The Australian bee bulletin. Vol. 3, no. 33 February 24, 1895

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

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THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

VOL. 3. No. 33. FEBRUARY 24, 1895. PER COPY, 6d

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E. TIPPER.

Hunter River Bee-Keepers' Association.

MONTHLY MEETINGS.

TUESDAY, MARCH 12TH.

Subject—Size, shape and make of hives. (*Contd.*)

C. MANSFIELD, Hon. Sec.

The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.,- FEB. 24, 1895.

IN another column Mr. Abram draws attention to the business to be transacted at the forthcoming Convention to take place at Bathurst. He deserves every commendation for setting the ball rolling. There were two evenings we spent since last Convention, that we would like to spend the like again, the one was Mrs. May's Demonstration of Cookery with Honey. Could that lady be induced to give another such an evening not only the beekeepers of N. S. Wales, but the people of Bathurst, would have a most enjoyable and profitable evening. The other evening was with Mr. Mansfield's magic lantern. We would suggest to the N.B.A. the advisibility of considering these matters Will some of our readers give us other suggestions? We have been also informed that the Delegates to the late Agricultural Conference at Richmond, were allowed free passes on the N.S.W. railways. At the Mildura conference of fruit-growers, the same privilege was also accorded by the railways of the other colonies. Why should not beekeepers have like privilege? We trust the Committee of the National B.K.A. will take these matters into consideration.

An article by Mr Humble, on "The Growth of Heddonism," in our next.

A Bee-keepers Convention was held at Mrs. Atchley's, Beeville, in December, at which some 300 delegates were present.

Mrs Atchley writes us she purposes, at no distant date, to visit Australia. We feel assured bee-keepers will do their best to make her visit most enjoyable.

Mr H. L. Jones, of Goodna, Queensland, [illegible] since 1894, kept a diary of apiarian [illegible], such as the time the different trees blossom, &c. He has promised us a resume of it. We feel assured it will be read with very great interest.

We are sorry to learn that Mr Albert Gale has been detained several weeks in Brisbane, Q., in attendance on a son suffering from a bad attack of typhoid fever. We sincerely trust ere this the latter is recovering, and Mr Gale's anxiety abated.

Our picture frames have received another addition this month, in the shape of a very nice cabinet photo of Mr Roberts' apiary at Muswellbrook. There are some 30 hives, and scattered among the hives are Mr Roberts, Mrs Roberts, her sister, and Mrs Roberts' four little girls The background includes workshop, and honey room with bee escape on top.

CONVENTION MATTERS.

W. ABRAM.

Having to keep indoors on account of the continuous wet weather, of which by the way we have more than enough, I want to make myself useful in some other way, and thus here I am again. I am afraid almost to trouble you too much, therefore apologise for trespassing so frequently upon your generosity, the more so as this time I select a theme somewhat outside my province, and in fact I do not exactly know how and where to begin, and how or where to end. But as we are now nearer the time of the next convention than before, I may be excused in not letting another six months pass by uninterrupted, else if everyone does, the thing may go "bung."

In the first place remember that Bathurst is the selected spot for our next convention. The committee who undertook the arrangements of affairs hitherto usually meets in Sydney, if they meet, and while the convention was held in Sydney everything was easily arranged,

the more so as we had the very liberal offer from the Dep. of Instruct[illegible] regard to place of meeting. Sy[illegible]fers other facilities also. This year matters stand somewhat different, and an early start might be advisable. A sub. com. of a couple of beekeepers in Bathurst might be appointed to arrange as regards place, accommodation of visitors, etc. Then invitations for subjects to be discussed might be issued forthwith, so that everything could be under way in good time. Again, the Union's annual meeting comes in between I suppose, and the alteration of rules, postponed till then from last year, comes again under consideration, but I venture to think that by then you will have decided for the best suited set and act accordingly. I have not materially altered my views to what I expressed in what I submitted last year. If anything better can be brought forward, let us have it.

Regarding the convention I would further suggest that the Mayor of Bathurst or some such influential personage of the town be invited to accept the chairmanship. We would honour the town thereby for harbouring us, and no doubt reap the benefit. But as it may not suit such a gentleman to be with us from beginning to end, and to make the thing more important, I would further suggest that a vice-chairman be appointed at the start of the convention or previously, he to be a known beekeeper. This proceeding would make the office as chairman easy and acceptable even to a gentleman who has little knowledge on beekeeping, at the same time our interests are guarded. Gradually we may see other improvements possible and utilisethem, in order to obtain a high constitutional standard. In the evenings friendly conversational discussions, accompanied by a cup of tea or something else, might be worth trying and prove a beneficial change; it seems quite enough to talk business all day for perhaps three days, though the days are not very long then.

SOUTH AFRICA.

We take the following from *The Port Elizabeth Telegraph and Eastern Province Standard*, of Thursday, January 3rd:—

It appears somewhat singular that while the prosecution of new industries is so desirable in this country, that of apiculture appears to excite little or no interest. Beekeeping is in other countries considered an useful as well as profitable pursuit, and as it is so remunerative in Australia, it ought to be equally so in South Africa—the home of the honey bee. In our vast forests there are inexhaustible supplies of honey-bearing flowers, and honey in many countries supplies the use of sugar in the manufacturing of various confections. The correspondent who has obligingly furnished us with the latest issues of the *Australian Bee Bulletin*, strongly advises farmers and others no longer to neglect so important an industry as beekeeping. There is always a market for honey, and the few samples we see on the market, that readily bring a shilling a pound might soon be superseded by larger quantities of the superior article at a considerably advanced price. The hives used in this Colony are generally of the most primitive home-made kind, being simply a box or cask, collecting the honey from which inevitably means the wholesale destruction of young bees. By imported hives, similar to those used with such success and profit in Australia, the bees are not destroyed, but improved, and increase rapidly, causing a demand for more hives. The farmers are allowing thousands of pounds to slip through their fingers by neglecting this industry. One Australian farmer cleared £1,000 in two years by his honey. He had in all 21½ tons or 48,000 lbs. In Sydney the very best two-story hives ore sold at 8s 3d each. Besides the honey, the bee farmer makes a good thing by selling mead—a drink that is largely consumed on account of its healthy properties. A correspondent who draws attention to the loss sustained by neglect of this industry, has himself this season taken 120 lbs of honey from a single hive. Few of us who have rambled through such forests as those of Oliphant's Hoek, Kroomie, the dense bush among the Waterkloof Ranges, have failed to be struck with the preponderance of bees' nests in big yellowwood trees. An industry is almost at our farmers' doors but is neglected. Yet naturalists concur in stating that South Africa is the real home of the honey bee. We, therefore, put forward the above few remarks for the consideration of farmers who have, possibly through want of information, allowed a most remunerative industry to escape a fair trial and almost certain success.

SPECIAL SUBJECT

AUTUMN RE-QUEENING.

A. F. BURBANK, Queensland.

The best time for autumn re-queening for Southern Queensland is during March. No queen should be introduced later than the middle of April. In any district the new queens should be in their hives five weeks before heavy brooding ceases. This will give queens time to have plenty of young bees in the hive before cold weather comes on.

J. D. G. CADDEN.

I prefer re-queening in autumn, for the young queen gets to laying well and what bees you go into winter with are young and strong, get on well, and begin to build up earlier in spring, and so a strong colony to gather the early fruit bloom, &c., putting aside the advantage of having drones to mate queens. Yes, decidedly autumn is the better time for you have a good chance of mating to select drones and no waiting for queen rearing, because of lack of drones in spring.

J. WILSON GREEN.

I am beginning to think it is a bad plan to re-queen in the autumn, at least in this part, after the rainy season starts, as it is too risky to change the queens, and more so to start queen rearing, as so much rain prevents the bees from getting fresh stores, so many hives kill off their drones, and the bees seem disheartened and do not build as good cells as in the height of the season, or as many, whilst every spell of fine weather robbers are hunting around the hives as soon as opened. In future I intend to do all re-queening during the swarming season, as with plenty of nuclei and tested queens ready it is very little trouble, and saves time to the bees, and then is the time to get good vigorous queens and plenty of royal jelly, and colonies that will build the best of cells.

BINNI.

Circumstances *may* occur when it is desireable to re-queen a hive in Autumn. For instance, should an apiarist discover a faulty queen caused by age or accident and at the same time desire to keep the number of his hives intact, it would be wise to replace her with one full of vigour and of the race his experience has proved best for his locality. I know there has been a good deal said and written against autumn bred queens, but a couple of years experimenting on this point has failed to prove to me that there is anything in the contention. As a matter of fact, the reverse is the result with me and I notice such is the experience of some in America by late files of their journals. The more I study the breeding of queens the more I am satisfied *it is carefullnes in method* that counts and not the season at all, and I contend that a *carelessly* bred queen will give poor satisfaction and poor results, whether bred in Spring, Summer or Autumn. However, apart from the above, I fail to see utility in requeening hives in Autumn just for the love of it. It would entail unjustifiable expense. Better in my opinion to "double up" the hive of a poor queen with a prolific colony than to incur the expense of another queen, who might through lack of bees "peg out" during the winter. Locality is a great factor in determining the best course to pursue on this question, coupled with the common sense of the bee-keeper.

QUESTIONS.

A. F. BURBANK.

31 The queen should be allowed to breed as much as she likes. Should you desire to have the queen kept in the bottom storey, see that the workers don't work her out with honey; when the bees start this game, remove the full frames into the super, and put some empty combs (from which the honey has been extracted) into the middle of the brood nest, one or two will be sufficient at a time. This should be done often, as the changing of the combs must be healthy for the brood. I would never advise any one to use queen excluder, because it increases the swarming mania.

The above is intended for the ten frame Langstroth hive and will keep any ordinary queen out of the super. If you happen to have a queen that wants more than nine L. frames for brood let her have them, and put on an extra super.

A. F. BURBANK.

32. I have had this happen five or six time this season and in all cases the swarms were weak, and there were robbers about. These wretches seem to make the bees nervous and they balled their queen to protect them; in some cases the queens were balled too tight and killed Sometimes when queens go out for their flight they get back to the wrong hives and are killed at once, at other times balled for a while first.

33. Mr. William S. Pleffer, Armidale, writes —I should like to know the opinions and experiences of bee-keepers about bees finding nests in the bush. Do they send out single bees to spy out the land, or does the whole swarm search for a nest. I believe they employ both methods. I have seen, and so has a friend of mine, the whole swarm looking for a nest, going from tree to tree. I have also often seen a single bee making a close inspection of a tree from bottom to top, flying with its head about half an inch from the tree. Once whilst a friend of mine was camped in the bush he saw a swarm on a sapling for five days; the fifth

day on coming into camp at sundown he was surprised to see a commotion among the bees. In a few seconds they were in the air, and flew straight into a tree about a hundred yards away. That looks as if they knew where they were going, and the place had previously been inspected by some of them.

