but it secures worker comb instead of drone comb.

MEANNESS

"You keep bees, of course you take the *Bee Bulletin*?"

"Oh no, I always see it though, Mr. So and so takes it and he lets me look at it always."

Such conversation actually took place in one locality lately. One individual was mean and the other thoughtless. What show is there of improving the A.B.B. or even of keeping it up to its present standard, with many of such people?

At the Technical College, West Maitland, on Friday evening, October 26th. Mrs. Walter May, of Singleton, gave a practical demonstration of the uses of Honey in Cookery, under the auspices of the H.R.B.K. Association. There were some 100 ladies and gentlemen present. While a quantity of articles had been previously prepared, Mrs. May cooked some there in their presence. The different edibles were handed round, and with the addition of a cup of tea, much relished and appreciated. Mrs.

May, in a very lucid manner, explained the constituents and mode of making the different articles, and at its close a warm vote of thanks was accorded her. We are sorry that space compels us to hold over a full report to our next issue.

We trust our friends will pardon this issue being a few days late, but a combination of different circumstances arose which have unitedly caused the delay.

We don't like saying it, but money is not coming in as fast as we could wish. Will some of our friends take the hint.

In the neighbourhood of Newcastle bees are doing very well now on white clover, and iron bark, and stringy bark, coming fast into bloom. The undergrowth is luxuriant with blossom.

We had a short and very pleasant visit by the Rev. J. Ayling, President of the National Beekeeper's Association. The Rev. gentleman was taking a holiday to recruit his energies, and visit the Hunter River district where he formerly resided for some years.

Mr. John Welch, Teralba, writes us he has sold his splendidly-arranged apiary at Teralba, to Mr. John Smith, of the same place, and gone to Cassilis, where he has bought a sheep station. He intends, when settled there, to again start bee-farming on a large scale, the country being very suitable, the trees being white box, iron bark, stringy bark, and apple tree.

The *Illawarra Mercury* of October 2 has over two columns of a most interesting account of a visit to the bee farm of Mr G. W. Gordon, of Jamberoo. We are sorry our space does not permit us to copy the article, or our time to enjoy a visit there, but as we read we get quite hungry to have a fill of visitings we have promised ourselves, and some of our friends to make. We shall keep the copy by us.

We have great pleasure in calling attention to a new Cookery Book, by "An Experienced Australian Cook," entitled the "Economic Housewife's and Beekeepers' Guide to Cookery." It is a neat little book, printed at this (the *A. B. Bulletin*) office, consists of over 100 pages, and wherever honey can be used with advantage in the recipes, or new uses made of honey in the way of delicacies, &c., the authoress has availed herself of such. It is published at the small price of 6d, per post 7d. We shall be pleased to forward copies on receipt of postage stamps.

We have had an agreeable surprise. Mr. I. Hopkins, of New Zealand, the author of the "Australasian Bee Manual' has indulged himself and his good wife to the extent of a visit to Australia, and has come along our way. We have spent a few very pleasant and profitable hours in their company, and sincerely trust that on their return to their adopted country their recollections of Australia will be as pleasant as ours of the few hours we have spent with them, and that the ill-health from which they both have suffered, will have entirely disappeared.

We are in receipt of two splendid photos of Mr T. Bolton's apiaries at Dunkeld, Victoria, the one the "home" and the other the "out-apiary." In both there are goodly stocks of well-arranged hives; and the forest close by and grand well-wooded mountains in the back ground, evidently imply that Mr Bolton knew where to pick good places for his bee-farms. May he long continue there, and may plentiful honey harvests ever attend him. We have placed both photos in one of our frames for exhibition purposes, and hold them in reserve for the time when the accounts on our books are less and cash in pocket more enables us to regularly give illustrations.

While Mr I. Hopkins, of New Zealand, was in the Hunter River District during the past week, he, in company with Mr Tipper, visited his namesake, Mr Hopkins of Tickhole. That day was quite a red-letter-day for the latter and his family. Mrs Hopkins had carried off all the prizes for preserved fruits at the local Wallsend Show, together with prizes for home-made bread. Mr Hopkins had also cleared off all the honey prizes. The New Zealand namesake became intensely interested in the various snake incidents the members of the family had experi-

enced—there are no snakes in New Zealand, and specimens of the innocent-looking but terribly wicked little tick were examined with great curiosity.

If you have some seven or eight hives with about three frames of bees in each don't attempt to count your honey by the ton for this season, nor blame the district you are in, if your bees are hardly supporting themselves. We saw one man with a large variety of trees and shrubs all round him, much of it in bloom, and such an apiary, blaming the district he was in, and talking of going several hundred miles away to find a better place. Bees will not get honey unless they are strong and have plenty of field bees. You will not get your hives strong unless the queen has plenty of young nurse bees to prepare the cells for her to lay in, and feed the young larvæ. The young nurse bees cannot do the latter properly unless there are sufficient field bees to bring in food for them. Plenty nursebees encourage the queen to lay. Plenty field bees supply the nurse bees with food, and ultimately make the surplus honey, which is the profit of the careful and patient bee-keeper. If you have not the means of strengthening weak colonies by brood, bees, and honey from stronger colonies, better unite the weaker ones.

APPLE TREES.

We are indebted to Mr. W. S. Campbell for the following reply to sample sent of bluish coloured blossom, handed us by Mr. Buttsworth, of Cessnock, and supposed to be spotted gum, which we forwarded to Mr. Campbell:—

217 Macquarie-street,
6th October, 1894.

Sir,—In reply to your letter of the 19th. ult. I beg to inform you that the supposed sample of Spotted Gum blossom forwarded to the Department is not Spotted Gum at all, but Angophora lanceolata, one of the Apple trees, whose smooth trunk is often a good deal like that of Eucalyptus Maculata, the Spotted Gum.

I have the honour to be, Sir,
Your obedient Servant,
WALTER S. CAMPBELL,
for the Under-Secretary.

E. Tipper, Esq.,
Australian Bee Bulletin, West Maitland.

WASPS.

We received during the month from Mr T M. Walker, of Tenterfield, a small box containing four different kinds of, apparently, the bee species. Being unacquainted with them, we forwarded them to T. H. Maiden, Esq., of the Technological Museum, from whom we have received the following reply:—

Technological Museum, Sydney.
29th October, 1894.

E. Tipper, Esq.,
Australian Bee Bulletin,
West Maitland.

Dear Sir,—The specimens received with your letter of the 20th instant, consist of three wasps belonging to the family *Scoliidæ*, and two small bees belonging to the family *Andrenidæ* (short tongued bees.)

The two largest, with shining blue-black wings, are the common black Scolia (*Elis anthracina*). The large ones with yellow bands upon the body is the common banded scolia (*Dielis formosa*). The two little bees belong to the genus *Parasphicodes*, and probably form nests at the bottom of burrows in the ground.

Yours truly,
T. H. Maiden.

CAPPINGS.

We are in receipt of regular files of *Gleanings*, *The American Bee Journal*, *The Beekeepers' Review*, *the Progressive Beekeeper*, *The American Beekeeper* and the *Progressive Beekeeper*. We read them all with the greatest interest, and present our readers with a few "cappings"—there's some good *honey* in them.

Dr Peiro says the daily use of honey is an infallible preventive of gravel or stone in the bladder.

Gleanings of Sept 1 has on excellent portrait and a very flattering biography of Mr H. L. Jones, of Goodna, Queensland.

In Switzerland a chocolate manufactory has been very successful in using honey instead of sugar in the preparation of the chocolate.

In reply to two hundred postal cards asking for honey statistics throughout the states, the general replies are very poor but a Florida man booms up with 9 tons from 50 colonies.

The Ontario Beekeepers' Association receives from the Government a grant of 500 dollars, and each affiliated society receives a portion of the grant.

The editor of *Gleanings* says—We think we can definitely and positively say that bees do at times move eggs from one part of the hive to another, and even deposit them in queen-cells.

Frames, with drone brood in the bottoms and corners. Cut the drone brood out, and put the frame in with young swarms. They will put worker brood where the drone brood was.

An Italian bee journal says propolis is an effectual remedy for painful corns. Make small plasters by spreading it on pieces of linen, warming the same slightly and applying.

Dr Miller recommends as a cure for robbers, to pile hay or straw at the entrance, up to the top of the hive if necessary, then pour on water and keep it thoroughly wet.

A Dr Murdock, of Florida, thinks he has had success in feeding royal jellyto drones without killing them, as such diet usually does) and this he cansiders the key note in breeding the extra large bees for which he is becoming famous.

C. H. Hatch thinks that prolificness of queen is of less consequence than vitality of offspring, and that crowding the queen beyond her natural want, by spreading the brood, may be at the expense of that vitality.

A Mr M'Intyre, of Fillmore, attributes bee paralysis to a colony getting weakened at some period in the winter, so that the queen gets slightly chilled. He says uniting an affected colony with a strong one, and thus warming them up, usually cured it.

Dr Pietro recommends rhubarb or pie-plant for garden growth. He says nothing can be more enjoyable than pie plant stewed with honey. The children love it, liberally spread on their big slices of bread. Incidentally, it saves butter.

In reply to a question in the *American Bee Journal*—Taking into consideration its value for other purposes besides honey what honey plant will it pay best to raise in your locality?—out of twenty-one replies twelve put alsike clover and five buckwheat.

Mr G. M. Doolittle says brace combs are an advantage. With them the bees commence sooner to go into the sections, and "for every pound of honey stored in the brood nest at the commencement of the season or honey harvest there will be five pounds less stored in the sections."

Mr R. L. Taylor, at the Michigan Experimental Apiary, after a series of careful experiments in packing hives and spring feeding, etc., says that his experiments go to show that small brood-chambers prevent the swarming fever—We can't quite swallow it.

Mrs Atchley filled a wagon covered with wire cloth with bees, all turned in higgledy-piggledy, without hives or combs. They did not kill a single queen in a sixty-mile journey. Hasty wants to know if such a mass of queens and bees could be wintered or taken across the ocean?

In June, 1775, Frederick the Great, of Prussia, decreed:—"If any one offers for sale any injurious poisonous substance mixed with honey, by means of which not only is the Royal wish in regard to the protection of the most useful bee trade frustrated, but injury is also inflicted on others, six years' imprisonment with corporal punishment shall be the penalty; moreover, if the health of any one is injured by this substance, the responsible person will be prosecuted as a criminal."

