The Australian bee bulletin. Vol. 4, no. 39 June 24, 1895

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

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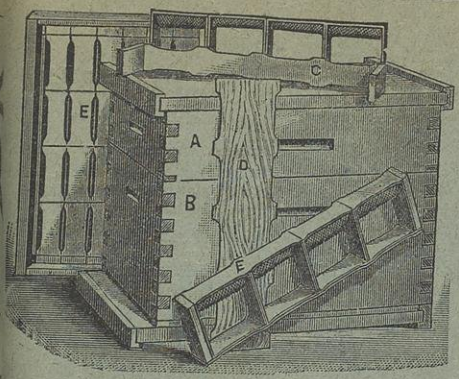
THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

VOL. 4. No. 39. JUNE 24, 1895. PER COPY, 6d

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

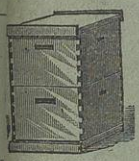


1½-Story 8-Frame Hive.

DOVETAILED HIVES.

Having imported several new machines, including a Dovetailing Machine, we are now testing its capabilities and when we know at what rate we can turn them out we will be prepared to quote prices, for which see next *Bee Bulletin*. They will be as illustrated. Any one requiring them in the meantime we will quote prices which will be ready in a few days, and it will be to your interest to get same before purchasing elsewhere.

Beekeepers requiring odd styles of Hives and Frames, etc., should write for Prices and make arrangements for next season's supply at once, as they are likely o be a little delayed if left until they are required, as our machines will be hard-ushed to supply regular sizes.

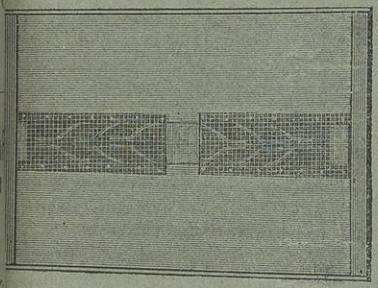


2-Story Hive

THE HEDDON HIVE.

This hive possesses many advantages over others for producing honey cheaply, and is being used and enquired for by many bee-keepers. Prices will be ready in a few days, and those who wish to get Hives at once should write for prices.

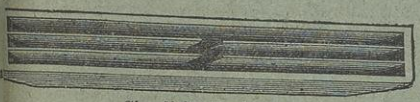
We have in use about 40 2-Story 10-Frame Hives with gable covers. These have been in use or some time and are almost as good as new and well painted. We will have these hives for isposal during the coming spring. Our only reason for selling being that in future our ut apiaries will be run with the Heddon hive. We will sell for 5s 6d each, without frames, each ive with 2 bodies, gable covers and bottom board.



Laresse Bee Escape

LARESSE BEE ESCAPE.

In our apiaries this Bee Escape has proved more rapid and satisfactory than any other, either between supers or on top of tiered cases of honey outside.



Simplicity Feeders.

SIMPLICITY FEEDERS.

To feed bees when they are getting short of food. This feeder will be found to be cheaper and better than any now offering. Price, 3s a dozen.

CHOCOS.—We have a number of this delicious vegetable, which we ill mail to any one wishing to try them at 6d each, post free. They flower from middle of nuary to frost, and the bees are continually at work on them. The fruit is planted in Spring nd will grow either on ground or trellised. A prodigious producer of fruit.

Save your copies of the A. BEE BULLETIN. Send to us and we will bind 12 numbers of them for you for 3s.

E. TIPPER.

NOTICE.

I shall be at the Bathurst Convention, and will be pleased to receive subscriptions for the A. BEE BULLETIN, Advertisements, &c. Will also have samples of labels, &c.

E. TIPPER,
A. Bee Bulletin.

The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—JUNE 24, 1895.

ANOTHER year has rolled round since the last N. S. W. Beekeepers' Convention, and in the course of a few days the beekeepers, both of Victoria and New South Wales, will be sitting in Convention in their respective colonies. In both colonies good work has been done during the past twelve months. Important Railway concessions have been granted and both Governments have taken active steps towards the establishment of foreign markets—Victoria, both by her bonus system and the Government system of grading and branding; New South Wales by the promise of a Foul Brood Act, and active enquiries re markets in the old country, at the instigation of the members of the National Beekeepers' Association. Although not much immediate success has attended in either colony, still there is room for hope the deliberations of the Conventions now about to sit will lead to results of substantial benefit to the beekeepers of both colonies.

WORK for this month in the apiary is that of "let alone." If the hives have been seen to earlier that they have plenty of food they should now be left severely alone. Any possible good that might be done by opening of hives will be more than counterbalanced by chilled brood and the breaking up of the comb and propolising arrangements the bees have made for their own comfort and warmth.