34. Does the common Australian Box Tree come into blossom every year or only once in three years ; S. Richardson.

J. D. G. CADDEN.

33.—Is answered I think and I believe both methods are adopted.

34.—Around me the box trees did not blossom last season, and I am safe in saying that once in three years is nearer to it, or perhaps a heavier bloom in that way.

R. A. TAYLOR.

34.—In my opinion the common Australian box does blossom only once in three years, as it is coming in blossom this season

33.—I believe that bees always find a nest before they go into it, I had a swarm last year leave my yard and I followed them to the bush and they went straight to a tree and into it.

WILLIAM S. PLEFFER.

34.—The yellow box tree usually comes into bloom in November, December, and January. The favourableness of the season or otherwise regulates its blossoming. Blossom buds form on new wood and as long as the seasons are favourable to the growth of new wood it will put forth blossoms, until checked by drought. It then takes several years of rest, more or less prolonged according to the conditions of the weather. Trees that have bloomed this season are now covered with green leaves and young blossom buds.

J. S. DICK.

33.—Bees most undoubtedly send out scouts to find suitable nests.

34.—The common box tree does not blossom every year. It is the same as the gum tree, it will bear an abundance of bloom, then next season comparatively none, season after more, and probably the third an abundance again. My experience of the gum tree of Glen Innes was a great crop of bloom only one in six years. The bees rolled in honey in tons. The tea-tree of the coast is the same, giving extensive crops of bloom in something of the same period, and from my experience of the box it follows in about the same time.

E. E. BUTTSWORTH.

34—The common Australian box tree does not bloom yearly, and I am not sure that it blooms every three years. The last box trees that I saw in bloom about here flowered in February 1892, and they do not appear to be coming in bloom this year.

33.—I believe it is a usual thing for a swarm of bees to send out some of their number to look for a home. I have frequently seen several bees together examining trees, as if they were searching for a suitable place to live in. I think it probblea, that a swarm led by a virgin queen may search for a nest, for they seldom alight near their own home.

J. WILSON GREEN.

33—I believe the usual method is to send out a few bees, about a dozen, and when they find a tree more will join them if needed to prepare the cavity for their nest. When the whole swarm go from tree to tree is, I believe, when the tree has been cut or blown down, or they may be a starved out one, or making from a poor locality to a better, Still I think they usually send out from 12 to 20. If you remove a swarm hanging on a bush, and no bees flying, you will usually find about that number later on or perhaps next day.

34. With me it certainly blooms every year, but I believe yields little except about the third year, then it yields well and about the best honey in the bush.

SCHUMACH BROS.

33. My opinion bees send out scouts to choose a tree for a nest and when they find one to suit return to the swarm, and then they all remove to it. I have seen, hundreds of times, bees flying up and down trees and looking in every spout as they came to and inspecting it. On one occasion about a dozen bees flying up and down a tree, and looking in every spout they came to, there was one they paid great attention to and I made up my mind to visit the place again next day and have a look at it, and sure enough on arriving there they were working away. On several other occasions I have seen and heard of the same thing. So I am sure that scouts are sent out to find a suitable tree.

34. Mr Richardson did not mention what kind of box tree, white or yellow, but I presume he meant the former, which blooms here every year. But not the whole of them. They bloom in the months of April and keep thus until the latter end of winter. Yellow box blooms here every year in spring.

BINNI.

33. The opinion I have always held on this question is that a hive intent on swarming has, about the time queen cells were expected to emerge, sent out *several* field bees to find out a suitable home for suitable habitation. The first scout to bring back intelligence causes the swarm to rush out pell-mell. If while coming out other scouts return, they join in the stampede and clamour for a discussion, on the merits of their information, hence the clustering of the swarm in the vicinity of the old hive. Having accomplished this, several bees may be observed to leave the point of the cluster and dart away, seeming to be delegated to investigate the whole matter. On the return of these, away goes the swarm to the spot finally selected. Should only one scout return within a certain time the swarm decamps to the spot selected by this one and the other scouts returning later on, finding the swarm gone, remain with the parent hive. I admit the "very-like-a-whale" aspect of this theory, but I cannot account for this very interting act of bees on any more reasonable ground.

[Several valuable replies came when forms on press, but will go in our next.]

H.R.B.K.A

The usual monthly meeting of the above took place at the Technological Rooms, West Maitland on Tuesday, Feb. 12th. Mr M. Scobie was in the chair, and there were present Mr C. Mansfield, Secretary; Messers. Harden, Noad, W. S. Pender, R. L. Pender, G. Pender, J. F.Munday, E. Tipper, and Mr Halloran of Wagga Wagga (on a visit to the town.)

Mr G. T. Pender placed on the table a Higginsville cover. It consisted of five pieces, the main top consisting of two, thicker on one edge than the other with a steady taper. The two thick edges are placed together, and a piece about 2 inches wide and length of hive acts as a ridge cap. Two pieces, one at each end, in front and back of hive, complete a cover that it is claimed does not warp, and easily throws rain off.

Correspondence were read and several accounts passed.

The members gave accounts of the state of the honey gathering in their respective districts, which were by no means encouraging, the wet weather and the floods having quite stopped the flow.

Mr Halloran said through foul brood, which he had conquered, he had now but nine swarms from which he had taken about 600 pounds of honey of very good quality, principally white and yellow box, river gum, and pepper trees. White clover would not grow there, but there were plenty of small bush flowers.

Mr Mansfield gave several experiences he had lately come across of two queens in one hive. In one case he was led to believe there must be another queen in the hive as eggs were being laid very regularly while previously another queen had laid them otherwise. He searched and found the two.

Mr Tipper reported that he had received a communication from Mrs Atchley in which she expressed her intention to visit Australia.

Mr W. S. Pender read his promised paper on "Size and shape of hives and frames" which will be found elsewhere. It was resolved discussion on the paper be left over till next meeting

On the motion of Mr R. L. Pender a vote of thanks was accorded to Mr Halloran for his visit. It was carried with acclamation and duly responded to by the visitor.

MUSWELLBROOK BEEKEEPERS' ASSOCIATION.

From the *Muswellbrook Register.*

The usual monthly meeting of the Beekeepers' Association was held in the School of Arts on Saturday night, the 9th instant, when the attendance of members was only moderate. The chief business of the evening, was the reading of a paper on "Bee-robbers," by Mr. Clarke, which was followed by a discussion. Mr. Clarke's paper was as follows:

One of the pests of the apiary is the "Robber Bee," and every beekeeper should know how to prevent robbing, be able to recognise robbers, and know how to deal with them, when they put in an appearance.

It is seldom that we will be troubled by this nuisance while there is a possibility of collecting honey or pollen in the field, but it is after the honey harvest, when the worker has no honest employment, that they begin to turn their attention to the other colonies with a view to extracting the honey therefrom, and if they find one that has neglected to "mount guard," or who are not strong enough to defend themselves, you may depend that they will commence to remove the stores to their own hive, even if they have to fight every inch of the way. They will, if possible, overcome the defenders of the hive, leaving them dead or disabled in their box, and carry off all their hard earnings. The experienced beekeeper will have no difficulty in knowing when some of his weaker colonies are being set on by the robber. The first sign will be a number of bees in a great state of excitement in front of a certain box. On going to enquire the reason he may discover by bitter experience that his bees are unusually angry and will come at him as soon as he approaches them, stinging most recklessly. After getting his veil on and examining closely he will discover that bees are fighting their way into the box and out again, evidently heavily laden, and taking to the wing

with great difficulty, perhaps climbing up the side of the box so as to get a start from a more elevated position than the alighting board. He will also see bees examining the joints of the box, the bottom board and the cover, endeavouring to get in by a back door or window as it were, those alighting on the board at the entrance meeting with great opposition from the inhabitants of the hive, who will defend their stores to the last, but they must be overpowered, as bees will flock from all parts to take a hand in the work of destruction once it is fairly commenced. To stop the business it it well to contract the entrance so that the defenders of the position will not be so exposed to attack. If they cannot then hold their own, it will be necessary to block up up the entrance altogether. If this is done on a hot day, it will be well to give the bees in the box plenty of fresh air, for there is a danger of them beingsuffocated. This can be done by putting on another story and covering with wire cloth. Open the box again in the evening should robbing start again next day, close again and keep closed for a day or two. Should this not have the desired effect, some recommend that the assailed box should be moved, and places changed with one of the best fighting colonies in the apiary. Another very good plan is to cover the box with a bee tent (if you should be so fortunate as to have one) until things become quiet. Or it is recommended that a piece of cloth laid across the entrance, sprinkled with water out of a watering can and over the bees about, if repeated twice or three times, appears to frighten the robbers. Or place a handful of straw in front of the entrance, so that the bees will have to work their way in through it. The inhabitants of the box will find their way through, in or out, but the robbers do not like it, and will take themselves off. These are some of the methods recommended by American experts to stop this evil. Local beekeepers advice that the division board plan should be tried, and declare it to be an infallible cure. That is, take a piece of board, from $\frac{1}{4}$ to $\frac{3}{8}$ of an inch in thickness, and fasten it to a frame top bar, so that it can be put into a box like an ordinary frame, but the board must fit the box. touching both ends, bottom and top boards. Cut cut a small hole in one of the lower corners, then pass all frames to one side of the box, leaving a space of say two inches at the other side. Take a frame out if necessary, then place division board in the box, with the small hole to the back Then proceed to close that part of the entrance in front of frames, so that the bees must enter on the outside of division board, and pass down to the small hole aforesaid and through it into the box. Robbers will not attempt to break into a colony fortified in this way. It was a wise man that said "Prevention is better than cure." If so, the prudent beekeeper will manage his apiary so as to have but little trouble from this pest.

If in a large way, with a great many colonies at work, it would be well to go in for a bee tent, to be always used when working among the bees when there is danger about. Be careful to leave no honey or combs about, that can be got at by idle bees.

See that all colonies are strong with good laying queens, in good boxes; no bad joints, or ill-fitting covers, and be sure to have a good Italian strain of blood through the apiary, as no bees will defend their homes and property better than the Italian Although bees will fight for their rights, it occasionally happens that they will allow the robbers to enter their box, and carry off their stores as fast as they are gathered, but this is generally owing to them being what is termed "hopelessly queenless," or with an unfertile queen. The remedy in this case is to give them a frame or two or brood, and a good laying queen, and the bees themselves will soon put a stop to it.