Professor Cook and William M'Evoy are both certain that bee paralysis is caused by partial starvation. The latter says—The sudden stoppage of a honey flow when a large quantity of brood is on hand—the bees will use up the unsealed stores very soon, and then will not uncap the sealed honey fast enough to keep pace with the amount of brood that requires feeding. If the beekeeper would see that his colonies of bees had plenty of *unsealed* stores while brood-rearing is going on he would never be troubled with this state of things in the apiary.

Mr H. L. Jones, gives the causes of so many queens arriving dead in Australia

from America, says :—"The majority of queens were put up in large three-hole cages, and the loss in many cases was distinctly traceable to the fact that some bees had got stuck in the candy, and thus cut off supplies. A cage of this kind is not at all adapted for successful shipment. The candy (the weight being all at one end) the cage will, on being tumbled into the mail bag, in most cases settle with this end down, and thus on a three weeks' trip across the ocean the bees, as they die off, will drop straight into the candy, and communication with the food is soon cut off. A shallow six or eight hole cage, one side ventilated and one side not, with at least two entrances to the candy, also some kind of guard to make it almost impossible for dead bees to roll into the candy, will give much better success, Of course, the candy could be placed at both ends of the cage, but this would necessitate a double supply and a larger cage."

HALF FRAMES, &C.

(The Editor of the Bee Bulletin.)

Sir,—I am very glad to see an old bee keeper like Mr. Pender (in your last issue) converted to the half-frame in the top story, and every line he wrote is an argument in favour of the Gallup hive. For its top story claims all the advantages he mentions. And I maintain the bottom storey claims other advantages, viz., with starters the bees will start in the centre of the frame and build a true comb all the way down. I never can get them to do this in the Langstroth frame. Again, if your bees are weak : a division board placed in the front, make a double entrance, and you can confine them on three or four frames in the back of the hive ; no robbers, no draughts. In the Simplicity you must have two division boards and the single entrance (easily robbed). Again, in handling, the frames being so compact, the comb is not so liable to get broken out as in the Langstroth. In my opinion the Langstroth frame cannot be used to advantage without wire. The Gallup can. I work both hives, and as far as my honey flow is concerned I think the Gallup is superior in all respects to the other. I also noticed Friend Nancarrow wails the adulteratian of his lovely honey with the inferior honey of the coast. I don't know what part of the coast he refers to, but so far as this part is concerned he can take his chance with all confidence, for I do not think there is a bee-keeper down here that wants a company to sell his honey ; and I think I will be within the mark by saying there won't be twenty shares applied for on the South Coast. We on the South Coast have had enough of companies in our other industries. And, as far as I am concerned, I have had enough of providing fat billets for people who know less and also care less about the industry, than the people who employ them. I don't want to throw cold water on the Company. But experience teaches me it will be a failure. The same as our Beekeepers Union will be until it represents the interests of bee-keepers, and for which reason I always refrained from joining the same. However, to things more congenial, our honey flow this season is six weeks later than last year : too much wind, I think, and not enough hot sun. The paddocks now are white with clover, and with some warm weather I hope to keep the extractor busy for a couple of months. The farmers here are awakening to the advantages of running a few hives in connection with their farms, and with our climate and clover we ought to make a big show in the honey producing centres of New South Wales.

George W. Gordon.

Minnamurra Apiary.

NON-SWARMING BEES.

Sir,—Your correspondent, Mr. Beuhne, in a very suggestive article in your last issue opposes the views of Mr. Colbourne, with regard to the value of bees (as a race) that do not swarm, but it is a somewhat weak argument in support of his views, which he (Mr. Beuhne) ad-

vances in recounting his troublesome experience with swarms, seeing that such an experience is (as friend B. no doubt has since discovered) not necessarily involved by keeping a swarming race of bees, and there is a system of management which dispenses with all such unpleasant features as after swarms and their attendant worry, by one and the same manipulation that is expended upon the first swarm when it issues, and is rehived upon its old stand minus its brood. More of this anon, however.

Again, Friend B. argues from the scarcity of swarms last season, that his attempts at producing a race of non-swarmers are already showing results in that direction, but, whilst I think these efforts most praiseworthy and in the right direction, the results named seem to me no proof of their ultimate success, or that we can do more than produce queens less likely to swarm than the present average run of queens. The past season, in my own experience at the home apiary, was most exceptional for the fewness of swarms, and others also noticed in their apiaries the comparatively few swarms they had last season. From nearly double the colonies I had few, if any more, natural swarms than Friend Beuhne, and my honey yield did not average half that of the previous season. So that his contention as to honey results being "better," might be negatived by one from myself that they are "worse," as a result of non swarming. Neither would be fair contentions, seeing that bloom and weather affected both issues most materially. Passing by the comparison of a sitting hen and swarming queens, the force of which I fail to grasp, I come to Mr. Beuhne's suppositious case of a district fully stocked with bees, and his implied arguments that by non-swarming bees we can keep a greater maximum number of hives with less or a "minimum of labour;" that is to say, the honey would be produced more cheaply. Against this there is much to say; and even if it were partially true, it is a small benefit. In the first place, if a district is "fully stocked" it is no benefit to keep more hives. The way to cheapen the cost of our honey in such circumstances, is to keep the same aggregate host of workers in *fewer* hives; to keep the *minimum* number of hives for a *given result* in honey production: that is the achievement the *highest* skill must be directed to. Not to keep the maximum number of hives, which is a mistaken, but common enough aim and idea; and which it may be readily acknowledged, non-swarmer bees will enable us more easily to accomplish. But to keep *fewer* colonies and yet have the same available host of workers, can, or will these coming bees that do not swarm, and that lack all the stimulus and incentive to large population induced by the desire to colonise, or (to be safe in every statement) that seems invariably to attend every colony that desires to and finally colonises, lacking this (as Mr. Colbourne points out they do and will), can they be expected to average in strength, and in vigour, and push in their own up-building, and as early as the others, the race that swarms and within each colony has this propensity and tendency to rapid up building? I doubt it. They will not so average; they are not the race for an overstocked country, and it should not be overlooked that by the very act of swarming the other race lay themselves open by the "no-increase" system of management already referred to (and the only correct system for such a country) to still further intensity of population and work being produced, over and above that already produced naturally and concurrently with preparations for swarming; for seeing we by this plan hive every swarmed colony on its own stand under its own (already-occupied) supers, and with all its own bees, and distribute its brood to its neighbours, and persisting in this course till every colony has swarmed, and its brood passed on, we reach an average of excellency per hive that leaves nothing to be desired, and that is the key to the problem of keeping our given host of toilers in the minimum number of hives. And that at once also, and forsome weeks afterwards increases the relative propor-

tion of field-gatherers to brood-rearing to our great advantage in honey production. So that we may, taking these aspects of the subject into consideration, safely say that in every place where overstocking supers has to be guarded against, and in every such case where it is desirable to produce our honey at the least cost nature has provided in "swarming of bees" every aid and opening required to enable us to, with intelligence and skill, accomplish these aims rather than oppose them. It is, I make bold to say, in a district *understocked* that non-swarmers may be of some benefit, as we might thus be enabled to own an out-apiary or two more than at present, but this is a doubtful benefit to the fraternity of beekeepers as a whole; and mere capital could then more readily form a monopoly in honey production by numerous half-cared-for apiaries than is possible at present, when skill, care, intelligence and industry have to go hand-in-hand with capital.

While contending thus for the race of swarming bees, and having sought to show that our friend has not produced any sound reason as yet for their substitution by non-swarming bees, I may add that a lot of bees given to excessive swarming may, I believe with him, be greatly improved by careful selection from stocks indisposed to swarm, and many who keep bees for pastime, or are necessarily absent from their apiaries during much of the day, can with advantage to themselves and others work up a strain of their own, and Mr Beuhne's point of exchanging such is of great importance. The larvae from the queens chosen to breed from can be placed in the queen cups of colonies preparing to swarm, thus securing young queens from a non-swarmed mother, yet reared in a colony under swarming impulse, and when this first swarm comes off, if no increase is desired, lift these cells into upper story of some other colony, to be cared for over zinc, and return the swarm to old stand. Trusting that other pens may be led by this friendly criticism of Mr Beuhne's contentions to urge the pros and cons of this important subject.—I am, &c.,

Mr W. S. Pender might have been advocating the Heddon hive in his article in your last on "Half-depth Supers," but alas! he comes somewhat short of full liberty and comfort; that fatal objection or "disadvantage" he names near the close— what a pity it is there! I advise our friend to upset his past ideas (though those of the majority perhaps) over this obstacle—cut the hindrance in *half*, and have all his frames half depth and interchangeable, invertible and spaced distances. Surely he is in reality a disciple of Heddon, for two of these half stories make as good a brood chamber as a full-depth! Yes, and in some respects *much better* he shows plainly. Welcome to our side, friend Pender. Next year you may write up the "Divisible brood chamber hive a success." T. Bolton,

Grampian Apiaries, Dunkeld, Vic.

MR. PETERSON'S YIELDS.

To the Editor Australian Bee Bulletin.

Sir,—It is not very often I am troubling you, but this time I have to ask your permission to insert a few lines. I was greatly surprised to read in last (September) *Bulletin* your report of the last Beekeeper's Convention saying that:

"Mr Niven had kept bees near Mr Peterson for 25 years, and had always looked on the reports as incorrect. He never saw any extraordinary yield of honey there."

Mr. Niven was a neighbour of mine on Nuggety Hill, Wattle Flat, for two or three years previous to 1878 and left here beginning of 1878, nearly 17 years ago, to live at Eugowra, 150 miles away. He had one swarm of bees in an old soap box when he left, and I should like to know as he has never been at Wattle Flat since 1878, where and when

"He (Mr N.) had kept bees near Mr Peterson for 25 years."

As Mr. Niven, when my neighbour at Nuggety Hill, had never more than two swarms of bees in old boxes, robbing them once a year it is very evident that

"He never saw any extraordinary yields of honey there," and no wonder. I was transferring my bees into moveable comb hives that year (1878) and had never heard of any big yields, here, or in any other parts of Australia either. Mr. J. Carroll, of Queensland, produced honey in middling large quantities then, but I never heard what his crops amounted to.