THE *Sydney Morning Herald* of June 15, contains the following:—

> The cases of honey shipped by the Woolloomooloo to London are of fair colour, but bad flavour. They are valued below Jamaica, which is selling at 23s.
>
> The 55 cases of Government branded honey were offered by auction, but there were no bids. The rest is being offered privately, the only likely buyers being the druggists.
>
> Many of the tins had leaked, and some were only half full. The consignees suggest that stronger tins should be employed, and that they should be packed singly.

A kick back, isn't it? We recollect on one occasion sending some three large jars containing Australian jam to England. When they arrived at their destination one of them was broken and the contents nearly all disappeared. Our correspondent who received them said, "It was very probably the Custom-house officials broke it open to see what was in it." Again, is it not a fact that the butter men rely on the English winter market to sell their butter in, not in the summer, when there is plenty of English and Danish butter coming in? Now, June is the middle of summer in the Northern Hemisphere, and the honey has been rolling in for some month previously. Honey coming from Australia, then, is only making a glut in the market. But it will not be doing so in winter time. November to May. As to its being of bad flavour, if that is meant for the branded honey of the Victorian Government, we have too much confidence in the men appointed by that Government to believe they would send inferior honey. And Australian beekeepers should be pretty well acquainted by this time with the tricks and dodges of bears and middlemen. So the kick is not so very bad as at first sight appears.

Heat will spoil honey long before it comes to the boiling point.

Sorry to have to hold over a lot of interesting and valuable correspondence.

The French are now paying great attention to the length of bees' tongues.

We omitted to state in our last that Mr A, Gale was sole judge at the Wellington Show.

Mr Blow, the well known bee-man of Welwyn, England, has been taking a tour in the West Indies.

As postage stamps are not negotiable in New South Wales, will our friends in sending their subscription to the A.B.B. do so in postal notes or post-office orders.

We have to hand a lengthy report of the Wellington Point Show, near Brisbane, Queensland. Among tke prize winners we see the name of Mr F. Burbank, for three bottles extracted honey, and sample of honey in comb.

There is one man who has been working and thinking very hard in the interests of beekeepers. We allude to Mr H. R. Whittell, hon. sec. of the National Beekeepers' Association. We have had opportunities of knowing this. It should not be lost sight of at the Convention.

The Victorian Railway Commissioners have agreed to carry hives, &c, for those who wish to remove or establish outapiaries, at truck loads 1s 3d per mile, with three tons, and 16 miles the respective minimums for weight and distance. Any additional weight over three tons to be charged *pro rata*.

We are pleased to publish the following for Mr Colhoun,—Please correct in next *Bulletin* a slight error that occured in last month's issue. It should read, I have 170 hives of bees in my two apiaries, on the Hastings & Macleay Rivers, independent of my brother at Kiama, of whose apiary I have nothing to do with.

We see that Mr. Albert Gale is still on the warpath. He addressed a meeting of beekeepers at Millthorpe, on bee appliances and how to use them, afterwards at Springhill, on general bee culture, the result being the formation of an association, and we believe the same will be well represented at the forthcoming Bathurst Conference.

Mrs. Jennie Atchley has relinquished the editorship of the Southern department of the *American Bee Journal*, her place being taken by Dr. J. P. H. Brown The *Southland Queen* edited, we take it by Mrs. Jennie Atchley, was to have started in the beginning of May. With her ability, experience, and reputation, there ought to be a splendid future before it.

A great number of February A.B.B.'s went astray in the post. In every case where we were apprised of same we sent a fresh copy till our spare copies run out, and also forwarded the complaint to the Postmaster-General, who promptly made a searching investigation, for which our best thanks are due, but without any commensurate results. As a consequence we are run out of the February number, and will be glad to receive such from any that can spare them.

VICTORIAN BEEKEEPERS' CONFERENCE.

From the Farm and Home.

The meeting of the Beekeepers' Conference has been fixed for Thursday and Friday, the 4th and 5th of July. The Mayor of Melbourne has kindly consented to grant the Association the use of a room in the Town Hall.

Arrangements will be made with the Railway Department to secure for delegates attending the Conference return tickets at excursion fares. All beekeepers wishing to attend this Conference should at once notify the Secretary if they are members of the Beekeepers' Association. The subscription fee is only 2s 6d per annum. Send your subscription when intimating your intention of attending the Conference.

By the time the Conference meets it is probable that reliable information will be to hand regarding honey which has been exported.

It now remains for those concerned to move on further with the work of export.

This will be the chief business for discussion and decision.

The Secretary would be pleased to receive as many samples of honey as members are able to bring for exhibition The following schedule gives the outline of questions to be discussed, subject to the further arrangement of the committee :—

PROPOSED PROGRAMME.

JULY 4.