Mr Ellerton congratulated Mr Clarke on his paper, and he thought Mr Clarke should have suggested a double wire cloth as a safeguard, or the bees would pass the honey out through the single cloth. He had not heard of the division board principle before, and he thought it ought to be a good one. He was not in favour of shifting the hives that were being robbed as the bees were likely to attack the hives on either side when they found the one they had chosen for spoils was gone. He believed in wet straw being piled up against the hive entrances. He had a case of robbing very recently through the heat breaking the combs down and causing the honey to run. There were not many bees killed in that case. He would recommend keeping the hives strong and not letting them become queenless, and then there would be little danger of them being robbed.

Mr Grant said he could also compliment Mr Clarke on his paper, and could confirm Mr Ellerton's statement about the bees passing the honey through the single wire cloth. He said the wire cloth on his honey room was only single, and he had seen the bees get inside and pass the honey to the bees outside. He thought a double wire cloth cover with an empty half-story was the best means to adopt. There was one thing Mr. Clark forgot, and that was the sheet idea, which was to throw a sheet over the

hive and cover it well, and let the bees fight it out. He had great experience with "robbing" during the flood in '93, when in putting the bees back he did not put them all on their own stands, and he lost 12 colonies through robbing. He also hived a large swarm that came to his apiary, giving them a frame of brood and honey. Shortly after, he noticed something wrong, and in about fifteen minutes they were robbed out. He could recommend the use of a bee-tent, as he placed great value on it, and would not be without one if it cost pounds, and he thought everyone that owned a dozen colonies should have one.

Mr Roberts said he could endorse what the other speakers said about Mr Clark's paper. He had not had much experience in "robbing," and he did not want to have, but it was well to know what to to do when undergoing such an experience. There was one idea in Mr Clarke's paper which was new to him, viz., that of the divison board, and he thought the plan a good one, as the bees had to fight their way in through the tunnel, and back out again. He thought it was only an omission of Mr Clarke's not to say that the wire cloth should be double.

Mr Paul moved a vote of thanks to Mr Clarke for his very able paper. He was pleased to say he had very little experience in "robbing" and he thought there were some good suggestions in Mr Clarke's paper.

Mr Clarke in reply thanked the members for the vote of thanks, and also for asking him to write the paper as it caused him to hunt up information, and would benefit himself as well as the members. He said it was purely an error of his, not stating the wire cloth should be double, as he perfectly well knew it should be.

Mr Paul moved that the business for next meeting be re show, and that every member come with suggestions for the coming exhibition.

Seconded by Mr Ellerton and carried.

Mr Ellerton suggested that the association procure some bee-journals for the use of the members. He would like to hear what other members thought of [illegible]er.

Mr Grant thought the idea a good one, as the works would be very useful to the members, if bound.

Mr Paul thought it better to obtain some good bee-books, for the use of members, as they would be much more serviceable than the journals. After further discussion the matter was allowed to stand over till next meeting.

LACHLAN B·K·A.

W. NIVEN.

The Lachlan B. K. Association held their monthly meeting in the School of Arts, Eugowra, on Feb 6th.

Mr N. E. Osberg, president, occupied the chair. In opening the meeting he congratulated the members on the very good start that had been made. He said it showed the interest taken in the Association to see members coming 18 & 24 miles to attend the meeting.

The Chairman called upon the Sec. to read the rules for the Association, which were drawn up by the Committee. After some amendments they were adopted on the motion of H. Wright seconded by L. Kirby. The Sec. was intrusted to get 100 copies of the rules printed. It was proposed by J. Smith, seconded by J. Ashcroft, that the Commissioners for Railways be asked to carry empty tins by rail in beekeepers' return empty honey cases free of charge. It was also proposed by H. Wright seconded by P. Cabot, that as it is necessary to place honey on the market at a very low rate, the Commissioners for Railways be asked to reduce the present charge on the carriage on ½ ton and less quantities of honey. The Sec. was instructed to ask the members of the various B. K. A's to co-operate with us in obtaining what is asked in the propositions, and to have the propositions brought before the Commissioners of Railways through the National B. Association. Mr Miller read an interesting paper on flowers in relation to bees, showing how through ring-barking and opening up the country the

native flora was destroyed, and [illegible] ro-duce honey, in the 1st place, it [illegible] ry to have flowers for the bees to gather honey from. He mentioned several plants he considers adapted to the district for yielding honey also of commercial value otherwise. Transferring, foul brood, and loss of queens were discussed by Messrs Rushton, Marsh, Smith, Cabot, Wright, and Niven.

Mr Wright promised a paper on queen rearing for next meeting. The meeting then closed.

HASTINGS RIVER BEE-KEEPERS ASSOCIATION.

We are indebted to Mr Selkirk, Wauchope, Hastings River, for the following report:—The usual monthly meeting of the above was held at Wauchope on Thursday night, 6th February, and notwithstanding the very unpropitious state of the weather there was a fair attendance.

The President (Rev. H S Buntine) occupied the chair.

A paper on hive-making was read by one of the members and after this many interesting points were touched upon. Two members were elected.

The paper for next meeting is to be on the subject of transferring colonies.

It was acertained that the colonies owned by members present number 55, and of these fully one half are presided over by Italian queens.

Members were very unanimous in their expressions of disapproval of the recent long contiuued rainy weather, which has stopped the honey flow, and in case of weak colonies it is feared that much more of the same unfavourable conditions will lead to loss. It is anticipated that the excessive rainfall will be the trouble of these parts, the January fall of 25 inches was considerably over the average.

[Mr Selkirk asks us to give our opinion of non-swarmingdevices The principle of putting all the working force of two colonies into one hive, seems to be much in favour with those who use the Wells hive in England, that hive being on that principle. The Langdon non-swarmer and Fray James non-swarmer were much advertised and talked about last summer. We have not tried them ourselves and so cannot speak of them. Neither have we seen them in different apiaries we have visited. We notice also the American bee journals, or our own supply dealers are not advertising them now What would their silence mean ?

GOSFORD AGRICULTURAL SHOW.

The following are the awards given at the above, held on Feb. 15th and 16th:

Honey in comb, 6lb. sections, Macansh Bros (A. Schroeder, manager.)

Honey in comb, one large frame, Macansh Bros. (A. Schroeder.)

Bar frame hive in working order, Macansh Bros. (A. Schroeder) highly commended.

Honey in comb, one small frame, 1, R. L. Pender, 2, Macansh Bros. (A. Shroeder.)

Clear Honey, half dozen pots, 1, Macansh Bros (A. Schroeder.) 2, H. Cadell.

Beeswax, yellow, 6lbs, 1st R. L. Pender, 2nd, Macansh Bros. (A. Shroeder.)

Beeswax, white, 6lbs, 1st, Macansh Bros (A. Shroder.) 2nd, R. L. Pender.

Collection of Beekeepers appliances, Macansh Bros (A. Schroder.)

Observation hive, highly recommended C. E. Kohlhoff,

The following are the honey awards at the Alstonville show on Feb. 7th and 8th:—Honey, candied—E. Mackinnon 1. Honey, not candied—J. A. Perry 1. Best apiarian exhibit—R. Robinson 1.

SPECIAL SUBJECT MARCH.

THE LONG IDEA HIVE.

QUESTION.

25.—Do brood combs deteriorate with age and how long do they serviceably last.

WELLINGTON P. A. AND H. SOCIETY.

Mr. Nancarrow, writes:—"I am sending you a schedule of our next show. I would like your opinion on the same, on the Honey Section. I am pleased to say we have 60 members on the roll, they are all working well and to one end and that is to make our 1895 show worthy of the district and members. The ton of honey I mentioned is ready and will be sent forward next week. I notice by the *A.B.B.* that Mr. John Smith of Queensland, cannot supply the demand of his English customers. I hope that will be our fate, for if so we will increase our colonies and dozens of persons who are only waiting for a good market to be opened up for them will go into the industry. The quality of the honey in this district this season is exceptionally good and if placed on the market in its present state, should command a ready sale—a good inquiry for more. A son of an old friend of yours, Mr. A Ayling, of Dubbo, joined our Association last week and is going into queen rearing extensively. I hope some of your good men will visit us at our next show, and if they drop me a line I will attend to their personal comfort and any exhibits they intend showing."

The following are the apicultural prizes to be competed for at the above, which takes place on April 18th and 19th. Such an excellent prize list deserves good entries, and the results will be well looked forward to by the bee fraternity. Entries close Tuesday, April 9th, at 9 p.m.—

SECTION 18—BEES, HONEY, AND APPLIANCES.

—o—

Open to All.

252 Best collection of bee-keepers appliances, prize 20s.

253 Best Trophy of Apicultural Produce, may include honey in jars, frames, sections, beeswax. 1st prize 20s, 2nd 10s.

254 Best Italian Queen, prize £3. Queens to be shown in nucleous hive together with progeny, the queen afterwards to become the property of the W. V. B. K. A. Prize only to be awarded if judge considers it worthy of a prize.

255 Best three frames honey any size, *Western* [illegible] special, 15s.

256 Best Wax Extractor, 10s.

257 Best Collection of Edibles made with honey, prize 20s and certificate.

—o—

Open to bee-farmers only.

258 Observation hive with colony of bees at work, Italians or any other breed, Fong Lee's special 20s, second prize Lassetter's trophy. Winner to have choice of prize.

259 Best frame and section hive not painted, made by exhibitor, 15s.

260 Best honey extractor, prize 10s.

261 Best 12 1lb sections of honey, first 15s, second 5s.

262 Best 3 large frames of honey, 10s,

263 Best three shallow frames of honey, 10s.

264 Best 6lb extracted honey in glass jars 1st 20s, second 10s.

—o—

Open to Members of the W.V.B.K.A only.

265 Most attractive display of bee products, first prize, Mr Hayne's special, 20s 2nd 10s, 3rd Mr Satchell's trophy. Winner of second prize to have choice of second and third prizes.

266 Best specimen of six sheets of comb foundation made by exhibitor. prize 10s.

267 Best 5lbs of Beeswax, to be produced by exhibitor and unadulterated, 1st 15s, second 5s.

268 Best collection and trophy of bee appliances and products, the property of exhibitor prize 20s. Mr Nancarrow's special. 2nd prize Wise and Co's trophy. Winner to have choice of prizes.