There has been two or three reports concerning my bee-farm published in the *Bulletin* and taken from local papers, the Bathurst *National Advocate* and Mudgee *Western Post*, and I don't think I am to blame to let my big yield in 1892 be known, just to show what could be done in New South Wales in a good season. That season, 1891-92 I filled six 400 gal. square iron ship tanks and four 200 gal. tanks quite full and had started at another 200 gal.tank, so if I didn't weigh my crop I measured it, and you will admit that I was correct in calling it 21½ tons or 48,000 lbs. I would have had still more honey than 750lb. average per hive spring count, if I had not lost time waiting for tanks; besides, the 120 hives I had at the end of the season were full of honey and I could have taken another 1½ tons, leaving the bees plenty of winter stores. So, Mr. Editor, getting 1,200 lbs from my best colony is not so very surprising after all. I have no axe to grind, don't sell queens or supplies, don't retail any honey, don't want to sell out, don't exhibit, don't attend conventions, nor push myself forward in any way; so you will admit, Mr. Editor, that I derived no benefit from my securing the largest average yield per colony on record besides value of crop, which I have had so far no trouble to sell, as my brand is so well known to settle all doubts. I propose, Mr. Editor, that Mr. W. Niven, of Eugowra, send you his cheque for £5, and I will do the same; you, Mr Editor sending a reporter to inspect my books, account sales, and pass book, and make searching inquiries about those 10 tanks full and one partly filled with honey which I had during and at the end of 1891-92 season; and I agree to pay reporter's expenses if I am wrong in any of my statements; and Mr W. Niven, of Eugowra, to pay the expenses if I prove to your reporter's satisfaction that I am right. Last season was very indifferent with me, less than 80lb average for 160 colonies, spring count; out of this small crop I had to feed nearly two tons back, owing to honey flora breaking off shart, middle of March. I am feeding now (October 3rd) and expect to double back my 200 colonies to 120 colonies Such are the ups and downs of a bee-keeper. More downs than ups in my experience during my 17 years beekeeping. Trusting, Mr. Editor, you will agree to above proposition.—I am, &c.,

H Petersen,
Nuggety Hill Bee Farm, Wattle Flat.

Mr. Peterson has sent us a statement of the honey sent by him from Nuggety Hill Bee Farm during 1893, with the quantities and the persons to whom consigned, it totalling up to 21 tons 1 qr.

He says: "Besides honey sold, and not included in returns, I use a great lot myself for making mead, etc., and give some away to friends. This year I have been holding my honey back; sold about £150 worth to date. This will make near £1000 for less than three years. All this I can prove by my books and account sales. The *Sydney Mail* published a letter of mine on this subject. All I wish is a full inquiry.

SPECIAL SUBJECT NEXT MONTH.

The N.S.W. Foul Brood Act.

QUESTIONS FOR NEXT MONTH.

27.—(Bloxham Bros.)—Give size, description and probable cost of the most suitable Honey House required for an apiary of 150 colonies, in a good honey producing district.

28.—(A. Moore, Scone.)—Have any of your correspondents given the same care and attention to black bees as to the Italians, and with what result?

QUESTIONS.

(By A. A. Grindrod.)

25.—How and in what proportion is honey used in preserving fruit.

26.—Would some of our contributors who have brought honey largely into use in cookery kindly give some of the ways of using it.

Magnus M. Smith.

25. I have tried honey for preserving fruits as directed at end of pamphlet received from *Bulletin* office many months since, "What is Honey?" but am sorry to say the results were not very satisfactory. Fruits tried were plums, grapes and peaches.

26. We have also tried honey instead of sugar in cooking, and so far it seems to have a tendency to make it rather sodden. Shall be glad of information in answer to friend Grindrod's queries.

Elliot J. Rien, M.H.R.C.

26. Re your questions on honey uses, I have only used it in making confectionery. I believe if manufacturing confectioners could get honey guaranteed pure at a fair price, it would be used more extensively. When I first went to the trade, fourteen years ago, a large amount was used in the factory I belonged to of an inferior quality. It was difficult to obtain pure honey. But the amount used gradually grew less, until when I left, six years after, very little was used. I intend to experiment in this line, as I think there are many ways in which its consumption might be increased in this trade. I have never used honey in cookery, so cannot answer these questions. If you think the above might prove interesting you can use it, though it is hardly an answer to the questions.

J. D. G. Caddan.

25. In preserving fruit only half the quantity of honey instead of sugar is necessary as, if 1 lb. sugar, ½ lb. honey; so that honey besides being better is cheaper.

26. I have "Honey as Food and Medicine," by T. G. Newman, and Mrs. C. follows it in our cooking, etc., and every recipe used find the proportions given sufficient, and cakes are delicious; cannot advise anything better. I got it from America direct, and have only one copy left. Too much to ask for space in *A.B.B.* for recipes. But say cakes, puddings, preserves, vinegar, wine and mead—in health are all better made with honey instead of sugar. And for sickness, for many complaints honey as medicine is just the best doctor. Like Rumilius Pollis, we may say *interus melle* is one secret of our good health.

SPECIAL SUBJECT.

INTRODUCING QUEENS.

MAGNUS M. SMITH.

I have tried friend Gaggin's chloroform process with success. Also removing queens from hive five clear days before introduction takes place, and in meantime keeping all queen cells or queen cell cups cut out. The bees then receive the new queen without trouble. Still if imported queen I use the cage in case of accident.

W. E. BAGOT.

During the last season I have tried very nearly all methods, and if carried out carefully they will all be fairly successful. Of course the main object of most beekeepers is to get a queen introduced safely and quickly, especially in the case of a valuable queen from a distance. Having these two objects in view, you cannot very well beat the confining process, viz., confining a number of young bees for 4 or 5 hours and introducing your queen direct by dropping her in among the bees.

JOHN D. G. CADDAN.

Almost every one has some particular plan of his own or someone else's, and like most other industries, some fail where others succeed; and if each gives his own plan there will no doubt be variety. I follow "Doolittle's" both for queens in my own yard and those coming from a distance, and so far only report loss of two queens. I have used all Doolittle's methods, and can say they are safe and easy; and so far see no reason to change.

ALFRED BROWN.

In my opinion the successful introducing of queens depends entirely on circumstances, and the operator must be conversant with the circumstances to ensure success. Under some conditions bees will accept queens, no matter how introduced. Then again at other times certain methods succeed better than others. I do not think any hard and fast rule can be laid down as *certain* to succeed at all times. I have used cages of several different kinds, but I find that direct introducing answers as well as any of them. The risk is a little more, but time is saved.

ELLIOT J. RIEN, M.H.R.C.

The best method for a novice is with the ordinary pipe-cover cage. Select a frame with some cells of unsealed honey, and place the queen without any attendants in the cage, pressing it into the comb; then remove the old queen and put this frame in the hive, leaving it two days. If she is released the bees will invariably accept her. I have often seen them release her themselves. If any queen cells are started destroy

them. When introducing by this method, I have known them to kill their old queen if I could not find and remove her. For valuable queens I prefer Doolittle's plan, which is but an extension of the above. The Benton cage is also an excellent introducing cage. It is needless for me to describe these methods, as I presume others will do so, and it has been done so often.

G. WILSON-GREEN.

I usually use the ordinary way, viz., cage the queen by herself and fill mouth of cage with candy, and let the bees do the rest. But if an imported queen, or a valuable one that has been a considerable time out of a hive, then I take a frame of hatching brood, which I put between two frames made of ⅜ square timber, with a wire front in each. Let the queen run in, put on three wire clips, and hang in a strong colony until brood has all hatched; then place the frame cage and all in a hive with two more frames of hatching brood; take off the clips and open cage sufficient to allow the bees and queen out; in a short time they will be all on the frames of brood; then remove cage and empty frame; draw up the division boards and leave an entrance small enough to let only one bee out at a time, as the bees are too young to guard a larger entrance just then. Should the queen arrive feeble, I pick out a few bees old enough to clean her, and put in cage with her.

GEO. COLBOURNE, Jnr.

The introducing of queens is, I think, the most simple and easily accomplished part of the work in the apiary. Out of hundreds of queens introduced, I have never to my knowledge had the bees kill one. Perhaps it is the method I practise that has much to do with my unvarying success; and as I have never seen it in print I will describe it here. I put the queen that I wish to introduce into a small cage and carry her to the hive I wish to put her in. I then open the hive and find the reigning queen and remove her. I then set the comb she was on on the shady side of the hive and slightly smoke the bees on it; then take the new queen out of the cage and place her on the comb and watch her for a few seconds to see how the bees receive her. If they attempt to bite or sting her I blow a little smoke on them; and when they are quiet turn the side of the comb that the queen is on towards the hive, and let it lean against the hive, and leave it there for a few minutes, so that the bees will cluster on the under side. When they are quietly clustered I consider my queen safely introduced. The frame may then be hung into the hive; and in a few hours the queen will be laying. This is no theory, as I have practised it with hundreds of queens. The bees clustering around the queen seem to give her the same scent as themselves, and when she is put into the hive the other bees do not seem to know that they have lost their old queen, and that a fresh one has taken her place.

"BINNI."

There are three good ways known to me—(1) "Simmon's Plan." On the evening of the day you wish to introduce the queen, place her by herself without any food whatever for at least 30 minutes. She will then be hungry. Then about dusk go to the hive you want to put the queen in, having taken care to make this hive queenless at least 36 hours before—carefully turn back a corner of the quilt, blow in a little smoke to drive the bees away from the spot, let the queen run in, replace the quilt, put on the cover, and do not interfere with the hive for two days. (2) "Hudson's Plan." Make a frame of ⅜ pine, any size, say 4 inches by 3 inches; on one side of it take wire cloth; take a frame of sealed honey; place the queen thereon alone, cover her with the cage, tie it on so that it cannot fall, break the capping of a few cells for the queen to get at, put the frame into the hive, replace the cover, and let alone for two days. (3) Take the "Benton Cage" in which the queen has reached you through the post, pry off the wooden lid, turn down that corner of the wire cloth that is over the candy. Place the cage, wire cloth side down, on the centre frame of the brood nest in the hive you want the queen, put on the cover, and do not open the hive for two days.

Note.—In introducing by method No. 1, you *must* make the hive queenless at least 36 hours previously. By method 2 or 3, if the hives are not already queenless you can remove the undesirable queens at the time you operate. Personally, I prefer No. 2 method, and have never yet had a failure.