10 a.m.—Committee Meeting.
11 a.m.—Roll Call of Members.
Secretary's Report.
Discussion.
Notices of Motion for Discussion on following day.
2.30 p.m.—Our Victorian Honey Resources.
Classification of Honey.
Packages for Home Trade and Export.
Present Prospect of Export.
7. 30 p.m.—The Production and Preparation of Beeswax.
Black Bees v. Yellow Bees.
Foul Brood Reports.
Methods in Manipulation.
Reports of Yields

JULY 5.

10 a.m.—The Formation of a Joint Stock Company to Undertake the Export Trade.
Railway Freights on Honey Bees.
Notices of Motion.
2.30 p.m.--The *Australian Farm and Home.*
New Ideas on Beekeeping.
Large v. Small Hives.
Shade and Cover.
Is the L. Frame the Best for all Purposes?

THE NATIONAL BEEKEEPERS' ASSOCIATION.

The committee of the above met at Messrs Hebblewhite & Co., George St., Sydney, on Friday evening, June 14th. The following were present: Rev. J. Ayling in the chair; Messrs Abram (vice-president), Whittell (hon. sec.) Trahair (hon. treasurer), G. Gordon, Tipper, Seabrook, and Bloxham.

The minutes of previous meeting were read and confirmed.

CORRESPONDENCE.—A telegram was read from Mr. A. Gale that the convention would be held in the School of Arts, Bathurst, instead of the Town Hall. From Mr. Guthrie, expressing his willingness to read a paper. From Mr. Nancarrow of Wellington, stating that delegates would attend from that district, and also bring honey and other exhibits. From Mr Patten, offering to read a paper on any subject provided he had four days notice. From Mr. Ellery regreting his inability to attend the Convention. From Mr. H. L. Jones, of Queensland, expressing his intention to be present. From Mr. Niven also giving suggestions re future associations From Mr. Lord, who would give a short paper on bees, to be read by Mr. George Bloxham. Mr. George W. Gordon, to read a paper on the Beekeepers' Union,, its functions and aims. From Mr. J. D. G. Cadden, offering to read a paper on the scope of a beekeepers association. Mr. W. Abram, on constitutional conventions and systematic beekeeping. Mr. W. S. Pender on hives, locality and management.

Mr. Whittell announced that Mr. Trainor. proprietor of the principal hotel at Bathurst would accomodate the delegates at 4/- per day. That the North Coast Steam Navigation Company would allow delegates to travel on their boats at single fare for the double journey. Mr. Shaw, Mudgee, offered to read a paper on swarming. Mr. Whittell also announced the number of applications to attend the conference up to present time as 107. On the motion of Mr. G. Bloxham, it was resolvsd to ask Mr. G. Colbourne, junr., Cave Creek, to read a paper.

The Secretary said he had sent invitations to 27 members of Parliament.

It was agreed the Convention should open on the first day at half past ten.

Mr. Whittell read the draft of report to be read, which was agreed to, on the motion of Mr. Tipper seconded by Mr. Bloxham.

On the motion of Mr. Trahair, it was resolved to ask Mr. Patten to read a paper on the Co-operative Honey Supply Company. It was resolved no paper occupy more than 20 minutes, each speaker on it 10 minutes, and the reply

18 minutes.

The following programme was then arranged :—

Open address by the Hon. Sydney Smith.

Secretary's Report.

Paper by Mr. G. W. Gordon on the Functions of a Beekeepers' Union.

Paper by Mr. Cadden on the Work and Scope of The National Beekeepers' Association.

Mr. Abrams on Constitutional Conventions and Systematic Beekeeping.

Mr. Whittell on Organization.

Mr, Guthrie on Honey, its Composition and Adulteration.

Mr. Lord (to be read by Mr. Bloxham), Bees.

Mr. Shaw, Mudgee, on Swarming.

Mr. Patten on The Co-operative Honey Supply Company.

Mr. Tipper on Beekeeping.

Mr. W. S. Pender on Hives, Locality, and management.

Mr. Trahair offered to get up programmes free of cost. The offer was accepted on the motion of Mr. Bloxham, seconded by Mr. Tipper.

MUSWELLBROOK B. K. A.

(*From the Register.*)

The usual monthly meeting of the above association was held in the School of Arts on Saturday night, the 1st inst. and the attendance was good. Mr. A. Weidman, Vice-president, in the chair.

The minutes of the previous meeting were read and confirmed on the motion of Mr. Clark, seconded by Mr. Paul.

Accounts were received and passed for payment, subject to the usual conditions.

Mr. Grant said he had received a private letter from Mr. Tipper, stating that the duty of 1d per lb. was about to be taken off honey, and that if it was taken off, it almost meant ruin to the Beekeepers of New South Wales, He quoted figures as given in the May issue of the *Australian Bee Bulletin.* After a short discussion the matter was allowed to drop.