269 Best one frame of 10 Queen Cells in glass nucleus hive, with bees attached, Mr E J Mathews special 10s

H. R. A & H. ASSOCIATION.

The following is the schedule of prizes in the apicultural section at the above Society's Show, to take place on the Association Ground, West Maitland, on Wednesday, Thursday, Friday and Saturday, 1st, 2nd, 3rd and 4th May:—

Special Prizes offered by the Hunter River Beekeepers' Association and the Agricultural Society conjointly.

499 Comb Honey, Most attractive display, not less than 50 lbs., labels allowed, 15s.; second, 7s 6d.

500 Comb Honey, best 12 1lb. sections, 10s.; second 5s.

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

502 Extracted honey, liquid, 6 2lb. glass jars, 10s.; second 5s.

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

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

505 Best Leather-coloured Italian Queen and her bees, displayed in a single comb glass nucleus, 10s.

506 Best Yellow Italian Queen and her bees, displayed in a single comb glass nucleus, 10s.; (offered by Mr. R. Scobie).

507 Honey Vinegar, in glass, not less than 1 gallon, 10s.

508 Beverages, best and largest number, not less than three, made from honey, 15s.

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

510 Cookery, best and largest assortment, made with honey as an ingredient, 15s, second, 7s 6d.

511 Best Wired Frame of Comb Foundation, 5s.

512 Best Colony of Bees, 10s.; second, 5s.

513 Best Beehive, suitable to the district, 10s, second 5s.

514 Best three empty combs, naturally built, 5s

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

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

RAMBLING.

We took a notion lately to pay a visit to the apiaries of the Messrs. Taylor, at Blackhill. In company with a friend, we found ourselves one morning at Hexham, the junction of the Messrs, Brown's line to Minmi with the Great Northern line. But no train left Minmi-ward for several hours. So three alternatives were before us—wait, walk four miles, or return. But Anderson was plucky, and we decided to walk. Four miles along a railway line — hopping from sleeper to sleeper, choosing side tracks, now and then a chain or two of newly-laid clinkers—it was capital exercise. Well, we reached the pipe line, and it was a most agreeable change walking on its protecting planking over swamp full of vegetation, the ti-tree being prominent; ducks and other wild fowl sporting in the water or flying about; horses and cattle also luxuriating in the cool waters which nearly covered their backs, while feasting on the sweet and long swamp herbage. On into lightly timbered grazing land, apple-trees being the most plentiful; again on the pipe-line over swamp, and through fence on to the Woodford Road. We felt sure we had come right so far; but not a soul was within cooey to tell us where the Messr s. Taylor lived. A house on the brow of a hill several hundred feet above us, we'll find out there. We believe in short cuts instead of going round, so up we must go straight—but the mud was soft and slippery; as we cluch at grass tuft or shrub stem it would come away in our hands and cause us to slide back. But we got to the top, to find—the house was not inhabited! We were, however, within sight of other habitations—three equi-distant in different directions. We steered for one and made enquiries. The good woman told us to go along that track, over that hill, down the other side, to a creek, then turn to the left, and we would come to Mr Taylor's. "And how far is it?" "About half-a-mile." We went along that track, over the hill, down to the creek. But she said Mr Taylor's was only half-a-mile, and we've come that far now. We cross the creek, turn to the left—lose the track—have we gome wrong? We scramble over logs, through undergrowth, onward and upward. Isn't that a fence yonder? Yes, and we are soon in the partial clearing, and spy houses away on the hill. But thunder clouds are about and a heavy-down-pour of rain is wetting and with the exercise warming us up at the same time. We make for the largest stack of buildings, to find not a soul about, and a pump that would not draw water. But there were some beehives here, and another house away on the hill yonder. So up there we go through the rain. Right this time. H. W. J. was at home, and shortly afterwards his father, Mr Edmund Taylor arrived. The latter showed us his grounds adjoining, where grapes, plantains, and other fruit trees were growing on the most suitable of soils. He told us of his experiences, his failures and successes in fruit gowing. One reason he had built this second house

near his plantation was on account of thieves who came from the neighbouring mining townships. Some how or other, we don't believe we ever enjoyed a feed of fruit so much in our lives before. Some red heart Japanese plums were truly delicious. The dinner bell, and we found ourselves seated at table, with father, mother, and family of seven or eight sons and daughters, of ages from ten to twenty-two, all in the bloom of health and strength. After doing justice to a frugal meal, Mr H. W. J. Taylor took us down to his own selection, half-a-mile away and adjoining that of his father. Here were about seventy hives, in a splendid position, in a clearing on the side of a gully leading down from the hills, which rose close by like a huge wall, thickly covered with timber and undergrowth. Our young friend is great with poultry, and evidently takes care of his breeds, judging by the way they were fenced off. His apiary is very complete, having workshop, where he makes his own hives, frames, &c. And honey house at another part, in which was an excellent local made Stanley four-frame extractor with room underneath extracting gear for straining wire and about 300lbs honey. A separate honey tank contained about 500lbs honey. He opened several of his hives, showing us imported and daughters of imported queens, and the queen that laid eggs that did not hatch. He commenced some eight years ago with three-quarter Langstroth frame, and has continued using the same size ever since. After a pleasant hour spent in that way, bidding good bye to Mr & Mrs Taylor sen, and rest of family, Mr H. W. T. accompanied us on our road back to the pipe line.—a very much shorter way than we had come. When we got home in the evening our appetites had by no means lost their sharpness for the exercise we had taken.

Mr France gives an account of a bee tent for an out-apiary, which we must copy in a future issue.

TO MAKE AN EXTRACTOR.

BY J. F. MUNDAY.

To make the tank for the extractor get five sheets of tin, bend over ¼ inch of their sides to form a hook; hook the sides together carefully, one at a time; hammer them together and solder them as you do them. See that the top and bottom edges are straight. Then bend over ⅔ of an inch into a round hook along the part which is to form the top of the tank, then get a piece of ¼ inch wire the full length of these sheets of joined tin to make a hoop for the top rim of the tank. Make that piece of wire straight, put it in the hook above mentioned, hammer the tin round it; then bend the tin round a cask, hook the tin together, and solder securely. The side of the tank will then be formed.

To make the bottom—join together two other sheets of tin, then lay it flat on a table, place the side of the extractor on the top of it, and see that it is quite circular; then mark the tin *bottom* ½ inch all round from the outside of the tank; cut the tin where marked. Next make the support for the spindle of the revolving comb-holder, thus—get a piece of soft wood about four inches thick and six inches long, bore an inch hole one inch deep in the centre of one end of it, and shape it in the form of a cone, the small end being at the end where the inch hole is. Then make a tin case that will nicely cover it, except the top and bottom ends. When done solder it on to the very centre of the bottom made for the tank. Then put into the hole at the top of the cone an iron socket, which should have been previously made thus: an inch cut off a round iron bar one inch in thickness, and a cup made in one end of it with a bit, in which the point of the spindle will turn. Now solder the bottom on to the side of the tank. Cut 1½ inch hole near the bottom and make tap or outlet for the honey and solder it on. To make the revolving comb holder get a kerosene can, carefully draw a straight line diagonally from corner to corner on opposite sides,

two sides only, of the tin; where the [illegible] cross each other cut the tin [illegible] 4½ inches from centre, bend these pointed parts outwards at right angles to the can, to make a square hole for the spindle. Now cut out altogether the other two sides and the two ends of the can at 1¼ inches from the edges of the can all round. Next get our pieces of soft, tough wood, 1½ inches wide, ½inch thick, 14 inches long, bore a small hole through the width and at about 1-10th of an inch from each end of each piece of wood. Nail securely one along each end of the can, ⅛ inch above the edge, and parallel with the sides in which are the square holes. Now get a piece of square, soft wood, the size of the square holes and about 17 inches long. In the centre of one end drive in a two-inch screw a little more than half way, and file off the head nice and round. On the other end make a small crank, or handle, 3 or 4 inches in length. Now pass this spindle through the square holes in the can, projecting through the bottom hole about 3 inches; punch a small hole near the points of each pointed piece of tin, against the spindle, and drive in a small wire nail, so securing the can firmly and truly to the spindle. To give it greater strength, nail on to the can on each side of the spindle, and close to it a piece of ½-inch wood about three inches wide. Nail these parallel with the other pieces nailed on, and right across the can exactly. Next make a cut with a saw ⅛-inch deep, and just at the back of the holes, and cut out that small piece of wood to the depth of ⅛-inch at the ends of that piece of wood to form a square frame; fasten the ends of the wire where they meet securely, and then get a piece of half-inch mesh wire netting, the size of the frame just made, and sew it on to the frame with wire. Nail a few boards together to make a wooden bottom for the extractor to stand on, and fasten the extractor to it; then get two pieces of wood 4-in. long, 1½-in. wide, 1-inch thick, hollow them round a bit so that they will fit the outside of the tank level with the top; securely nail them on to the top and parallel with it one on each side, exactly opposite, the first one where the hoop joins. Now get a piece of ¾-inch board, 3 inches wide and long enough to reach right across the tank, and just over those two pieces of wood nailed on the top of it. In the centre of this piece of wood make a hole large enough for the top of the spindle to revolve in it; the spindle at that place should be made round to fit the hole nicely, and of course project through it. When done, stand the comb-holder on its support at the bottom of the tank, put on the piece of wood that goes across the top, and through which the top of the spindle turns, and screw or bolt it down, so that the comb-holder revolves properly. Put on the handle, and there you are.

This extractor is made to suit the "Munday Frame," but one to suit any frame can be made in a similar way.

The reason why I write this is because some bee-keeper might like to make an extractor for himself, as I have done, cheaply.

CAPPINGS.

From Gleanings, American Bee Journal Review, and Canadian Bee Journal.

D. A. Jones, in 1879 placed on exhibition, at the Toronto Industrial Fair, 10 tons of honey—the product of his own apiary that season.

Harry Lathrop says:—Honey is concentrated nerve food in its very sweetest form; and if people would use honey on their bread, instead of butter, they would have more vitality, better complexions, and a more even disposition. The ancient patriarchs regarded honey as the cream of food; and so it is if eaten lightly. Honey eaters are the kindest, best-dispositioned, and most benevolent of people. — Further on he says:— Glucose, a perverted form of corn, is prevalent in beer and in other drinks, and especially in soft caramels and creams and in syrups, jellies, and similar things Although derived from nutritious food, it is in a perverted shape; and to glucose may be attributed the rapid spread of Bright's disease.

In Canada beekeepers get wholesale 12½ cents and retail 15 cents for extracted.

Naphthaline is said to be a preventive of bee stings. When the bees go for the naphthalised hands they always desist from their aim.

A pulled queen is the quickest and easiest cure for laying workers. So far as C. C. Miller had tried it wns a sure thing. Just drop a pulled queen among the brood, and that's all.