R. BEUHNE.

The method I now practice is known as Simmon's Plan, which Mr. Ellery advised me to try last season, and by which I have since introduced over seventy queens without a single failure, and without any interruption in laying excepting for a few hours in each case. This is most important, as, during a honey flow the bees will invariably fill all vacant cells with honey during the 24 to 60 hours which it takes the bees to gnaw out the queen, when the candy cage plan is practised, and if the queen was taken from one of your own nuclei, the caging for so many hours will put her off laying for a little longer after she is liberated. Occasionally the bees will not liberate the caged queen for three or four days, raise cells and ball her, necessitating further attention.

Simmon's Plan is simply to remove the old queen, and from four to eight hours after let the new one run in *alone* from the top, having kept her warm, without escort and food for half an hour before. This should be done about dusk, or after timing the removal of the old queen accordingly.

The queen to be introduced may be left where she is laying till wanted, and when entering the

new hive will take a sip of honey and go straight on laying. In most cases I let them run in at the entrance now excepting under unfavourable conditions.

This plan can, of course, not be applied to queenless or laying worker colonies. The best way of dealing with the latter, if still sufficiently strong to be worth the trouble, is to remove the hive a few feet, putting an empty one in its place, into which put most of the combs after having brushed all bees off them, leaving them and a few combs in the old hive ; then put a queen or queencell on the combs in the new hive on the old stand (where all flying bees will go) leaving mostly young bees and the laying workers in the old hive. When the queen is properly established add the remaining combs and bees. This plan has always been successful with me. Introducing queens is a very easy matter when due attention is paid to the time and conditions, and we may even have two queens laying on the same combs if we copy nature and produce the same conditions, which occasionally show us two queens side by side. During last season I had two queens in each of four three-frame nuclei for several months.

W. S. PENDER.

Success depends greatly on two points: First, the queen ; second, the colony to receive the queen. There are many forms of introducing cages, but I give preference for those in which the queen is released by the bees in from 24 to 48 hours. The Miller cage is my favourite. Plug the candy hole tightly with candy, put in the queen only, if she is excited keep her in solitary confinement until she is quiet, then take her to the hive whose queen has been removed not more than three days, and place the caged queen between two combs containing brood, drawing the combes close enough together to keep the cage in position. Leave the hive for five days, when you will find her properly installed and laying. A hive having a large number of newly emerged bees will receive a queen without any trouble, and in case of a valuable queen it is a good plan to remove the hive to a new stand so that the old bees when leaving the hive will return to the old stand and be lost to that hive.

The above applies to queens coming from a distance.

When I wish to introduce a queen from one hive to another in the same apiary, as when I sell the queen of a hive and want to introduce a queen from a nucleus, I simply take two frames of brood and bees from nucleus, with the queen between, and place them in the centre of the hive, generally carrying two combs of brood and bees from the hive back to the nucleus, close the hive and leave them. I have never failed when introducing (perhaps uniting should be the term) in this way.

When selling bees by the pound with a queen, I generally cage the bees some hours before I introduce the queen to go with them, I keep the bees queenless until they have been roaring for an hour or more, when I drop a laying queen among them through a hole at one end of the cage. I have sent many bees and queens away this way, and have yet to record one failure. If introducing is to be practiced this way in the apiary, I take bees from several colonies to put in the one cage, and keep the bees shut up twenty-four hours after giving them the queen, when I hive them on a comb containing brood (a very small quantity being unsealed.) Virgin queens under three days old can be introduced in this way, though I have not given it an extended trial for virgins. Another way that I have found very successful—when a laying queen has not been caged more than twelve hours—is to smear *her wings* with honey, and drop her on top of the frames of a colony immediately after its queen has been removed. When practising this method honey must be coming in, in fact, during a honey flow queens are the more easily introduced I could give many more methods, but consider the above the most practicable.

NATIONAL B. K. A.

A committee meeting of the above took place at the Technical College, Ultimo, on Friday, the 5th inst. Present: Mr. Abrams (in the chair), Messrs. Whittell (sec.), Seabrook, Tipper, Gordon (of Paddington), Bloxham, and Allport.

Apologies were received for the absence of the Rev. Mr. Ayling, and Mr J. Trahair.

Mr. Whittell said he had received a copy of the South Australian Foul Brood Act.

Mr Tipper read the New Zealand Foul Brood Act and Mr. Whittell the South Australian Act.

After discussion the South Australian Act with a slight amendment was agreed to as the most suitable.

On the motion of Mr. Seabrook it was resolved that a deputation wait upon the Minister for Mines and Agriculture and urge upon him the necessity of passing such Act, and that it consist of the President and such members of the committee and other beekeepers who could possibly attend.

On the motion of Mr. Bloxham, seconded by Mr. Gordon, it was resolved that meetings of committee take place in

future at seven o'clock instead of eight, and on Wednesday instead of Friday evenings.

Discussion took place on the clauses of the proposed Land Act, and it was decided to request the Minister for Lands to make the establishment of an apiary one of the special conditions of occupation.

On Thursday, October 18th, a deputation representing the National B. K. Association waited upon the Minister for Mines and Agriculture to ask him to introduce legislation for dealing with "foul brood" in bees. Messrs. J. T. Wilshire, J. Trahair, H. R. Whittell, Henry Lord, J. D. G. Cadden, and other gentlemen interested in the industry were also present. The deputation pointed out that the question of disease among bees had been engaging attention for some time. In the Northern districts foul brood was very prevalent, and it was also bad in some other portions of the colony. The effect of it last year had been to reduce the sale of beekeepers requirements by about 33 per cent. in consequence of the disease preventing the natural increase of the apiaries. The industry was likely to prove a valuable one if protected, and to that end the deputation asked that legislation should be passed dealing with the whole question, so that no danger of the spread of the disease should arise from the carelessness of persons having perhaps only one or two hives. They suggested that a qualified inspector should be appointed. Such an Act as the one they asked for existed in all the other colonies.

The Minister in reply, said that he sympathised with the deputation in their desire to prevent the spread of the disease, and if he could do anything to cope with the difficulty he would be glad. A similar difficulty existed in other industries. For instance, fruit was destroyed by the spread of disease which was being introduced from other colonies. Only recently an instance came to his knowledge where permission had been refused to land certain fruit in two other colonies, and then it was sent to New South Wales and landed here. He hoped before very long to introduce a comprehensive measure dealing with the whole subject, not of disease in bees merely, but in fruit also. There was a great deal of work before the present session, but if time permitted he would endeavour to introduce a measure, in which their recommendations should receive consideration. The legislation would have for its object the prevention of the spread of disease in the colony, or the introduction of it into the colony.

THE PROPOSED N. S. WALES FOUL BROOD ACT.

The following is the draft bill adopted at the committee meeting of the National Beekeepers' Association.

An Act to prevent the spread of Foul Brood and other Contagious Diseases among Bees.

Whereas it is desirable to prevent the spread of and to eradicate contagious diseases among bees—Be it therefore enacted by the Governor of the Province of New South Wales, with the advice and consent of the Legislative Council and House of Assembly of the said Province, in this present Parliament assembled, as follows:—

1.—Every person who shall have in his possession, or under his care, any colony, hive, or swarm of bees affected with foul brood or other contagious disease, shall forthwith report the same to the Department of Agriculture, and take such steps for the eradication of such disease as the Department may direct.

2. Any person who shall, after one week's notice in writing having been served upon him by the Department or person appointed or authorised under the provisions of the next clause, knowingly fail to observe the foregoing section in any particular, or shall knowingly have on his premises any comb affected with foul brood, or other contagious disease among bees, shall be guilty of an offence under this Act, punishable, on summary conviction, by a penalty of not less than five shillings or more than ten pounds.

3. For the purposes of this Act there shall be appointed by the Governor one or more bee-experts to carry ont the duties necessary for the

administration of this Act, and the Governor may, from time to time, make such regulations as may be necessary.

4. Any Inspector, or person appointed or authorised by the Department of Agriculture for the purposes of this Act, may, with such assistance as he may think fit, enter upon any land or premises where bees are kept, and inspect all bee hives and materials used for beekeeping thereon.

5. This Act may be cited as the "Contagious Diseases among Bees Act."

H. R. B. K. A.

FOUL BROOD AND LEGISLATION.

Abridged from the Maitland Mercury.

A special meeting of members of the Hunter River Beekeepers Association, convened by circular, was held in the Technological Museum October 12, the President (Mr. Robt. Scobie) in the chair. The meeting had been hurriedly convened for the purpose of conferring with Mr. H. Rawes Whittell, Secretary of the National Beekeepers Association and of the National Horticultural and Pomological Society, Sydney, and Mr. Wilshire, President of the latter Society, and committee-man of the National Beekeepers Association.

The President, in introducing Mr. Whittell, said that Mr. Wilshire's name had been mentioned in connection with the meeting, but he was unable to be present. Mr. Whittell was a gentleman who occupied the position of Secretary to the National Horticultural and Pomological Society for some considerable time; a gentleman of some travel and of a good deal of observation, and he was present that night to discuss with them the matter in reference to "foul brood in bees." He said he could not do better than call upon Mr. Whittell to lay the matter before them which he came there to do.

Mr. Whittell, after some preliminary remarks, said:—I have recently returned from a tour of investigation into the fruit and apicultural industries in the principal adjoining colonies, and you will no doubt be pleased to hear that at the present time the apicultural industry in New South Wales is in a more advanced and better position than in the other colonies, In support of this I must inform you that the ruling price of honey to the producer in South Australia when sold in quantity is 2½d per lb: and no supplies of consequence for export; Queensland, 2d to 2½d per lb. with a moderate surplus; Victoria 3d per lb. and no surplus; while we have a ruling price of 3¼d to 3½d and very considerable supplies awaiting market, one producer alone having 20 odd tons in stock. Of course, I am only referring to first class qualities of extracted honey. Some of you may think that a surplus stock does not show a good position, but if you do your views are not quite correct For the moment a producer, whether individual or a colony, produces more than actual requirements, a source of wealth is established by the sale of these products to other individuals or countries, as witnessed by our great pastoral dairy, and other exporting industries. But the difficulty in the apicultural industry is that as far as the producer is concerned we have not yet discovered an outside market of sufficient dimensions to profitably consume our surplus products, therefore all our efforts should be turned that way. Yet again, in the honey as in the fruit, the method of supply and prices to the consumer in our home markets are such as render the consumption comparatively limited in comparison with what it ought to be, both fruit and honey being important articles of diet when viewed as being largely conducive, in fact necessary, to sound health. The trade arrangements of such articles as these should be such as to place them in the hands of the consumer at prices which would not cause them to be considered luxuries. Mr. Whittell concluded his remarks by an explanation of the clauses of the proposed bill, the expense of carrying out which would be borne by the Department of Agriculture and not by the beekeepers. If the Government spent £15,000 a year for the purpose of encouraging production it was only a small matter to ask that they should find £200 or £300 for the purpose of eradicating diseases brought about because of the encouragement given to production. The bill was entitled "The Contagious Diseases among Bees Act," and was intended to prevent infection by foul brood, &c. It was proposed to have the administration of the Act done through one centre; inspectors would be appointed whose duty it would be to visit apiaries in any district in which foul brood was reported, and take steps to compel beekeepers to keep their hives free from disease; and a penalty was to be enforced for non-compliance with this provision.