Mr. Paul said he had received nine photographs of the honey exhibit at the late show and they had all been distributed but two, and he thought that the association should present one to Mr. Gale, and one to Mr. Tipper. He moved and Mr. Ellerton seconded, that one each be presented to the gentlemen named, and was carried. It was also decided to have them both suitably inscribed.

The chairman suggested that the next meeting be allowed to lapse, as there would be nothing to do, and little to talk about while the bees were taking their winter rest.

It was moved by Mr. Paul and seconded by Mr. Luscombe and carried that the next meeting be allowed to lapse.

The chairman reported that he had been to his country apiary, and had found some of his bees in a very bad way. He brought a frame home with him to show the members to see if they could find out what was wrong. The frame was greatly mutilated, nearly all the cells in the centre where it had been used for brood were torn down to the base, and the outer edges where the honey was, was not touched.

Mr. Grant thought that ants and not the bees had torn down the cells, or otherwise, the brood had got chilled and the bees had broken down the combs to get it out. After a short discussion (the cause of the peculiarity being still in doubt) it was decided to visit the apiary on Wednesday next, and if the mystery was not solved, to forward the frame with some bees to Mr. W. S. Pender.

Mr Ellerton desired to have the opinions of members as to the best kind of quilts to use over the frames.

Mr Paul said he thought the same as Mr Jones, that all that was necessary, was a good cover, and proper bee space and no quilt.

Mr Grant was of the same opinion as Mr paul, but should he use anything, it would be a half story with bagging tacked on to the bottom and slats put on to preserve the bee space and packed with chaff.

Mr Roberts was in favour of felting as it would soak up all moisture.

Mr Paul was asked to read a paper at the next meeting, on "Spring Management," and having consented, the business closed and the meeting terminated.

LACHLAN B. K. A.

W. NIVEN, HON. SEC.

The monthly meeting of the Lachlan B. K. A., was held in the School of Arts, Eugowra, on 5th inst. A good attendance of members were present. Mr N. E. Osberg, chairman.

Minutes of previous meeting adopted on the motion of Mr Miller, sec. by Mr Smith.

Correspondence received. A letter from Mr Tipper, (A.B.B.) calling the attention of beekeepers that it is likely the one penny per lb duty will be taken off honey imported into the colony, and suggesting would it not be well for beekeepers to agitate against it. After discussing the matter for some time, many of the members not falling

in with Mr Tipper's views, it was decided to let the matter stand over for further consideration.

A lengthy and able letter from Mr Whittell, Hon. Sec National Beekeepers Association, urging beekeepers to attend the Beekeepers Conference, to be held in Bathurst, 3rd, 4th, 5th July, and make a united effort, and force the beekeeping industry into the position it deserves. Other correspondence of less importance also received.

Proposed by Mr Kirby, sec. by Mr Lynch, that Mr Niven represent this Association at the Conference to be held in Bathurst.

Proposed by Mr Lynch, sec. by Mr Miller, the Sec. be instructed to ask Dr. Ross and T. Brown, Members of Parliament, to support the passing of a Foul Brood Act, to be introduced by the Minister of Agriculture.

A paper by Mr H. Wright, on artificial swarming, read by Mr Miller, which was attentively listened to. Mr Niven considered the system described a very good one, and thought persons having only a few hives if they adopt it they would often prevent the loss of good swarms at swarming time. Proposed by Mr Chesher, sec. by Mr Miller, that a vote of thanks be accorded to Mr Wright for his paper.

Proposed by Mr Kirby, sec. by Mr Smith, that the next meeting be held in the School of Arts, Eugowra, on 10th July.

MURRUMBIDGEE B.K.A.

W. A. HOWARTH HON. SEC.

Since my last communication we have had several meetings, at which there has been a fair attendance of members. Rules and regulations have been agreed to, and we now feel ourselves as fairly hatched and on the wing. You will see by my heading that the name of the association has been changed (which I humbly request you will have placed upon your register). As liberal unionists we considered Wagga Wagga too conservative, hence the change. Matters in connection with the forthcoming Convention have been talked over, and there is no doubt that our veteran President will ventilate them, providing he gets a chance. We have nothing to complain of in regard to the bees in this district, the winter being so dry. The bees are still at work; the box-trees are still in bloom; there does not appear to be any kind of disease in the district. Our President, who is very vigilant in this respect has had nothing to report. At the Convention this association will be represented by our President, Mr T. Halloran, of Fernleigh, Wagga, and Mr W. A. Howarth the Secretary and Treasurer. Our member, Mr James Gormley, has signified his intention to be present at the opening.