Charles Dadant says:—*After comparative experiments*, the preference of the majority of beekeepers, using the French language, is incontestably in favour of a frame and hive far larger than the regular Langstroth.

Mr M. B. Holmes, of Canada, says:—I think we may safely say there is ten times as much honey consumed as there was ten years ago, and if the bee-keepers of this country do their whole duty, there is not a doubt that the consumption of honey will continue to increase at the same rate for the next ten years.

Mr G. W. York, in a paper he read at the North American B. K. A. annual meeting, says:—It seems to me that comb honey, in most home markets, should bring not less than 20 cents per single section, or 6 sections for one dollar. Extracted honey should retail, per single pound, at 15 cents or 8lb for one dollar.

A W. A. Chrysler writes:—The Langstroth eight-frame has become so much of a standard hive that I am very sorry to change to any thing else; but I have decided to "flop," and not only from the eight to the ten frame Langstroth, but right over to the ten-frame Quinby, with the frames shortened to that of the Langstroth.

How to Make Honey Candy.—Take one cupful of honey and the same of best white sugar; mix together and boil in a new tin, which has been well greased with fresh butter. If the candy is to be white, pull it while warm. When cool enough cut into small pieces and wrap in buttered paper, as exposure to the air makes it soft.

[illegible] Coleman says there is a difference betw[illegible]ve-banded bees and Doolittles. "T[illegible] former are crosses with Cyprian or Syrian blood. The abdomen, except the tip, are almost a solid yellow, and their temper is so different from that of the Italians that it betrays itself. The Doolittle bees, in the main, are gentle, and not nearly so yellow as our five-banders, and in my experience are better honey gatherers."

Out apiaries in the United States, are arranged for at the rate of 25 cents a piece for each colony on the ground, spring count. The land-owner has nothing to do with the bees. If anything happens that requires our attention he is to let us know, and we look after them. Of course the beekeeper must understand artificial swarming and prevention of swarming.

Willie Atchly tried the experiment of fertilization with drones from drone-laying queens and laying workers. The queens so fertilized produced nearly all drones. He says:—My idea is, that the mating of these queens by such drones was so feeble that not one egg in twenty would touch the fluid and be transformed from a drone to a worker egg, as the fluid is so scant, and the vessel containing the same is not full enough, and the eggs pass right on by without being impregnated, and all caused from improper mating.

Candles for Fastening Foundation

European journals give a plan for fastening foundation in brood-combs that is said to be a great success. A candle 2 to 2½ inches in diameter is made of beeswax, generally by wrapping scraps of warmed foundation about a very slender wick such as is found in toy candles or tapers. Cut square at the lower end, so it will stand without a candlestick. Light the candle, then when a little pool of melted wax has formed about the wick, hold the candle to one side and let the drops of melted wax fall where you want to fasten the foundations Advantages claimed: rapidty, no previous preparation, solid work. One paper

recommends using a tin tube to sl[illegible]wn a half inch upon the cand[illegible]

SOMETHING FOR AUSTRALIA TO[illegible]UMINATE ON.

One of the first great efforts of the North American Bee-keepers' Association was made in 1886, when at the Colonial and Indian Exhibition, in London, four of the Association's delegates set up the largest display of honey ever yet made. It exceeded in quantity the combined displays at the Chicago Fair, and attracted the attention of the world to the honey-producing capabilities of Canada. Twenty seven members supplied the whole display, and gave the delegates *carte blanc* to do with it as they deemed best. The delegates took advantage of the license thus accorded them, and gratuitously distributed four tons of honey by way of advertisement. All kinds and classes of people, from Queen Victoria to the children of the charity schools of London, participated in the gifts. Notwithstanding this and the expenditure of some 2,000 dollars for labour and material in connection with its sale, the contribntors received back 10 cents a pound for extracted, and an average of 16½ cents for their comb honey, on the total amount of their contribution, and were also paid the cost of the glasses and tins in which they put it up.

DO BEES TRANSFER AND STEAL EGGS?

W ABRAM.

Dear Mr. Editor,—As the above subject has been introduced again and extracts from American papers cited, I think it may please some of your readers to hear what Mr. Doolittle said about the matter some years ago in the *A. B. J*, and I extract the following in effect:—

Mr. D. relates: One day a strong swarm issued, but returned again, because the queen's wings were clipped. He was bnsy and did not, as usual, make an artificial swarm, and the swarm came out again next day and united with two others. From the last of the three stocks that swarmed, he had cut out all queen cells about an hour ago, and to prevent swarming intended to introduce a queen. But not enough that the stock swarmed, although without a queen or queen cells, the tripple swarm returned into just this stock. The next day it came out again, and was hived in an empty hive. Mr. D. now proceeded to give a queen to this parent hive of the big swarm, but how astonished was he, as he saw, that 423 queen cells were built, 276 of which contained eggs and larvæ, although 11 hours ago there was not a queen cell in the hive. Here he discovered for the first time the difference between eggs deposited by the queen and these transferred by the bees. 188 eggs had the queen laid, they were with the point fastened to the cell bottom, 17 were put in by the bees, as they were in all possible positions. 71 cells contained larvæ which the bees must have transferred. These were from 2-3 days old and floated literally in food. Since then he has noticed several other instances that eggs and larvæ from a comb of brood given to a queenless hive were transferred to another comb, but always were first the queen cells built, and then the egg or larvæ put in, but these instances are not often, and with larvæ, it is three to one of eggs, because the bees rear a queen easier from a larvæ than from an egg.

Thus far from Mr. Doolittle's narrative. I could cite others, but the above is as good as any within my knowledge, and serves the purpose. What surprises me is that Mr. D. did not sit down to think whether, after all, the bees could not make as good queen cups as any one else, and as quick, and that he introduced a queen instead of using these cells to rear queens in the upper story, &c.

As to the evidence of the thing. Where is it? If the queen laid 188 eggs in queen cells, as Mr. D. admits, is the irregularity of position of the 17 eggs any proof that the bees transferred them there? And as regards the 71 larvæ, why, it is plain, the bees, finding queen and queen cells removed, set to work to repair the loss. What could be mor-

natural? But as for 11 hours between the destruction of the original queen cells and the finding of result next day as stated, I have my own opinion about these figures altogether.

As a matter of fact it is of no consequence whether the bees move, transport transfer or steal eggs or larvæ, or whether they do not, because even the most staunchest believers in this theory do not depend on this mode of queen rearing, so that the actual practical value is useless, anyhow. The bees simply outwit us, sometimes, unless we are close observers. I remember a case where the bees started a queen-cell, the egg having been laid 20 days before it hatched into a larvæ. I saw the queen lay it and removed her. Lately I found a laying queen in a hive where I took the original one away five days before. Her progeny is black with shade of Italian blood or color. The found one is of splendid yellow. Have the bees stolen her? No.

Now a few words to Mr. James, who invites me to swearing. Yes, I swear by the Holy Moses that to the best of my belief and knowledge, bee paralysis did not exist here eight years ago. It is in America over 10 years, and thousands of colonies have been lost through it. As I am now on fourteen years here I believe I would have seen or heard of it before I did, had it existed earlier than in America. It was not known in Italy when it appeared here, but I have heard lately, that many bees have died there last winter, from what cause I do not know. Codlin moths was not known here fourteen years ago, but having been introduced can now be found everywhere. It surely came from somewhere, where it existed before. Most diseases do come that way.

BEE ESCAPE.

J. DUNDAS, MILDURA.

Sir,—I send herewith a rough sketch of bee-escape which I find works splendidly. It is both quickly and cheaply constructed and easily worked. A frame or body to suit length and width of hive, by 3¾ inches deep, floor of 6x½ T and G lining let into rabbets in ends, deep enough to allow bee space under sections, when placed in position. The boards are cut away on outer side to form entrance to the escapes which are made of zinc. Two edges are turned down ⅝ of an inch at right angles and the others ½ inch in the opposite directions, the latter fitting close to the lower side of the floor, when two ¾ inch nails secures each in position. The points or outlets can be so nicely adjusted that the bees from below do not care to enter. In working the escape, I provide a crate of sections with starters, which after removing the full crate I put in its place, then the escape, and on top of all the full crate cover up for the night and in the morning there will scarcely be a dozen bees in the whole crate; of sections, which can be removed without any irritation, either to the bees or myself. I have not yet tried it on the full frame super, but see no reason why it should not work equally as well as on the sections.

WESTERN AUSTRALIA.

Mr Robert Wolfe, W. A., writes:—

We are having a very fair season over here, if anything rather dry. I got a queen from Doolittle and am raising some good queens from her. Her stock so far looks splendid, quiet to handle and beautifully marked. She is the only one alive out of six sent, I guess it is about the longest journey a queen has ever been sent and arrived alive?

You will be glad to hear Mr John A. Ayre, Mel Bonum Apiary, Gin Gin, has seen in the land of the black swan more to please him that Ligurians and honey. On Christmas day I am glad to say he got married to Miss Wise, of Perth. The wedding went off well, and the happy couple are now settled down at Gin Gin, studying the A B C of married life. I am certain the Western Australian beekeepers with me, wish him and his wife every success in life.

[So we all do most heartily]

CHLOROFORM.

A correspondent in the *Edinburgh Evening Courant* adopted the use of chloroform in the robbing of his hives. We take it to mean skep or box hives, and that he has only a few of them. We give the extract as being more interesting than practical, especially in a large apiary. It is as follows:—"The quantity of chloroform required for an ordinary hive is the sixth part of an ounce; a very large hive may take nearly a quarter of an ounce. My mode of operation is as follows:—I set down a piece of wire gauze, to prevent the bees from coming in immediate contact with the chloroform; and in this plate I pour the chloroform. I now quickly and cautiously lift the hive from the board on which it is standing, set it down on the top of the table, keeping the plate in the centre; cover the hive closely up with cloths, and, in twenty minutes or so the bees are not only sound asleep, but, contrary to what I have seen when suffocated with sulphur, not one is left among the combs; the whole of them are lying helpess on the table. You now remove what honey you think fit, replace the hive in its old stand, and the bees, as they recover, will return to their domicile. A bright, calm, sunny day is the best; and you should commence your operations in the morning, before many of them be abroad."

THAT STRANGE BEE. FOUL-BROOD.

R HELMS.

In this month's number of your journal I notice a very interesting occurrence of a hermophrodite bee. What a pity that Mr Taylor did not preserve the specimen. I should be greatly pleased to receive as many as possible of similar specimens for careful examination. It is at any time a rare occurrence and besides so easily overlooked.