Mr. Munday (Woodville) said the matter was of vital importance to the beekeeping industry, and he was very pleased to see some action taken which was badly wanted. Anything worth having was worth paying for, and he thought a small tax would be required from all beekeepers for the purpose of paying the expenses of carrying out what was required for the eradication of disease in the apiaries of the colony. He thought there should be an inspector paid by a small taxation from beekeepers—say 2d a hive, This functionary might also be a lecturer; he must be a competent man to be able to decide about the disease. It might be advisable to appoint an honorary inspector for the Hunter River district. It would be less expensive and more likely to ensure success. He noticed several people who did not use the bar frame hives, but

gin cases, and there would be a difficulty in examining the latter. At the same time he thought it would be a hardship to poor people to compel them to use bar frames.

Mr. Tipper said that foul brood was not a matter to be dreaded by beekeepers themselves. A few years ago it took possession of the hives in this district, but anyone who knew anything about bees could cure it in half-a-dozen different ways. The danger was that a lot of careless people who kept bees would not go to the trouble of keeping them in proper order, and the consequence was that their neighbours hives were in danger of infection. That was the class of persons who had to be guarded against. One inspector would be sufficient under the act. He should have power to examine all hives suspected of infection. If there was any expense in connection with the administration of the Act he said let the person who had foul brood pay. He laid upon the table the South Australian Foul Brood Act, the Californian and New Zealand Acts, and some regulations as to the inspector's duties in the province of Ontario.

Mr. W. S. Pender said he could get rid of foul brood in half the time it took to report it to the Inspector. The disease was likely to break out in any person's apiary, and if he wanted to breed queens for sale, it might interfere with his business.

Messrs J. W. Pender, F. Pullen, M. Scobie, and the president took part in a general discussion of the proposed measure.

On the motion of Mr. J. W. Pender, seconded by Mr. Geo. Pender, it was resolved—"That a sub-committee, consisting of Messrs J. F. Munday, W. S. Pender, E. Tipper, and M. Scobie be appointed to examine the proposed measure, compare it with other similar facts, and make any suggestions they thought desirable, and send them in writing to Mr. Whittell.

HUNTER RIVER BEE-KEEPERS' ASSOCIATION.

The usual monthly meeting of the above Association took place in the Technological Museum on October 16th. Mr. J. F. Munday occupied the chair.

The offer of Mrs. May, of Dunolly, Singleton, to visit West Maitland and give a demonstration of the uses of honey as a substitute for sugar in cooking was accepted, and the proceedings will take place in the Technical School on Friday, the 26th instant. A number of ladies were to be invited to attend.

The Chairman thought the committee should revise the subscription lists. Those who did not pay up their overdue subscriptions should be entered as unfinancial on the roll.

Mr. Scobie said that the time at the monthly meetings were frequently monopolised in the transaction of business connected with the association, and that no opportunity was allowed for the consideration of matters connected with the management of bees. He moved "That the committee meet at Mr. Tipper's *Bee Bulletin* office, whenever necessary to transact the business of the association."

Seconded and carried.

Mr. Scobie reported the result of Mr. Whittel's visit on previous Friday, and laid on the table copies of the proposed bill dealing with contageous diseases in bees.

Mr. E. Tipper then read the following paper on "Foul Brood in Bees." He said: As some of those here have studied the subject of Foul Brood, long before I knew anything about it, there will possibly not be much that is new to them in this paper. On the other hand, there are those who have not not studied it, and will be glad to make an increase to their present stock of information. Again, as at present we are endeavouring to get the Parliament of the Colony to pass a Foul Brood Act, it is well the public should have some knowledge of the destructive nature of the disease upon which we wish to legislate.

The disease is called Foul Brood, because it is in the brood in which it is most noticeable. Instead of the healthy, fat little white grubs that lie at the bottom of the cells, the colour changes to yellow or the faintest buff, distinguishable immediately in a healthy patch-brood. The colour strengthens to a pale brown, while the skin becomes flaccid and opaque; death soon ensues, when the body, sunken by evaporation, lies on the lower side of the cell, becoming progressively darker until it assumes the color of coffee. Should the larvæ escape until it becomes capped, the capping has a sunken appearance, and a hole appears in the centre. The smell is strong and unmistakeable, like offensive glue; and if you attempt to pick a dead larvæ out it will adhere tenaciously to the cell wall, but draw out into long and thin strings like half dried glue.

The nurse bees, as they feed the larvæ convey the bacilli from one larvæ to another, and very quickly it spreads throughout the hive. Every egg, if not already supplied with the microbe by the diseased queen, as it emerges into its larval state, receives it from the nurse bees. They all die, and in a short time, the once lively, busy hive is a mass of stinking cor-

ruption. The old bees die off, and the swarm is extinct.

But there are inquisitive and robber bees about. They have taken some of the honey to their own hives, and in doing so have carried the foul disease, either in the honey or on the hairs of their body. And the same result follows in every hive in an apiary, till the beekeeper finds himself with only empty diseased boxes.

Now, what produces this is what is termed *Bacillus Alvei*. By the aid of the microscope these are found to be little rod shaped creatures, 1-23,000th. in. wide, and 1-12,000th. in. in length, which gradually assume the shape of a stick or rod, then break off; each of these again forming the rod shape and again breaking off.

The vitality of the bacillus alvei is so great that it takes three hours boiling in water to destroy all germs. They will live indefinitely in ice, though not germinate. They will not live in the air 36 hours, and acid is death to them.

It is an open question if foul brood arises from dead brood, some contending it does not.

There are air germs that produce deadly compounds, but dead brood alone is attacked by these germs and not live brood. The germs of foul brood do not float in the air.

Death from poisoning by means of rotten or stinking dead brood that cannot be removed, even if the honey contained a portion of this poisonous disease, could not result or the disease be carried from one hive to another, as it would be so diluted that it would not spread the disease as does contaminated honey bearing the bacilli of foul brood which attacks and destroys life. The remedy in that case, is, simply remove the dead brood, and the cure is perfect.

The germs of foul brood, if stored and sealed in honey, will last indefinitely.

Any cure of foul brood must be done by the removal of all germs.

Mr M'Evoy said distinctly that foul brood would germinate of itself.

A Mr. Graden implied that it was carried from hive to hive by the wind.

Samuel Simmins contends that Foul Brood may originate with a quantity of dead brood so great that the bees could not remove it, and left it in that condition month after month, with a certain amount of breeding still going on—the living breathing and feeding amongst the dead, with the fermenting warmth of the clustering insects, which appear to generate the future growth of the foul brood virus. He also adds:—"If then we are compelled to arrive at this conclusion it must be assumed that all animal life carries with it certain infinitesimal and unobserved seeds of disease and death, which develop into microbes only in the presence of those various disorders brought about by the violation of nature's laws."

I have read somewhere that all the great plagues that have afflicted and caried off millions of the human race have been traced to some great battle-field, where the carcases of thousands of the slain have been left rotting in the open air.

In the face of these statements, it will be seen the risk which careful beekeepers suffer from having a careless beekeeper in their neighbourhood.

Mr. Cheshire was the first one to successfully cure. He did so by the use of phenol or carbolic acid, without destroying the combs, but his remedy demanded a great deal of care and attention, and would be really, for that reason impractible in a large apiary.

Mr. M'Evoy's system of curing by starving, and the like plan adopted by the Hunter River beekeepers, has been most certain and effectual. The bees are placed in clean hives with starters only, closed up till they are close on starved to death, and then placed in fresh hives with full sheets of foundation. My experience with the plan, however, was, that the bees for some reason or other became dissatisfied with the queen, and even if transferred to another swarm she did not live long after. It was more than likely the microbes must have been in her body.

I have effectually cured it, however, on two occasions, and the queens were none the worse after, but seemed to breed equal to any other in the apiary. In the evening I cut out and burnt the affected brood, well sprayed the frames, right to the bottom of the cells and hive with strong carbolic acid, as far as I could make out 1 in 17, of glycerine, till the bees were driven out of the hive, and covered them and the hive over with bagging. Next morning, the acid having lost much of its strength, the bees all returned, and everything went on well after.

A great preventive of Foul Brood is the often using of Carbolic diluted with glycerine, say 1 in 300. The bees devour it greedily and thus keep themselves disinfected.

I am convinced every beekeeper should examine, at least in fine warm weather, every hive once a fortnight, to see that all is right, and only by this means could he make sure all is going well.

I will conclude this paper by asking all here to carefully study the proposed Foul Brood Act so as to forward any suggestions they may think fit, to the National Committee, and by so doing save a large amount of valuable bee property from unnecessary destruction, and the man who wishes to derive a profit from his bees from unnecessary loss.

Mr M. Scobie said that all the larvæ were not always attacked. He had seen apparently healthy brood here and there on an infected comb.

Mr Munday said it did not necessarily go into every hive. He thought that the bees carry it by means of the flowers they gather from more than from diseased

hives. Had found the bees dissatisfied with the queen, and not like the hives they were transferred to and went out again. He did not like the use of carbolic acid, and doubted if the germs of the disease were in the eggs of the queen.

Mr W. S. Pender said Professor Cook, Dr. Howard, McKenzie, and several other writers were doubtful as to the existance of the microbes in the queen's ovary.