QUESTION NEXT MONTH

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

This question is given on account of the steady rise in value of wax in the Euporean and American markets.

39.—G. Colbourne, Junr.,—Do you use chaff hives, if so please give your experience with them?

QUESTION.

J. ANDERSON, VICTORIA.

36—Having made all my hives myself, I have tried different covers, but prefer and use the ventilated gable covers and place a piece of flour sack over frames

No. 37—What do you do with your spare combs during the winter months?

A. J. BROWN.

37.—I use ordinary sugar bagging with paper over it.

H. L. JONES, QUEENSLAND.

37—Leave them on the hives, where they are secure from moths.

W. E. BAGOT.

37.—Why keep them on the hives to extract the winter flow from.

F. HOWELL.

37.—I fumigate with sulphur, tier them up in

supers, space combs about 1¼ inches apart and make them moth and mouse proof.

ILLALONG.

37.—I leave frames on hive. If the colonies are strong they will keep the moth from them. Some colonies that have been weak I have placed paper under the cover, also between the super and brood chamber.

G. COLBOURNE, JUN.

37.—I hang all my spare combs in the extracting supers and stack them away, being careful to have no cracks large enough for mice to get in. Look over them occasionally to see that moth worms are not doing any damage.

WILLIAM NIVEN.

37. With fairly strong colonies we make no alteration in the hive during winter, bees having the run of combs. Weak colonies of bees are contracted in brood chambers. Empty combs are allowed to remain in top story over them.

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

37—I leave the empty combs in the supers and store them in the storerooms without any other preparation. In the spring, I take them out and place them on the hives. I have no trouble with the moths anywhere since I have had Italians.

A. F. BURBANK.

37.—I place all spare combs (when I have any) in supers or empty hives § of an inch apart and stack them up in the honey room, leaving the top and bottom boxes empty so that a tin containing burning sulphur can be put in when necessary. Great care should be taken that none of the combs touch each other, because this gives the moth grubs a good chance to web them together, which they will do in less than a week if the weather is warm.

A. J. BROWN.

37.—As winter approaches when I know supers are not required with me, I extract all honey from the combs, which I replace for two or three days for the bees to clean out. I then remove the supers with combs to my honey house and stand them in tiers about eight high. Into each tier I place two pieces of camphor, rolled up in seperate cloths to avoid too speedy evaporation, one piece near the top of tier and the other near the bottom. Each tier is stood on an ordinary bag, and covered with same, over which I place a hive cover. When treated thus my combs are as good at the end of winter as in the beginning. They are always free from moths and disease is unknown in my apiary.

FRANK EVALD.

37.—The best way is to have a small room partitioned off at one end of the honey room with racks to hang or stand the combs on. Another good plan is to place the combs in hive bodies, tiering up same to any convenient height on top of an empty box withsides and back only and at front a loose board put a cover on top of each pile. To destroy bee moth larvae that may be in the combs, put a vessel containing burning sulphur in the bottom box and close up same. As precaution against fire, the sulphur pan must be put on a brick or in a larger vessel containing ashes and covered with a piece of tin or sheet iron.

W. CRAWFORD.

37.—I sought out all brood combs, from super combs, clean them, and stack them seperately in supers two inches apart and spray them with No 5 carbolic acid well mixed with water, 1 oz. of acid to two quarts of water. Put the supers on top of one another as high as they will go all around the room, so as they can be got at easily. Also each stack with a ticket on brood combs, super combs, honey, &c., so by walking around the room you can see at a glance which combs you require, whereas if they were all stacked in one end of the room you would have to move the front ones to get at the back ones. If any grubs should be found in the combs they may be killed by fumes of burning sulphur by raising the supers up and putting it underneath.

W. S. PENDER.

37.—I find Italian bees can take care of empty combs during winter—in fact during all seasons—better than I can, so I leave them on the hives without removal The bees will generally take possession of an upper story, leaving the lower story empty, but having to pass through the lower set of combs they keep them free from the grubs of the wax moth. If I have any empty combs over after all two story hives are full I fill extra stories and place them under one-story colonies, making them two-story also, but leaving the bees in the upper one. If mice are troublesome the entrances need attention; keeping combs out of the hive does not pay. They need constant attention and fumigation. Combs that have never had brood in them and contain no pollen are not nearly so likely to be attacked with the wax moth as brood combs. I think the only comb destroyers beekeepers need fear are the larvæ of the wax moth, mice, and damp, and if these are kept out all will be right.

T. BOLTON.

37.—During the last extracting round all combs that are in any way imperfect or contain drone cells are cut out of frames for sake of wax they contain. These frames are alternated with the combs in the super cases and are returned to and remain on their respective hives all winter and spring, and in spring are ready to hive the new swarms into. Contrary to general teaching on the subject I find (as Mr. D. Fisher has recently pointed out) that colonies with their supers on all winter are if anything to the front earlier than those made (supposedly) snug by their removal in autumn. This being so and as by leaving them on the hives we are not exposed to risk by fire, and save storage, room, indoors, it is in my opinion best to do so.