Regarding your answer to Mr Holland I am sorry to say that I think it rather rash. Mr Holland surely knows foul brood. He states distinctly that he lost his bees by that disease and the somewhat unusual position of the larvæ is no obstacle to it being F. B. Mr H. seems to speak about unsealed brood, otherwise the position is not unusual. That advanced larvæ do not suffer from F. B. is an error. Jan. 30/95.

[Re the strange bee. If any of our friends who should come across such again will kindly send same we will be very pleased to forward them on to Mr Helms. Thanks Mr Helms, for remarks re Mr Holland. Mr Holland's description was different to what we have come across. When we wrote the foot note we had in our mind the fact that he knew foul brood. Our foot note concluded by asking for further explanation from our readers, and we are very pleased that it has woke Mr Helms up, from whom we would like to hear very much more than we do.]

Mr Wm. Jacob, Nemingha, writes:—I think my subscription to the *A. B. Bulletin* is due so I enclose postal note for five shillings. It is a grand little book. It is a very good year for honey in the Tamworth district.

Mr J. W. Dumigan, Killarney, writes:—We are having heavy rain, which has stopped the honey flow for this season. There will not be near the amount of honey in this district as there was last year. The apple trees are flowering very fair this season.

A letter from Mr Nancarrow, secretary to the Wellington B K. A. says, speaking of their forth coming show:—We are giving a prize of £3. for best Italian Queen. We have also £15 in other prizes and 3 trophys. I am proud to say we have a membership of 60 now and our prize list has increased considerably since last show. Considering we have only been in existence eleven months it shows the interest taken in beekeeping over here. Our members are sending a ton of honey to the English market as an experiment, and if satisfactory returns are given, we intend shipping all we can produce. I will let you know how we succeed in the venture.

[Hoorah, Wellingtonians, every success to you.]

SIZE & SHAPE OF HIVES AND FRAMES.

Paper read by W. S. Pender at H.R.B.K.A. Meeting.

Before we can decide on the hive and frame we shall adopt we should first consider our method of manipulation, and in order to procure honey profitably at its present declining prices we must try and make all possible saving in manipulation. Construct our hives of such size and shape containing frames of convenient size and shape as to be readily removed and replaced, and as much as possible so that one motion will accomplish several purposes.

Frames.—Shall we adopt a deep and narrow frame, as the Berlepsh, about 13 x 7½; a square frame, as the Gallup, 11¼ x 11¼; a long and moderately deep frame, as the Simplicity, 17⅜ x 9½; a shallower frame, as the Heddon, 18 1-16th x 5⅜; or a still shallower, the half-depth Simplicity, 17⅜ x 4½? To decide this point we must see how the bees and beekeeper approve of each style. The Berlepsch frame is well approved of by the bees, but it is so deep in comparison with its width, when used as a brood frame, that the bees store too much honey at the upper part of the frames, so that it becomes necessary to extract from combs containing brood, which adds much to cost in handling so many frames. The frames are so narrow that theoretically the brood nest has not sufficient protection from sudden changes of the weather, having so much space at ends of so many frames to keep up incubation heat. Nevertheless the bees do well in these frames, which partly upsets the theory. As for the Berlepsch hive, which has the combs so arranged as to be removed from the back one by one, it takes up too much time. If I were using the Berlepsch frame I should use it on the long idea plan, but then there is the difficulty in rapidly removing the frames in so deep a box to accommodate them without crushing lots of bees between ends of frame and hives. It will be noticed by many that in almost every instance where deep frames are used shallow or half depth frames are used as supers, unless the long idea system is adopted; and if these frames could be used so that the brood nest need not be disturbed, the shallow supers would answer admirably, but where so much honey finds its way into the brood frames a considerable amount of manipulation is necessary to the brood combs. The same reference I made to the Berlepsch frame will almost wholly apply to the Gallup frame as far as manipulation goes, but for size and shape I think the Gallup frame, with ten of them in the brood nest, offers more protection to the brood than any other size of frame, and for the long idea system of management is the frame of frames if queen-excluding zinc is used as a division board, and the queen confined to the brood nest.

The Simplicity size of frame, which includes the Root-Hoffmann frame, is longer and shallower than the above, and is a very useful frame for either long idea or storifying systems of management. It is the size most general in use, and is a good all-round frame. Bees will often fill the upper corners of the frames with honey, and often the outside combs and those next, as to limit the brood nest so much as to force the queen into the supers, and in very many instances the queen will choose the supers for laying in in preference to empty combs at the side of the brood, to prevent which queen excluding honey boards are often used, and bees certainly show a decided objection to queen-excluding zinc, and very often refuse to work through it. It will be seen if we leave bees entirely to themselves the honey will be placed where we desire it not, or rather where it cannot very easily be removed without loss of time. The simplicity frame is generally storified, and to give a full story to a hive at a time is generally in most localities too much increase, and is objectionable because the queen will often fill them out with eggs, especially if honey be not rapidly coming in at the time. To prevent this it is better to give supers of shallow frames, and then if the queen should occupy the super she is more limited in extent. To prevent the queen occupying the super I will refer to a method later on.

The Heddon frame is shallow, and long, and unlike other frames, which hang in a rabbet formed in the enclosing case, this frame stands on a piece of metal projecting into the hive about a quarter of an inch from under the ends. This frame has also closed ends, i.e., the ends are so wide that the ends of one frame touch the ends of the next. These frames also fit inside their case with a very little play, viz., 1-16th, while in hanging frames the frame ends are about ⅜in. from the ends of hive. The brood nest in this hive can be limited or expanded at will, because each body is so small in capacity, containing but eight of these shallow frames, which give a comb surface equal to five simplicity frames. At the sides of the hives are thumbscrews, which act on the ends of frames, with sufficient pressure to close all joints between frame ends, and so avoid propolis. The power obtained from these screws is sufficient to support the frames in position, even when the frames are full of honey, and the case is turned upside down or inverted. The case is not only invertible, but the frames also, and the position of the frames in the case between the upper and lower edge is central, so when the case is inverted the bee space between each set of frames remains the same.

[*To be continued*]

Mr. E. E. Buttsworth, Cessnock, writes, Bees are doing fairly well just now but there has been too much rain to suit them. I extracted a little this week.

AUSTRALIAN BEES.

Mr H. J. Wilson, Teesdale, Victoria, writes:—I am forwarding two separate kinds of bees. I would feel grateful if you would indentify and publish the names in the "*Australian Bee Bulletin.*" I am myself ignorant of their proper names, but I know, or fancy I know, that they are a bee of some sort or other. The box marked No 1 I received from a neighbour, who found them in a small cluster about the size of a teacup, hanging to a gooseberry bush, in the same way as bees always cluster when swarming. He said that he could see no queen with them, but I doubt if he would know one if he saw it. No 2. are bees which I discovered entering small holes (about the size of antholes) in the side of a hill, The bees were numerous, and the holes spread over nearly ¼ acre of ground, and so far as I could make out, only one bee seemed to enter a hole, or in other words, every hole had its own bee. Again, when a bee would alight it would commence and make a new hole; it would burrow down head first and throw the dirt back with its legs. I dug down very carefully more than once to ascertain what became of them when they went in, but could discover nothing. They used to come in with pollen on their legs, just like our hive bees, and they must have stored it somewhere, but I couldn't find out where. The specimen I am sending are dead and consequently smaller looking than when alive. No 2. has a sting but I have not felt it. No 1. does not use it if it has one. We get the *A. B. B.* regularly, and look forward to its arrival, I consider it a paper that no Australian beekeeper can well do without and wish it every success. Hoping for a little light on the above.

N.B. The bees have now deserted the hillside, and I dont know where they have gone to. They may return next year.

[We forwarded the samples to Mr Maiden of the Technological Museum, Sydney, from whom we received the following:—

6 February, 1895.

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

Dear Sir,—The bees forwarded with your letter of the 2nd instant, arrived in such a damaged condition, that it is almost impossible to identify them with any certainty, but No 1. appears to be a species of *Nomia*, and No 2. one of the genus *Haltius*, both are well known groups of Australian bees, though little is known about their habits.

Speimans of such fragile things as insects should never be sent through the post in paper, but enclosed in a box or tin.—Yours truly,

T. H. MAIDEN.

SHIPPING QUEENS FROM AMERICA.

H. L. JONES, GOODNA, Q.

I was much interested in the letters of Mr. John Smith and Mr. G. M. Doolittle under the above heading, in the December issue of the *Australian Bee Bulletin*, but have been too busy ere this to furnish the information sought.

Mr. Smith is mistaken when he states that I sent only 7 escort bees in each cage, when mailing queens to America, and Mr Doolittle also comes below the estimate, for instead of sending only 30 I send at least 40 young bees, with each queen. In a recent number of the *American Bee Journal* I am credited with recommending that few bees be sent in each cage, which is certainly a mistake, as I am inclined to the other extreme, and am pretty positive, in the light of my past experiments, that a cage large enough to contain about 50 escort bees comfortably, will give much better results than a smaller one. Such a cage can be mailed anywhere within the postal union for 2d, then why use a smaller one, with the certainty of a greater proportion of dead queens? Up to date I have received some 52 queens from America by mail, and out of that lot only 10 came through alive. Cages of all sizes and modifications were sent, some of them quite unique in construction, while others were the most unsuitable that could possibly be devised. I consider a

six hole cage superior to any other, two holes to contain the candy, two holes to be thoroughly ventilated, while the remaining two holes to receive no ventilation, except through the two ventilated holes. Free access should be allowed to the candy from at least two different points, and the entrance so arranged that the bees as they die off did not roll into and block up the passages.

FOUL BROOD, ETC.

Mr Reginald Greene, Keynton, Victoria, writes:—I do not know what the chief feature of the cure for foul brood will be, but if it means putting them in new hives I can't afford it. Would you let me know if the plan I propose would be likely to be a success?

1. Would it do to defer dealing with them (the bees) till near the end of the honey season, six or seven weeks hence? Our season is just beginning now.

2. I believe most of them have got it more or less, so I propose to do with all of them to make a sure thing.

3. Would it do to hive them on half sheets of foundation (dark yellow) instead of best foundation, whole sheets?

4. Now I propose to start in the morning, fitted out with one new hive fitted with its frames and foundation. Brush the bees into this new hive, and place it where the old one stood. Now take the old hive and put it in boiling water for one minute. Now fill the hive up with new frames and foundation. Go to the next hive and treat it just the same as the first hive, and boil that hive and fit it with frames, &c. So on with every hive and finish the same day. Please consider this plan and tell me if it is feasible?