Mr M. Scobie said Cheshire was the first to use carbolic acid, but salicilic acid was used long before, and some still prefer the salicylic acid, also borax. The starvation plan of M'Evoy's was only a modification of D. A. Jones' plan. Mr Munday alluded to all the hives in an apiary not being diseased, and he (Mr. Scobie) reminded them of a visit to an apiary where he believed every hive was diseased. Was thoroughly convinced it was not spread by the germs being left on the flowers. The foul-brood germ will not exist more than 38 hours in the open air. At that time they were unacquainted with its nature, and spread it by extracting from diseased combs. It was always worse in bad honey seasons, resulting from robbing, the diseased ones becoming unable from weakness to defend their hives.

Mr W. S. Pender said carbolic acid was giving place to eucalyptus oil for use among bees in England.

Mr Munday suggested that the subjects of discussion at each meeting be advertised in the *A.B.B.*, and that next month the subject be "Does it make any material difference the way frames are ranged in the hives." Mr M. Scobie also suggested "Our honey resources" be included.

On the motion of Mr Munday a hearty vote of thanks was accorded Mr Tipper for his paper.

MUSWELLBROOK B. K. A.

Silver Oak Apiary,
Muswellbrook, 16th Oct., 1894.

Dear Editor,—The first annual meeting of the Muswellbrook B.K.A. took place on Saturday last, and the report shows that the Association has made great progress, during the first year of its existance. It increased from 10 members to 22, and the number of hives owned by them from 41 to 240 (approximately). The following officers were elected:—Mr. Jno. Hazelwood, President (late vice-president), Messrs A Wiedman and A. A. Roberts, vice-presidents, Messrs D. G. Grant, Secretary, and T. Ellerton, Treasurer, both re-elected.

Nine new members have joined our ranks, which allowing for the dropping out of three or four others whose enthusiasm has waned, will bring our number up to 25 or more at present date. I enclose the annual report.

Yours truly,
Donald G. Grant,
Hon. Sec.

Anuual Report of the Muswellbrook Beekeeper's Association.

In presenting this, the first annual report, the committee have to congratulate the Association upon its success for the past year.

At the inauguration of the Association, there were only 10 members which number has increased during the year to 22. The number of colonies possessed by the Association at its foundation was 41, it now totals 240, being an increase of 199.

The Association has held thirteen meetings during the year at each of which subjects of interest to beekeepers were discussed.

It was decided at the August meeting to select a member to write a paper on a given subject, to be read by him and discussed at the following meeting. This was found to be a success and the committee would suggest that the practice be adhered to in the future.

The Association is to be congratulated on the excellent display made at the local show held last May. Taking into consideration the fact that the Association was only in its infancy, the quantity and quality of the products shown reflected great credit on the various exhibitors, and were acknowledged by experts to be equal to any similar display in the colony. The public also showed their appreciation in a very marked manner.

All the prizes, with the exception of four were carried off by members of the Association, and the committee would take this opportunity of thanking the Upper Hunter P. & A. Association for their generosity in offering the sum of 3 guineas to be competed for by beekeepers; also those members who donated special prizes. The P. & A. Association also kindly placed at the disposal of the Beekeepers Association a corner

of the pavillion in which was exhibited a very complete collection of apicultural appliances.

The committee also considers that the thanks of the Association are due to the proprietors of the *Muswellbrook Chronicle* for their generous offer of space in their paper for the insertion of bee news, which has proved of value in disseminating a knowledge of bee-culture in the district

As regards the financial position of the Association, the committee regret that it is not a flourishing one. There have been several heavy expenses attending the formation of the Society, which however will not have to be met again.

In conclusion, it is hoped that the efforts of the incoming committee will meet with the same success as has attended those of the present one.

Jno. HAZELWOOD, Vice-president.
Donald G. GRANT, Hon. Secretary.

MURRURUNDI B.K.A.

Mr. D. G. Teys, hon. sec., writes us:—We have just held our annual meeting, and elected our officers for the year. Mr. W. S. Goard was elected president, Mr. Worcoch treasurer, and D. G. Teys, sec.

We are starting the season with every prospect of a splendid one.

The winter has been one of the most suitable we have had for years. The trees have been in bloom all the winter, and all hives are strong and full of honey. The bees are now gathering largely from the white clover, which is growing very prolific around the town. Our greatest trouble is to find a market for our honey. Several of the residents have caught the bee fever, and are fitting up hives. Swarms are very plentiful, and a great many have been lost. The black bees in the bush are dying out, and being replaced by the Italian.

QUEENS LED BY HER DAUGHTERS.

[MRS. JENNIE ATCHLEY.]

Mother bees are always led by their daughters, with few exceptions. As the queen never leaves the hive after mating without her retinue or swarm, we must know that she is led by them. The queen follows, and is led to the tree or place where the bees cluster. She is also led by the swarm while absconding, and seems to be governed by the bees at all times. And I might say she is always led by the bees. For one of the exceptions that I was going to offer was, when the queen was unable to fly and falls by the way, then the bees will seek her, and cluster about her. But this can hardly be called her leading them, as it seems they do this through affection, and will remain with her. But she would rise and follow if she could. I am led to believe that the queen is also led and controlled by the bees inside the hive as well as out. She will follow and lay in the cells the bees have prepared. And the cause of the queen laying in queen and drone cells is because the bees cluster there to clean up and prepare the cells; and the eggs are deposited by the queen just because she is led there by the bees. When a new piece of comb is built, the queen follows and lays in the cells. So I think the queen has nothing to say or do inside or out of the hive, only as led by the bees. Neither do the drones. Funny families that the children do all the bossing.

IS IT A FORM OF PARALYSIS?

A disease which I at present am dealing with presents itself something after the following, the worker bees as usual being the unfortunates. They may be seen to hurry from the hive, exactly as a robber would who has been stung; they are doubled up and drag the two hindermost legs, hurrying off along the ground as though in a hurry to get away somewhere. After a space varying from half to one and a-half hours they commence turning on their backs, and generally die either on their side or back, the two front legs being the last members moveable, and they are kept going in such a fashion as to resemble a man sparring rapidly. I have had a stock affected since last June, and despite the efforts of a vigorous queen, they are now very low, Very few bees are to be found near the entrance of the hive, and those, or mostly those, die during the night, nor is it pos-

sible to detect many leaving the hive as I have explained, I believe more die away from home while in pursuance of their daily toil. I am convinced the malady, whatever it is, is to an extent contagious. For instance, into an affected hive I introduced a punic queen, and her progeny are following on. From another affected hive I removed some empty combs, and distributed it around, and now they're going off. Before noticing this I removed a very vigorous colony to a stand where a weak lot were affected, and the weak lot to the strong over-stand, and they also are going hence. However, it takes a long time at the death rate I have noticed to collapse a strong colony, and some seemed to shake it off. I have tried Muth's Foul Brood Cure with no success, although it soon cleared off paralysis (the fluttering swollen bee). Sulphur fumes, or sprinkled through the hives, is no use whatever. I am of opinion it is a specie of paralysis inasmuch as the hind legs are completely paralysed in the first "upset," but then again, paralysis as I have seen it (with the bees hopping, fluttering, swollen, and filled with excrement) is not contagious, or at any rate not, in all cases. The disease I have cited seems to me like the "grippe" in the human race, the body being doubled up. It will be interesting for me to hear something from some one on this matter. Yours, &c

Waysider.

[Would this be the same as Mr. Helms' "Depilating Disease?"—see *N.S W. Agricultural Gazette* of April, 1894, on Cheshire's *Bacillus Gaytoni*—If so, Mr. Helms recommends thoroughly disinfecting the hives and ground around, and spraying the hives with carbolic acid, of half per cent. strength, every third or fourth day.]

THE PROPOSED FOUL BROOD ACT.

The following communication was sent us from Mr. D. Grant, marked "private" but in a paragraph near the end he kindly grants us permission to use what we consider may be of public interest, for the benefit of our readers. New South Wales has had no Foul Brood Act up to the present time, and it would be well to take a little time and have a live, workable Act rather than to hurry too much, and to have what would be practically worthless. We have, therefore, decided to make the proposed Foul Brood Act of New South Wales the special subject for next issue, and invite correspondence on it from all who can give experience or suggestions.

Silver Oak Apiary,
Muswellbrook, 24th Oct., 1894.

Mr. Tipper, dear sir,—Your favour to hand, enclosing copies of proposed F. B. Act. If a person takes steps to eradicate the disease by any means, it is materially impossible to tell within a week whether he has failed or succeeded. I do not know of any cure in which a certain verdict could be given as to success or otherwise in less than three weeks (and it would not be reliable then). Too much reliance is placed on the bee-keepers reporting the disease himself—not one in ten will do it—and you will hear far less of foul brood after the Act is passed than you do now. As for individuals taking steps to cure the disease themselves, or acting according to directions from the Department, I hope you'll forgive me for saying its utter folly—that is, for the average bee man. My own recent experience convinces me of that. I think I understand the danger of F. B., and as it directly affects my pocket, cannot be accused of acting carelessly. I doubled a total of 17 colonies down to 3 to secure workable swarms. Of these 17, 1 was diseased, 2 were doubtful, and I did not care to chance the rest, so treated them all alike. I burned all the brood and frames, boiled all the honey, and rendered and boiled all the wax, and took every possible and impossible precaution. The three hives are clean, but, to-day, bless me, if I don't find unmistakable F. B. in one of my other hives. Now, I say that if a man who, clearly understanding the nature and severity of the disease, takes every known precaution, and neglects nothing

that outlay of time and labour, or sacrifice of materials can secure and meets with such a disheartening result, what on earth will it end like in the case of the man "who knows all about bees," and starts out to cure foul brood, even with Departmental instructions before his eyes?

I venture to say that only about one out of every ten average owners of bees (I don't mean bee-keepers in the advanced sense of the word) knows what F.B. is, and not one quarter of that 10 per cent. really understand what a serious disease it is, and how easily and quickly it spreads. Because they cannot see the foul brood germ, and kill it with a stick, they almost deny its existence! The moth they believe in because they can *see it!*

Its all very well for you Maitland people, you are under totally different conditions to us more countryfied bee-keepers.

However, I said all I could or cared to say when I wrote you some time ago, and I am still of the opinion that the N. Z. Act, or a modification of it on the same system of working, would have proved far ahead of the proposed Act. Mr. Whittell wrote me, saying that any objections raised now might spoil our chances of getting an Act at all, so I concluded to hold my tongue: but I've been thinking pretty hard ever since, I can assure you.