Should anyone be troubled with or exposed to foul brood, when it is discovered in spring, it is no small advantage to be sure where the super combs of the infected hives are and to have them by no mischance distributed amongst other hives, for foul brood, so visible in spring, was in all probability existing there the previous autumn though not visible in the brood combs or brood if there was any when last examined.

HOW I BEGAN TO KEEP BEES.

J. MC CUE.

Last October I saw a tree fell for honey, and noticed the day after the tree was robbed of the honey, that the bees were still there. On the third day I had occasion to pass it again, and saw that the bees were still in the log (it was raining all the week at this time), so I stopped and had a very, very, careful peep at them, and seeing that they were quiet, I reckoned I would get a box and hive them. I soon got the box, and "rigged" myself up for the fray—a mosquito curtain—no a piece of one, a big coat, and an old pair of driving gloves, and I was fixed up.

I started to lift the bees gently, a handful at a time into the box, until I got the best part of them in, then stood away a little bit to watch the few bees that were flying, and see if they would go into the box,—but they did'nt—they settled on a little titree bush, when soon after, all I had in the box were tumbling over one another to get out and join those on the bush. "Here's a go," I said "what's up, I must have missed her majesty." So I placed the box under the bush, and shook the cluster into it. I fixed the box so as the flying bees could join the bees in the box, when they started doing so. It was not long before all was quiet, so I covered the box and left them till sundown. When I went back, and peeped into the box I found it empty,—all the bees were gone— and clustered in the log again. I had another "go" at them, found the queen this trip, and to prevent further absconding I cut her wing, and placed her in the box, where the bees soon followed her. I then made all comfortable for the night and left them till daylight. Next morning, at peep of day, I found all the bees snugly clustered in the box. I carried them home and placed them on a stand I had ready. So much for my first colony. I did not feel my "bunged eye" when I *saw* them comfortably fixed on their stand.

As soon as the rain gave over George Brooks (our great bee hunter in this district), came over to help me take some colonies I knew of in trees close home. The first day we fell three trees for four colonies (one tree having two hives in it. We got two kerosene tins of honey, and made two colonies out of the four. The next day we fell four trees, getting nearly two kerosene tins of honey, and made two colonies out of the four. After this we waited for a week or so, which enabled me to find about a dozen more bee-trees, these we fell as our time allowed. By the end of December we had fallen over 20 bee trees, and the furthest not half a mile from the house.

On Jan. 1st., I had 13 colonies in boxes, so I made up my mind to transfer into frame hives. I rigged myself up again—mosquito curtain, thick coat and gloves—two bags spread on ground, (made the missus close all windows and doors) to lay hive and box on. I stood the box on its end, opening facing me, when I saw 5 nice combs hanging on the bottom of the box. Now, says I, I wish I had them on the frames. Bnt here goes. With an old bread knife I cut the first comb out, which contained all honey, so I put it in wash-hand basin and covered with cloth for fear of robbers. Then cut out next comb, which had young bees in. This comb I trimmed most of the honey from, and fastened it in a frame. So with the three next combs. By this time I was nearly suffocated with the heat, caused by my "rig out" --off comes the lot, big coat, veil, and gloves—I thought I may as well chance getting stung to death as to be suffocated.

After I had taken all the combs from the box, I turned it mouth downwards over frame hive, and gave it a few good knocks, which shook most of the bees into the frame hive. I then placed frames in, and put on oilcloth and cover, and soon had the pleasure of knowing that the queen was in frame hive; as the flying bees flew and crowded the entrance in a very short time. As soon as I saw most of the bees were in their new home, I placed it on a stand, where the old box stood previously. I used no smoke, and only got four stings, and these were got through pinching the bees while fastening the combs to the frames.

To be Continued

CAPE OF GOOD HOPE.

BEE KING.

Drought still on, no rain. Not sufficient to wet the ground thoroughly, so we have not got a bright outlook for our honey season. Our last two seasons were very bad, bees in the veld died of hunger. They even forsook the hives as they were not strong enough to defend their hives from moths and beetles At the present time our bees are working on the blue gum and Kie apple and several other shrubs are in bloom at present. Mr. Patten, Binni Apiary, Bolwarra, has responded to my invitation by sending me a queen bee, but I am sorry to inform you that it arrived, but was dead. Another gentleman also sent me one, Mr. J. McFarlane, of Lyndhurst, Victoria, so he informs me by letter, but it has not arrived. I am of opinion that the distance is too great for any certainty of their arriving alive. Perhaps as England is nearer, I might try to procure some there. I am glad you like the papers. There are several young beginners and farmers going in for beekeeping. If we only had rain we would have plenty of honey. I must also thank the many bee merchants for their kindness in sending their catalogues to me. Through them there has been several inquiries for bee hives and hive material, as the catalogues are beautifully got up and the prices for hives are second to none for cheapness, the only obstacle being the freight, which is very high, but I still hope that you will receive some orders from Africa.