5. I shall have a lot of honey to strain. What is the cleanest and best plan to adopt?

6. Who do you consider the best supply dealer to deal with?

7. How do you manage the feeding—I do not know?

I hope I am not boring you with all these questions, but you will have the thanks of a young beginner.

[To question 1 we should say tackle it at once, for during honey flow is the best time.

To 2, 3, 4, the Canadian scientist, Mackenzie, proved that to destroy foul brood in wax it was necessary to keep it to 194 deg. F., for three hours. The spores would live but not germinate in ice. The spores would not germinate in beef broth containing 2 per cent. carbolic acid, but were very prolific without it. Professor Howard has since proved that the spores are destroyed by thirty-six hours exposure to the open air. Try this plan:—Cut out and burn all diseased comb that you can see. Well spray hives and frames with carbolic acid. Do this of an evening. You might leave in the hive a small bottle containing carbolic acid with simply a tuft of grass or bit of rag for a stopper, so that the fumes will go through the hive.

5. Put in cheesecloth bag and hang over dish in warm place.

6. Try any advertiser in our pages. We can conscientiously recommend one and all.

7. Cheap and simple feeders can be had from any of the supply dealers.

BEES FEEDING ON SAWDUST.

W. E. BAGOT.

The saw mill had been cutting teak, and the bees got scent of it. (Teak is a white, hard, close grained timber, with a faint, but pleasant scent.) First one or two came and prospected it and no one took any notice of them, but next day they increased greatly, and some one sent word that the bees had started carrying sawdust away, which seemed nonsense. Who ever heard of bees carrying sawdust. But there they were. All of them appeared at first sight to be trying which could bury her head the deepest, but on closer observation, it was found that they were gathering something on their legs. On capturing one or two and collecting some, it appeared like propolis, but on tasting it, that idea had to be given up, as it was of a very sweet flavour. Now the question is, is it pollen or better still would it be possible of them to make honey out of it. I would also like to state that there is no scarcity of honey at present, the bloodwood in bloom and tea-tree just com-

mencing. It is also visited by numerous native bees and ants, which gives a heap of teak sawdust a very active appearance on a warm day.

These bees are probably collecting the resinous portion for use as propolis.

THE NEW BEE DISEASE.

D. G. GRANT.

Re the "New Bee Disease." I will give you what information my limited experience of it can afford.

Early in October last, I noticed in a number of my hives, some dozen or more, a peculiar appearance of sealed brood. As I had been treating some bees for foul brood, I, after a hasty and superficial examination, concluded that this was the disease spreading, and treated about half of them by McEvoy's method, destroying frames, brood, and honey and boiling the wax. About that time I noticed mention made in *Gleanings* of a "New Bee Disease" which was playing the deuce with the bees in California and of which the symptons resembled Foul Brood. This induced me to look into the matter more closely and upon doing so I found that while exactly like Foul Brood in several features, this disease differed from it in others. The following is I think the easiest way of showing the comparison :—

FOUL BROOD.	NEW DISEASE
1. Cappings of brood dark and sunken	do., do.
2. Cappings perforated	do., do.
3. Larvæ brown to dark brown	Larvæ *light brown* only
4. Larvæ decomposed into a shapeless glue like mass	Larvæ decomposed but slightly retaining its shape
5. Mass in cell ropy and adhesive	Mass not ropy though thick
6. Smell of glue often present	Without smell as far as I have found
7. Retains its glutinous state for some weeks	Dries down soon.

By slightly retaining its shape (No 4.) I mean, that though the whole larvæ is decomposed, one can still find in the mass the legs, shell of the head, and thorax and other hard portions, whereas in foul brood the whole mass in the cell is of the same consistency. By this time the colonies I had treated by McEvoy's method began to seal their new brood and I was rather startled to find nearly half of this brood, in a couple or three of the hives, showing the sunken cappings and the dead brood. Another colony, a clean one, hived on full sheets, with a diseased comb given. also developed the disease in the new brood. Seeing it was only useless labour and loss to destroy good combs, I treated a couple of hives in the following manner :—I killed the queen, allowing them to rear cells from their own brood. When all the brood was sealed I went over each comb carefully and opened every suspicious cell, removing as well as I could the dead larvæ, so as to force the bees to clean up the combs. When the queen hatched, I destroyed all cells and killed her, introducing a laying queen from a *clean* colony.

Neither of these hives showed any trace of the disease afterwards. I noticed, however, that the affliction seemed to be abating in the other hives, owing, *perhaps* to the fact that whereever I found a cell diseased, I made it a point to open it and remove the mass as well as possible. It has gradually decreased until now I can only find it in three or four hives and only a few cells in those are touched.

Whether this disease is likely to prove a serious matter, I cannot say. That depends upon what causes it, and this as far as I know, is as yet unknown. I sent samples of diseased comb to the Department of Agriculture, but beyond an intimation that Mr. Gale had been asked to investigate and report, I have heard nothing further. When I do I shall acquaint you with results. I will admit that it made me feel very uneasy to find hive after hive (some 20 in all), showing this mysterious disease, in some cases more than half the brood being dead in the cells, and so prove that a treatment which is infallible for the most dreaded of bee diseases, Foul Brood, had no effect on this one.

Things have turned out better than I

expected at the time, but those hives that were badly affected have received a big set back by losing so much brood being in fact weaker now than in spring when the disease first showed itself; that alone is serious enough for the beekeeper who expects and needs a return from his bees. As regards treatment, I advise nothing beyond precautionary measures to prevent as much as possible the spread of the disease. Above all not to exchange combs except among colonies actually affected, and to avoid robbing under any shape or form. Although I was successful in the requeening process I would not advise that treatment, first because the disease might have disappeared just as well if things had been left as they were, secondly because it is rather a serious matter to leave a hive queenless for a fortnight or more, and requeening immediately on removal of the old queen did not seem to have any effect with me. I am glad to see that Dr. Howard, who has given foul brood so much attention, has got the disease under investigation. It is to men like him, who have the necessary apparatus and skill and knowledge for work of this kind that we must look for a solution of the problem. Professor Cook gives it as his opinion that the disease in California is caused by want of unsealed honey in the combs, and the larvae being stinted in food. This I think is a mistake, for in most of my hives I uncapped the sealed honey and revrsed the combs to stimulate brood rearing, and the bees shifted all that honey into the cells next the bottom bar and back again when the combs were "unreversed," so that the brood cannot possibly have gone short of food.

This rather lengthy letter embodies all I know of the disease, and I hope to know from personal experience.

Mr. Dent, Balgowine, writes :—I am very much pleased with the *Bulletin*, from which I have been able to learn much that is interesting to a novice like me. I trust that the paper will be supported as its merits deserve.

THE GOLDEN BEAUTIES.

JOHN S. DICK.

In December number Mr James says —"Without doubt the golden beauties are most subject to disease. Mr Patten protests against such statement in January issue. Well, Sir, having both in my apiary, and disease being rampant in this district, allow me to give my experiences of both. I tried a hive of goldens 12 months ago (perfect beauties); this past spring I divided, and neither the original or the division has done anything since, but develop foul brood, and honey I had none from them. I received a Ligurian queen last winter (June), and introduced into a colony of blacks. I divided in spring, they went off at a jump and although side by side with the goldens and blacks (which are foul), they are clean and strong, and I have had 120 lbs of honey from. They fully confirm Mr. James' statement.

J. S. CADDEN.

Dear Sir,—In December number, Mr. G. James again has a hit at the Golden Beauties, going out of his way I think to do so, for color or race is not a subject for that month. In last month, I think Mr. R. Patten fairly and completely put the matter beyond discussion. If Mr. James desires to injure or prevent the sale of golden beauties because he has given them up, I will only contrast his conduct with his remarks in A.B.B. for June 1894, page 76. I will just say this, I have found Doolittle's strain of goldens, and queens reared from them, as good workers as any others, either pure or hybrid, and we all have found some hybrids excel even pure breds. I am quite satisfied that colour has nothing to do with cause of disease, and endorse Mr. P's. remarks re breeders in America, and I fancy I see as many bee papers and reports from America as any one. The show season is on and, among other schedules before me is the Hunter River A. and H. Association's, and in the rules and regulations I am pleased to see the one No. 12 page 70, and should be pleased to see such rule everywhere and con-

firms my remarks re judging, &c., as read at last Convention.

Mr. A. J. Flood, Pakenham, writes:—A heavy flow of honey has buried foul brood till next season. Bees are working well on appletree and messmate.

Sections coming off and extractors going is the order of the day. Of 32 swarms taken in the bush 16 were in dead trees, and 16 in green ones. See page 244 *A.B.B.*, re bees in green trees.

Mr Albert Sommerlad, Tenterfield, writes—The B.B. comes regularly, and I like it very much. I have increased my colonies from 8 to 22, besides extracting 5cwt. of honey. Would you kindly inform me whether it is unusual for a queen to decline to lay eggs in drone cells, even though they are plentiful? I have a queen which never laid a drone egg in her life, and she is now two years old.

Probably the queen is not prolific enough to lay a good colony of bees around her, or you have an unusually good queen. Will others have a say on this.

Mr Pratt, Richmond River, writes:—My apiary consists of fourteen colonies of bees. Up to the 15th of last month honey was coming in freely, some of the colonies yielding 24½lbs in ten days, and some 14lbs in seven days. I do not expect to do very much here with bees, as it is a very wet part of the colony. From the 18th of January until now (2nd February) it has been raining constantly, so that the bees have not had a chance to get out to gather any honey. In a few months' time I expect a scrub tree out in flower, called the buoyong tree, from which the bees gather a lot of splendid honey, as I have been informed by other beekeepers.

Schumach Bros write:—Our bees are doing very well here now, the apple trees are all in bloom and the bees are working on them well. The honey is rather dark but has a nice flavour. There is a great deal of pollen gathered from the apple trees as well as honey. Yellow box and red gum, and what is called the small leafed box that did not bloom in the spring are budding now, and should bloom next month. So with those and the five-corners blooming in April the bees ought to do well until June. It is very likely that myself and brother and a friend, Mr. J. King, will be present at the Conference at Bathurst in July.

Mr Hugh Russell, Wartook, Victoria, writes—I consider the *Bulletin* a capital periodical, full of practical information, and of great value to the beekeepers of all the colonies. I shall do my best to induce the beekeepers of this district to become subscribers.

Mr Wm. Gee, Campbeltown, writes:—I have 38 Italian hives all in a healthy condition. Up to the present time there has been very little honey flow, but now the bees are commencing on the ironbark trees, which are just coming out in bloom. The greatest honey season here is February and March.