A clause ought to be inserted to compel *all owners of bees*, under severe penalty, to register, say on the 1st of January of each year, all the hives or boxes of bees they possess, and I certainly think that a tax on a sliding scale would be a just and useful thing, say 1s per hive up to 5 hives, 6d for every additional one up to 10, 3d for every additional one up to 20 or 30, and 1d or 2d each beyond that. No beekeeper worthy of the name could object to a tax of some kind.

The revenue from the 53,000 hives in N,S.W. (according to Mr. Coghlan), would, at the low estimate of 3d each all round, amount to over £600, which sum would go a long way towards paying for a good administration of the F. B. Act. Also, I think that more should be said in the lectures on bee culture, given in various parts of the country, of the seamy side of the pursuit. Dozens, aye hundreds, have rushed into apiculture on the strength of these lectures, when everything was painted *couleur de rose*. How many have succeeded? And how many are there able to pilot an apiary through adverse circumstances, bad seasons, or disease? What they know of reverses is from experience very dearly bought. The general impression is that bee-keepers lay on the broad of their backs and enjoy themselves. Only to-day a lady asked me what I charged for honey. My answer was, "4d per lb in 60lb tins." "Four-pence!" she exclaimed; "is it not rather much, *considering that it costs you nothing?*" I remember hearing a lecture on bees some months ago, in which an instance was given of a bee-keeper who owned some 50 hives of bees, and who got a return of 300lbs per hive, of honey worth 6d per lb. It was worth it, I daresay, but did he get it? Did he get the half of it even? Most likely not. This sort of thing misleads people. Everybody wants to keep bees and sell honey at 6d per lb, but somehow they cannot get it. I would jump at an offer of 3d per lb for all the honey I could produce for the next ten years—if F.B. does not wipe me out.—Yours sincerely,

DONALD G. GRANT.

IMPORTING OF QUEENS AND DISEASES.

W. ABRAM.

It was not my intention to say a word against the importation of queens from America, inasmuch as the few queens that arrive here alive make it a very costly affair indeed, as the importer has to bear the loss as well as the freight, and therefore the undertaking will cease sooner or later; the more so, as the few queens that reach here alive are of very little use hereafter, the hardship of the long journey being too much for them. The only pity is that the money goes out of

the colony, never to return. But that is not what I mean to refer to. What I wish to warn against is this: With such importations we run the risk of also importing all sorts of diseases. What guarantee have we that the new disease Professor Cook speaks about may not already have entered our land, or may so at any time? And once here, how then? Is the importer able to cure it, when the Americans cannot cure it? Or if the importer of bees were the only one likely to suffer, it would not be worth my while speaking about; but the disease will soon spread, and make others suffer as well, perhaps more, as the introducer. This is the view I take, and for this reason I warn against importation of bees from America, unless immediate steps are being taken to have all bees arriving from abroad guaranteed. I am still of the opinion that paralysis is a free gift to this country from America. It has done harm enough, and may do much more, but I have still to learn where the benefit lays by former importation of queens from America. Are you stylish and want the latest, to ruin our industry entirely? Pause, before you throw your money into a venture so dangerous to the fraternity; if not, steps must be taken for the protection of others, my motto being—"prevention is better than cure."

TRANSFERRING.

"Binni" writes—Your correspondent, Mr G. Colbourne, junr., in his interesting article on "Transferring" in your last issue, appears to overlook one great difficulty, viz., when the hive or box to be transferred happens to be larger or smaller than the hive to be transferred to. This caused me to modify the plan some years ago, by making a $\frac{7}{8}$ board somewhat larger than a gin case, and cutting a hole out of the centre 6 x 4, tacking over this hole a piece of excluding zinc 7 x 5. I put this board on top of a new hive body, zinc side down, and place the old boxes *on top*, after drumming out the queen and a few bees. The queen and bees are then run into the hive underneath in much the same way as he describes.

Mr. D. Grant, Muswellbrook, writes:—In reference to the method of transferring given in the last number of *A.B.B.* by Mr. Geo. Colbourne, I can endorse all he says about it. The same plan suggested itself to me last season, when I started to transfer my bees from $\frac{3}{4}$ L. hives into Root-Hoffman. I fixed up two or three in the good old cut and dry way, but the mutilation of brood, and the general daubiness of the job disgusted me, so I got a lot of hives and frames ready to transfer *a la Heddon*. While doing the first one, a strong colony which I hived in a 10-frame L hive, the thought struck me to put the small frames of brood in a similar body with rabbets run along the sides and a honey board between. I, however left no entrance to the lower hive, but moved the upper one back an inch or two, to give an entrance to it above the honey board. This I found to work splendidly, and transferred about 30 in that way. I have some more to treat this season and intend to follow the same plan. The advantages of the plan over Heddon's method are many. The hive is not weakened by the process, rather otherwise, there is not as great a risk of brood getting chilled, as the bees themselves will take care of the brood below, by going down to it if necessary. There is not as much danger of starting robbing, no risk of afterswarms, and no trouble in uniting the second drive with the first, as by the Heddon plan.

WESTERN AUSTRALIA.

Mr. John A. Ayre, Western Australia, writes:—I have shifted to Ginger on the Midland Railway, it is a very good place. Bees doing splendidly, got about 10 tons of honey last season, and I think I will have a better one this season. I intend getting close on 16 tons anyhow.

SOUTH AFRICA.

Mr. Fred. Taylor, South Africa, writes: I have been intending to write to you for some time past, not that I have much to say, being but a poor correspondent, but you always send me an extra copy of the *Bee Bulletin* and I thought I should tell you. I have passed the copy round trying to get a subscriber. My bees have had more or less brood all through the winter and are now in excellent condition and as we are getting nice rains, though somewhat light, I hope to do fairly well this coming season.

A man whom I met the other day, shortly down from Mashonaland, described a bee found up there, which, I would say is about the same as you name *Apis Trigona*. He says they are as small or smaller than the common house-fly, have no sting, but bite. They always build their nest in a hole in the ground. For entrance to their nest they build a small pipe about 8 to 12 inches in height only large enough to admit one bee at a time. This pipe is built of earth somewhat like those that ants make. The inside of the nest is plastered over with propolis, the brood combs are built one above the other and only the top sides are used for breeding. The honey is stored in cells about the size of a grape, all round the sides of nest. That's about the exact description of the *Apis Trigona* isn't it? [Yes, it's very like it, but our *Trigona* nests are in hollow trees, &c., and not in the ground.]

The other day a swarm of bees moved up High-street, Graham's Town, and on their passage made (why I don't know) great use of what I've seen called, their business ends. There were seen cabbies tearing down the bye streets, inspanned oxen becoming extra frisky, dresses and coattails disappearing more sharp into vorious stores and shops, doors slamming and general hullabaloo all round. The bees after clearing the streets gathered under the eaves of the Cathedral, thinking, no doubt, the Church was the proper place for the forces to gather after the fight and to put themselves into shape again before they took their final flight to the woods, which they did soon after. This reminds me to ask if you have ever known of anyone being stung to death by bees? At what age does the Blue Gum commence to flower?

Mr. T. Hackett, Mount Cook Apiary, writes:—Dear Sir,—Enclosed find P.O.O for 5/6, my subscription for the *Bee Bulletin* my second year. I must say it is a success and becomes more useful and interesting with each issue. I have 64 colonies, all Italians. We had a very bad yield of honey in this district last year, average about 25 lbs per colony. The mangrove came in five weeks ago in blossom, and the hives and supers are all full for the second time. I would like to say one word about paralysis, and its cause, and that is, I believe, to be the fault of the apiary. 1st the hives to be close to the ground in a low swampy place. 2nd and worse than all to have bad roofs that will let the rain in. I found the sulphur to cure each colony affected within three days.

SPECIAL WORK FOR NOVEMBER.

N.Z.

Owing to the extremely bad weather we had during September the bees throughout New Zealand have suffered very much since. Very many colonies which previously were in a very forward state, and with more than an ordinary supply of food, were brought to the verge of starvation, and numbers that were not so well off for food succumbed altogether—where of course they were not attended to. Swarming, which is usually in full swing North of Auckland early in Oct., was thrown back fully three weeks. There has been an agreeable change during the past ten days, which bids fair to last for some time, and unless we get another bad spell we shall be able to make up for lost time to a great extent. Those who followed the instructions given the last month or two have now their reward in live bees instead of dead ones.

PUTTING ON SURPLUS BOXES.

When the brood chamber is getting pretty full of bees, with plenty of young bees emerging and honey coming in freely, top boxes should be put on, taking care that the bees have not already made preparations for swarming. When working for extracted honey it will be found a good plan to place two of the side frames from the brood chamber containing honey only, and with the adhering bees, into the centre of the super, and the two empty combs or frames of foundation from the super into the centre of the brood chamber. This arrangement of the combs will start the bees working in the super at once, provided it has been put on at the right time. It is a little more difficult sometimes to get the bees to start in supers containing section boxes, and there is more need to give them some inducement. In this case we have found that a few partly worked sections placed in the centre frame of the super has had the desired effect. Should there be no partly worked sections on hand, a nice clean comb cut and placed in the section boxes will answer quite as well. For many reasons which have been frequently given, we prefer half-storey supers for comb honey, putting on one first, and when the bees are pretty well started in that placing the second one underneath, next to the brood chamber. By this system the latter is kept cool, and tends to prevent swarming, which is more likely to take place when working for comb honey than when working the larger supers and frames for extracted honey.

PREVENTING AFTER-SWARMS.

It may of course be an advantage, under certain circumstances, as for instance when a person is desirous of rapidly enlarging the apiary, to take every opportunity to increase the number of his colonies regardless of any surplus honey being stored. Mr. Langstroth however has laid down the axiom that, "a moderate increase of colonies in any one season, will in the long run prove the easiest, safest, and cheapest mode of managing bees." And that this is perfectly correct we are fully convinced. Under ordinary circumstances the number should never be more than doubled, and unless in a small apiary that would be too much. In any case, after the first swarm has issued from a hive, all further swarming from that colony should be prevented if possible, and more especially if surplus honey be the principal consideration. Shortly after the first swarm has issued, there is pretty certain to be one or more after swarms leave the hive unless steps are taken to prevent after-swarming. Every swarm will be smaller than that which preceded it, and in the end the parent colony is left very weak. As a general rule the first swarm issues on the day the first queen cell is capped over, which is about the eighth day from the egg being laid. On the sixteenth day the queen comes to maturity and emerges from her cell, and the next day she leads off an after-swarm. The exception to this is when, through bad weather, the first swarm has been kept back till about the time for the young queen to emerge, when the first and second swarms have issued on following days. However, in ordinary cases the whole of the queen cells excepting one, should be cut out of the parent hive five days after the first swarm comes off. Should the cells be cut out earlier than the fourth or fifth day, the bees are likely to build other cells over the young larvæ, and thus frustrate the object in view. As there is now only one queen to come to maturity she must remain at the head of the parent colony, and therefore cannot lead off an after-swarm. This will generally prevent further swarming, but whatever precautions may be taken, and however careful the apiarist may be to prevent them, swarms occasionally will come off.