BECHUANALAND.

We are indebted to Mr Stirley for a copy of the *Bechuanaland News* of March 23rd., in which the following items occur. It may be interesting to Australians to learn that at a show there 3/- is charged for admission to the grounds, and so much more to the various sections, viz: 5/- to the dog section, 1/- to the bee section, &c :—

Iemand woonachtig in het distrik Britstown schrijft aan het plaatselijk blad dat hij dit jaar 120 pond honing uit een enkel bijennest, gesneden heeft. Daar zit geld in de bijenteelt, en die industrie is eene waaraan hier nog veel gedaan kan worden.

Somebody living in the district of Britstown writes to this paper that this year he took out of one of his hives, 120 lbs honey, There is money in bee-culture, and plenty to be done in it.

Bees have too long been neglected in this country, not only as a source of income, but as useful in gardens and fruit orchards in fruitifying the blossoms. Messrs. Gowie and Davidson's exhibit of bees and bee appliances, therefore, was a useful item in the show and seemed to be well patronised, as much as £15 being taken in one day by shilling admissions. Dr Stroud, of Pretoria, a beekeeper of long experience, exhibited a fine collection of bar-frame hive, bars for supers, guide combs, and honey in the comb, but not for competition.

J.W.H., Boggabri,—Anyone troubled with red ants, can get rid of them by putting small tins down level with the ground, upon the nest. Half fill with water, then a little kerosine oil on the water, then stir up the ants, and they will run in and die. Skim out often.

A RAMBLE.

E.T.

We found ourselves one afternoon lately on the railway line betweeh Cockle Creek and Barnsley. We had started to walk from a neighbouring township along the line, and after stepping aside to avoid being run over by the heavy coal train that came thundering along, we saw some distance ahead several men conversing. As we neared them we were agreeably surprised to find they were line repairers with a trolly, who seeing a stranger doing the ugly tramp on the sleepers, kindly waited and took us on to our then destination. Our friends not being at home we again resumed the tramp, till we came to an apiary close alongside the line, which we found to be that of Mr Thomas Holbrook. Mr Holbrook is a miner, but work had been so precarious he had taken up two acres of not very promising land. All his energies and possible means has apparently hitherto been directed to the building of a hut in which himself and family lived, some fencing, and his beehives. He commenced last spring with 14 colonies, and has increased them to 41, not having lost a swarm. He told us they were all in good condition. He uses gable covers, painted red, which makes the array look rather attractive. Has double bagging on top of frames. There was a bitterly cold west wind blowing, so to protect them he had closed the entrances for the night. There was a good flow on from swamp mahogany, a nice light coloured honey, of very good flavour. Spite of a warm invitation to stop to tea, we again went on our way. The wind was roaring through the forests, and the approaching gusts sounded like the advancing and passing of huge railway trains. At Cockle Creek we were just in time for the train to Teralba and there went straight to the tea-table at the hotel. We were in the humour to enjoy that meal and did so. The genial landlord, is an old dragoon of the British army and has seen service in Egypt, but his topic of conversation now was that the local pit had that day broken its record, and turned out 1000 tons of coal. He compared the present times with a few years ago, when his takings of a pay Saturday, would be £75, and his average daily take was about £24. The temperance cause has no better friend than hard times. Train time coming on we reluctantly left the warm fireside to go out to face the bitter cold wind. The moon had risen and was shining grandly over the lake. In the train our companion was a mining storekeeper, who complained strongly of the prospects of the country, his idea being, that the Government policy would drive employment out out of the country, capital as well, and make it worse for all. The train roared on, through tunnel and forest, past townships and flickering lights, till Hamilton was reached. Here we had to change. There were not many travellers, but we fell in with one who recognised us. He was a dairyman. Being delayed he had lost the previous train. When he got to Tarro, would have three miles to ride, but would then have an hours and a half's sleep before 12 o'clock. He and four others milked 40 cows every night. They rose at twelve, the forty cows were milked, and one took it in turns to get the 240 quarts of milk at the railway station by half-past three in the morning. He was loud in the praises of Durham cows, as being far superior to Ayrshire, Alderney or Herefords. But he was no beekeeper. He did not like bee stings. A whistle, the train stops, good night, on we went again till own destination was gladly reached.