Mr Cadden, Windsor, in a communication to Mr Mansfield, says—We have been flooded like yourselves. Of course it is not near me, still the wet is against the pets. The rain caused my grapes to burst, and what a picnic the bees are having. Hives fast filling up, both with bees and honey, the latter being sealed over for first time this season.

Mr. W. S. Pender, gives the following method of dealing with swarms:—If the two swarms come out together, just hive them in the one hive. If one comes out within three days of the other carry the new swarm and shake it at the entrance of the hive that contains the previous swarm. Should the bees show signs of or start fighting, sprinkle them well with flour, pollard, or some similar farinaceous substance. If more than 3 days intervene between the swarms, hive each one separately and unite them after each has brood well advanced. See uniting under "Special Work February N. Z."

Mr A. A. Roberts of Muswellbrook has sent us a queen cell with two eggs laid in it. Can any one give us a similar experience, also reason for such?

Mr E. [illegible] Penglase, Fernbank, Victoria, writes:- We started beekeeping about two and a half years ago and we have 40 strong colonies and five nucleus, several are pure, the rest hybrids. We do our own queeu rearing and change our breeders every season so as to avoid in-breeding. Last season we bred from a pure Cyprian, and this season we got two golden queens so that now we have some very nice bees. I think the Cyprian blood mixed with the Italians a great improvement for we get nice color and good hardy bees. We live on the bank of a running stream and we have a stretch of forest on one side which reaches for miles, and nearly all kinds of eucalyptus, hnoneysuckle, wattle and titree, plenty of native flowers, wild hop and dandelion. We fancy we hear some of your readers say they must be in the place for honey, but we can only say that the last three years has been very poor as regards honey, last year it was too wet, this year it is too dry. Nearly all the selectors' bees are dead; so are most of the wild bees, and I have just heard that a beekeeper about 30 miles east from here lost all but two hives. Just fancy that here in the land of milk and honey, for it is very seldom that three bad seasons for honey follows in Gippsland. We live in hope that when it does come we shall have it heavy for there has been 500 lbs taken from a hive in one season here in good time. All Victoria is not as bad as this part for we hear that the western parts are yielding good crops. Generally when it is good in the west it is poor here. We are much pleased with your journal and the way you answer questions. We think it a great help to new beginners. We notice in your Jan. number that Mr Burke had great trouble introducing a qneen. We always use tobacco smoke when the bees refuse to accept a queen that has been caged 24 hours, give them a good dose in the evening about sundown, say half a dozen puffs from a pipe, release the queen, and they will take her then. It makes them stupid, and must be done when there is no fear of robbers getting a start. They will be lively enough again in the morning. We have had some experience with foul brood. The way we treat it is on the starvation plan, and a young queen. Some get on all-right, others are as bad as ever as soon as brood rearing is in full swing. I think the best way is to smother the lot and boil the hive and get it ready for a new swarm.

Mr. Herbert Litchfield, Drysdale, writes:—Dear Sir,—I am in receipt of your letter containing full and courteous answers to my questions, I am obliged to you for the information, I only desired an answer through the *Bulletin* and did not intend to put you to the trouble of writing especially. There is one other matter which is troubling me, and to which if you have space in your periodical, I shall feel thankful to have an answer. I have a disease in two or three hives. In the early spring an experienced beekeeper saw it and said that he did not think it was foul brood. The disease has all the appearance of F.B. except that there is hardly any smell, and the hives appear strong and vigorous in spite of it. In some cases, two-thirds of a frame will be diseased, the capping dark and sunken and the contents tenacious and coffee coloured, but still no smell to speak of and certainly no gluey smell. I have a suspicion that these hives may have been chilled in the early spring, but I have since changed the queens. I have thought that by extracting might do it but the disease confines itself to about four hives. I take it that if hives had reached the style of foul brood that I have described they would waste away quickly, but in this case it is not so; they continue to increase. I am at a loss to know what to make of it. It is very disheartening to have to destroy three or four hives and I therefore do not care to do so until I am certain that I have foul brood.

[Read Mr. Grant's account of disease elsewhere The absence of smell does not prevent the disease being foul brood, and if you had a honey flow all the season your bees could increase spite of the disease. Have you tested it for ropiness?

Mr J. J. McCue, Moorside, writes: I received *Bee Bulletin* all right, and am pleased with the contents. I am starting a bee farm here—commenced in October last by purchasing hives of black bees, which I doubled on arrival, so have now 21 colonies in frame hives, and am busy Italianising them, having purchased ten tested Italian queens; when I fix these ten up I am getting ten more, for from what I can read I find the Italians are the best bees. Mr Gale, when judging my poultry farm for National prizes, said I had a splendid location, in front of house on the two strips of lawn, for an apiary. But I was afraid of bees then—but now, as game as a "soger ant." I used no veil or smoke up to the present (but now have a smoker); got a good many stings, and swelled terribly at first, but now I don't swell at all, or do I feel the stings so much. I have two bee books—"The Honey Bee," revised by Dadant, and Root's "A.B.C.," which I am studying to help me care for the bees properly; and the *Bee Bulletin* of course I must have. Please send it to my address, and as soon as I get to town I will forward postal note for subscription. "Moorside" being 12 miles from town makes things awkward for sending cash. Now and again I will send you any bee notes I can gather in this district that would be of interest to readers of *Bulletin* and if you like I could send you an amusing paper about "How I started an apiary" (if you think the w.p.b. would not get it.) I am only a beginner at the bee business, and from consideration I think that "'tis easier to get the honey than to get a market for it." Just now my colonies are doing wonders; the wattles and other trees being in heavy bloom. Well, I don't think my bees have to go more than 400 yards (if they do they are silly), for the trees are loaded all round the place, and as far as the eye can range I can see heaps of blossoms.

We shall be very glad to hear often from you and your "How I started an apiary," we shall be very pleased to see.

Mr Smith, Currabubula, writes:—This season has not been very favourable for bees here, as the lengthy dry weather we have had kept back an abundant yield of blossoms, but now that we have just had some good rain there will surely be plenty of honey for the bees. My bees have so far enjoyed immunity from any disease this season. Honey is very cheap in the local market the result of much inferior honey, principally non-extracted honey, which as a rule has a bad taste. I am glad the silly bickering and wrangling against school teachers keeping bees has ended; for they have proved themselves to be invaluable members of the bee-keeping community, without whom we cannot get along so well.

Mr. G. Hutchings, Rupanyup, Victoria, writes:—I am sending you year's subscription for your valuable little paper. We have had bees in frame hives several years, but did not pay much attention to them till we paid a visit to Mr. Russell's apiary, in the honey season, two years ago. I launched out last year, by buying 25 swarms in old boxes. The bees had a hard time of it coming home, 20 miles over a very rough road in a waggon, with a lot of new honey in the boxes, most of which marked the track I came. I built a neat shed last winter, and a roof of Tasmanian palings, 150 at 25/- per 100. I made an ant proof bench with empty tins inverted over the legs, which are sunk into the ground. I think this is better than the swinging stand, because on them you cannot touch one hive without setting them all swinging, and so disturbing them. I think shade over the hives is very necessary, as even then the combs sometimes melt out if the frames are not wired. I bought an Italian queen last year which proved a grand investment. I believe that three Italian hives will give as much honey as a dozen of the others. I have received a lot of valuable information from the *A. B. B.* The more honey we can produce in Australia, the more likely we are to open up a lucrative export trade.

Mr A. McLean, William Town, writes —The BULLETIN is very interesting indeed, and should be in the hands of all thoughtful beekeepers.

Mr A. Falconer, Darke's Forest, writes—Would you be kind enough to let me know what hive is thought best for practical purposes, and what timber is best for making; also if the Hoffman self-spacing frame will be a handy frame for extracting.

[For practical purposes our own experience is in favour of the 10 frame Langstroth, with self spacing frames. And if we changed it would be to a 20 frame hive. Re timber colonial pine is as good as any, but there are other light timbers that are said to answer very well. The Hoffman self spacing frame is equal to any for extracting.]

Mr Frank Curr, Bendolba, writes:—I have moved my bees out near the forest since I wrote to you last year, and they are doing remarkably well. Tallow wood and ironbark bloomed splendid here this season.

Mr W. Jupp, Bingleburn, writes—Honey is very plentiful in this district, both from box and apple tree, but the late rain has done a great deal of harm. I may add I live about eight miles north-east from Gresford, on the dividing range of the police districts of Paterson and Dungog. As you kindly invite questions I beg the favour of a little information re the best breed of bees. I have 71 hives of the common black bees in gin cases, and intend as soon as circumstances will permit to transfer them into the bar frame box, and change the breed. What breed of queens would you advise me to get?

[Read our advertising pages, and judge from them of the different queen breeders.]

Mr G. J. Richardson, Narellan, writes in reply to Mr. T. B. Peek's (Tamworth) inquiry why an Italian queen, bred from a pure mother, will at the same time produce both yellow and black drones:—I should say that I would always expect to find both yellow and black drones in all the colonies if he has hybrids of a lower grade or blacks in his yard. I find that drones mix to a great extent, from experience this year, as I had only four colonies of Italians at the beginning of the season and about — hives of blacks, all in Root hives, and as I intended to Italianize I encouraged drone rearing as much as possible in the Italians, and I took particular care to cut all drones and drone comb out of the blacks. and I am quite sure none were reared to speak of, as I used to go through them about twice a week, but I found that Italian drones had mixed with all of them to a great extent, and some of the hives stood a considerable distance from the Italians. Could some of your readers inform me if the common box tree comes in blossom every year in other parts of the country? It does not seem to do so here. It is showing buds freely this year, but this is the third year since it blossomed before. P.S. I like the A.B.B. very much, I find it very interesting and instructive. I cannot send you the names of any likely subscriber as there are no other beekeepers near me.

[See answer to question 34 in this issue.]

Mr George James, Gordon, writes—This has been about the worst season that I have had for the bees, and have to feed to prevent starving.

The following are the apicultural winners at the late Berry exhibition :—Extracted honey, H. C and L. R. Wilson Honey in comb, Mrs J. S. Jarret, Honey in frame, B. Naveau, A. King.

We would call the practical attention of beekeepers to the two propositions of the Lachlan Beekeepers Association :—"1. That the Commissioners for Railways be asked to carry empty tins by rail in beekeepers, return empty honey cases free of charge. 2. That as it is necessary to place honey on the market at a very low rate the Commissioners for railways be asked to reduce the present charge on the carriage of half ton and less quantities of honey." It would be well if the other beekeepers associations in the country would take up and discuss these two very important matters.

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