RETURNING SWARMS.

When honey, and not increase, is the main object, it is a question of much importance to the beekeeper to adopt measures to prevent swarming, but as already stated this cannot be always accomplished. However, by returning the swarms we may with a little trouble

gain the same end as though swarming had not taken place. Various methods have been adopted for returning swarms, but the following one has been successfully practised in our own apiary: Hive the swarm in the usual manner, and after cutting out all queen cells from the parent stock, place the hive containing the swarm as a super on the hive it came from. In the course of a few days the hive should be examined, and if there are any eggs and larvæ in the super, the combs containing them should be shifted to the lower body of the hive, taking care to provide plenty of room. If there should be a very large quantity of brood in the hive some of it might be given to other and weaker colonies. When the method is carefully carried out it seldom fails to have the desired effect.

MISCELLANEOUS HINTS.

Buckwheat is one of the most useful crops that can be grown, and when intended to come in for Autumn forage may be sown this month, leaving the sowing of the main crop until next month. Buckwheat flour makes splendid cakes. It is one of the best foods for poultry, and the blossoms yield large quantities of nectar. And though it grows best of course on good soil, it will give a good crop on poor clay soil. Every rural settler should cultivate a patch of this most useful grain. I think more especially when he combines beekeeping with his other pursuits. The seed costs very little, and a few pounds drilled in will give a very large return.

CLIPPING QUEENS.

Whether queens wings should be clipped or not, is a subject that has called forth a lot of argument among beekeepers for years past, and I think that a lot of beekeepers vote against it without even giving it a trial. Some beekeepers, among whom, if I am not mistaken, is that master of the art, Doolittle, clip all the wings clean off the body. Now, if anyone has seen one of these queens, so clipped, he will not be at all surprised if the bees evince an objection to accepting her, or a wish to supersede her as quickly as possible. Her beauty is thoroughly spoiled and she is a most deplorable looking object. I only clip about ⅔ of one large wing and it is not noticeable at all, and I can confidently assert that I never had a queen so clipped, superseded while she was a prolific egg layer. The strongest argument I have heard, or, rather the one put forth most frequently, is that the queens are likely to be lost in the grass or on the ground, if no one is by to watch for them. This, I think, is the strongest argument they could put forth in favour of clippping, for, if the queen, under the circumstances, was not clipped, the whole swarm instead of the queen would be lost. Take four swarms issueing at once with flying queens and two or more bunching, and see what a bother you have. Take the same thing with clipped queens and it is simplicity itself. If the bees bunch and settle you can divide them among the hives. If you do not divide them, they will come back of their own accord, probably more than a due share will try and make one of the hives, but if they do you can use your judgement, as to what amount should go in, and then cover the hive with a bee-sheet, when they will transfer their attentions to one of the other hives. There is one thing, though, about working a farm with clipped queens, it *must be done thoroughly*, every queen must be clipped, and you must allow no after swarms to issue. If you do this, and give the matter a trial, I am sure that you would never go back to the old flying queen system again.

MAJOR SHALLARD,
Glenbrook.

STRAY NOTES.

J. WILSON-GREEN, Logan River, Q.

Swarming started with me on 4th September, and continued every day nearly. So far the cry "Bees are swarming" this season is changed for "Here is another," and still they tumble out. That we are having an early and good season this time is evident; even those with

only one or two hives have had swarms that generally have none by being robbed too often, but the bees are ahead this time. I generally expect some to swarm about Michaelmas Day, very rarely before. What has bothered me is so many queens, raised early in 1892, that I thought were clipped have superseded them, and had queens with wings, consequently I lost several swarms this season. They seem determined to clear straight out in spite of a frame of unsealed brood, and very rarely settle without a lot of trouble. Spraying them with water only turns them or drives them up higher, and won't they sting when wet? There is nothing after all to beat a good noise to bring them down. A week or so ago I had an imported queen that laid in cell cups preparing to swarm, and I was watching those cells to take for nuclei hives, when we had a few showery days. Thinking they might have destroyed Q. cells during the wet I opened the hive, and found what I first took to be a worker in a cell destroying it, when to my great surprise I found my imported queen in the cell smothered in the royal jelly, quite dead. As the cell was built down to bottom bar with a slight curve she got stuck. Now had I not opened the hive I should have wondered what had become of her. She was very large, and had twelve frames full of brood. Although I received her from Root in 1891 this was the first season I let her do her best in a large hive. *Gleanings* of September 1st gives pretty positive evidence that bees do sometimes transport eggs, etc. I am also glad to see that the editor is in favour of a tall hive rather than a wide, flat one. I have always held that they do better, being more like a hole in a tree.

At the Show and Fine Art Exhibition held in the School of Arts, Casino, on October 12th, the following were the honey awards :—Honey, pure, 4 entries; J. Walton. Collection of bees, hive and honeycomb, 1 entry; W. Dockrill h.c.

Mr. A. Moore, Scone, writes :—There is a fair honey flow just now from bastard box and gum. But the distance is too great for the town bees to store much honey. However my bees are supplying the household with an excellent article. It may have the "Eucaliptus flavour," but as we are in happy ignorance of any other, we are content.

A subscriber at Bega asks : Could you kindly answer me the following questions through the pages of your valuable journal—(1) Could you tell me where I could get a selection in a good bee-keeping locality, or can you say what it is like between the Lismore and Tweed for bees. (2) What sort of a bee for business is the Carni Italian bee crossed again with the English bee.

[From what we have heard of the Lismore-Tweed country, we should take it to be a very good one for bees. We have not been there. The Carni Italian bee crossed with the English, ought to be a good business one. We have not tried it.]

Mr. Elliot J. Rien, Hawkesbury Agricultural College, writes October, 6th :—I am glad to see the A.B.B. is making progress and trust it will continue to do so and prosper. Re Mr. Goard, I am inclined to think he made some other mistake than giving them old brood, unless his bees are deficient in the top story, that is if, as he says it has, often occured, for in the days of my noviciate and even later before I adopted Doolittle's plan, I have given my bees a frame out of another hive containing brood and eggs in all their stages, and though I have hatched numbers of queens this way, yet, in no instance (unless the queen has been deformed or drones not flying) have I had such a queen as Mr. G. is afflicted with. Thus experiences differ. Re Mr. D. G. Grant, and *Apis Trigona*, I had two colonies, which I transferred to glass hives, in both the brood comb was built in tiers, in the form of a spiral, being the shape of an egg in one end, a sphere in the other, the honey and pollen cells surrounding it (the brood nest). The queen, in proportion, has the same appearance as an Italian queen. I have not seen the drones. The amount of honey gathered was quite insignificant. Of course last season was a bad one for *Apis Mellifica*, so I suppose *Apis Trigona* suffered as well.

Mr. J. G. Schumack, Binnaway, writes September 13th, 1894:—Bees are doing well here, and, by the look of the bush we should have a splendid season. Yellow box, red gum and bastard box. are covered with buds, and a few of them are already in bloom. I have some splendid queens here I reared from a queen I bought. They are very prolific, having their hives full of brood, and their progeny are splendid honey gatherers. I wintered them all together and covered them with straw, and they came through winter well, which was a very severe one here. I intend to do my best to make honey sell here this year. I am going to have several show cases made, and have them placed in the principal stores in all the towns around. I think if every beekeeper would do this there would be twice as much honey sold. If beekeepers keep their honey at home they can't expect to sell it. I think this is a far better way than advertising it, as people wanting honey can see what they are buying. Of course beekeepers want to place only good honey on the market, at a fair price that would suit both parties, say 4d lb. I have not sold any here under that yet and don't intend to. There are two other gentlemen here making a start at beekeeping, I wish them luck, as they deserve all that is good. I expect to have some young swarms at the latter end of the month or early in next month. Some of the bush bees are swarming already. I am trying yeran and motheran bung wood for hives and without a doubt it is the prettiest wood I ever saw. Several gentlemen here that saw it say they never saw the like of it, The only fault I have is the weight, it is very heavy, but very strong, it would make splendid furniture.

Messrs Bloxham Brothers, Sutherland, write:—The season in our district this year is very late, we have not commenced extracting, although by the middle of September last year, we were in full swing. The reason of this, as far as we an say, is on account of the very dry winter and then getting a lot of rain in the early spring. However, the wild flowers are showing up prominently now and our bees are mostly in good condition, and should very soon start and store surplus honey. We depend largely on the wild flowers and scrub, of which we have abundance, and no likelihood of it being destroyed for many years to come. About the beginning of August two strong colonies developed unmistakeable signs of paralysis, and we treated them with sulphur as recommended by many. The paralysis has been cured, but the question now arises with us, is not the cure worse than the disease. The mode of treating was to sprinkle each frame of bees and all, just as lifted from the hive; this was repeated in about three days. Shortly after this there was no sign of paralysis, but the bees in these hives seemed to have struck work and hung about in a very listless fashion, which induced us to open them, and on examining closely, found all brood had been destroyed. The queen continued laying, but the eggs instead of hatching, shrivelled up. Other eggs were deposited in the same cells with a similar result. On some frames the bees had cut the comb almost down to the base. We have now given them an entirely new set of combs, but from outside appearances they are "still on strike," hanging about in a languid manner. If they do not improve in a few days we intend either to replace the queen or give a couple of frames of brood from another colony.— [To our thinking you sprayed too strongly, the sulpher going right to the bottom of cells, and naturally drying up all larvæ. We will be glad to hear further in the matter.]

Pressure of space prevents us inserting in this issue article by Mr T. H. Bradley on "The English Market and Schoolmasters."

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