H. N., Joadja Creek, writes—Last season was a very bad one here. I have removed my apiary on to the top of the hill.

J. A., Springhurst, Victoria, writes—I have a fig tree planted at each of my hives, which gives a good shade in summer, and as they shed their leaves in autumn the bees get all the sunshine visible in winter. Please kindly tell in your next issue the best way to clip queen's wings.

See page 40, May number

BRAIDWOOD.

WELL WISHER.

I was successful last season with Crawford's queen hatching cages, but I think there is a little room for improvement in them, which I intend to try later on, and if I find after experiment that it is so, I will suggest it to Mr Crawford. I consider them a great acquisition to the beekeeper who may have more queen cells on hand than he knows what to do with. I was also very successful in introducing both virgin and fertile queens by the chloroform method. I introduced sevral virgins several days old without any trouble, and I dont think the bees were any the worse a few hours after, I generally did it in the evening, but instead of caging a queen on a comb I first chloroformed the bees and then having the queen in a round wire cloth cage, I let her run down from the top. Consequently the queen was not under the influence of the drug as she would be if caged on a comb before applying the chloroform. Of course I may fail the very next time I try it, but so far I have had better success by it than caging the queen in the hive and then letting the bees release her. On two occasions last year I caged queens that I had received from Maitland on the combs, and on looking five or six days afterwards to see how they had got on I fouud three sealed queen cells in one hive and four in the other, and of course thought my queens were killed, but to make quite sure I continued to look for them, and to my surprise I found them, one was balled but the other was moving about among the bees as she liked. Now, why did the queen that was moving about among the bees not go and destroy the sealed queen cells? They could not mean to swarm out for they were not strong enough. I am afraid that I have already trespassed too much on your valuable space, and shall conclude with the hope that those subscribers who were not paying up have either done so or have been struck off your list, and I hope the time is not far distant when the *Bee Bulletin* will be illustrated.

LONG IDEA HIVE.

From Australian Farm and Home.

It is about time this hive obtained a name which shall be more descriptive than the one by which it is at present known. The "idea" is length as against height; it might therefore be called the longitudinal hive. The idea is by no means new, as we have by us a pamplet published by P. O. Petersen in Melbourne, of date 1878, in which he gives a description of this hive, and says it has been twice patented in America—On 28th March, 1872, and on 24th November, 1874. The practical adoption of the idea is of more recent date, and proves likely to be largely used in the production of extracted honey. Speaking from memory, this is the same hive which is used in Norway and Sweden, and possibly in other European countries. The idea now to be developed is that of labour saving. Past experience shows that there is far too much labour in the perpendicular plan of storifying; unnecessary work for the back and arms, and also unnecessary disturbance of bees and less absolute control of the brood nest. It does not need much discrimination to see the advantage to be gained by the horizontal method as against the perpendicular.

Mrs. J. McInnes, writes us the moths were very bad in several of her hives. A neighbour told her to try salt on the bottom board. She did so, and had not been troubled with moths since.

W. T. M., Spring Hill,—Please send me the price for honey labels for 60lb tins and under. Also can you tell me the proper distance the glass should be apart in the solar wax extractor. I think my extractor could be better. The honey yield was not bad here consideaing the late spring and winds.

Re distance apart of glass in solar extractor, we presume you mean when a double glass is used about ½ inch answers very well.

PARTHENOGENESIS.

THE OCCURRENCE OF PARTHENOGENESIS IN BEES, WITH COMMENTS OF ITS BEARING UPON APICULTURE.

Rich. Helms, in the N.S.W. Agricultural Gazette.

PART 2.

PARTHENOGENESIS—SPONTANEOUS DEVELOPMENT OF UNFERTILISED OVA.

The occurrence of this form of parthenogeuesis, as already stated, had not been observed amongst the higherinsects those which pass through a regular cycle of metamorphosis in ordinary course of development, viz., egg, larva, pupa, and perfect insect that copulates to produce eggs) until just about the time Dzierzon made the extraordinary discovery in his apiary which has immortalised him This is true parthenogenesis, or the spontaneous procreation of animals from a virgin mother, the eggs of which pass through the same course of development as a fertilised egg would. By scientists the general term is now mostly applied to this form, and the others for morphological reasons are recognized by them under the previously mentioned designations.

Professor v. Siebold has been particularly active to investigate this problem, and his results entitle him to the foremost place amongst the workers in this field. One of the first results obtained by his labours was the discovery of parthenogenetically procreated silk moths, which proved partly to be males and partly females. Whilst however this phenomenon occurs intermittently with this species—that is to say, only occasionally, a virgin silk moth lays living eggs—with other *Lepidoptera* (moths and butterflies) it was found that the virgin female of some species possessed the quality of always laying living eggs. In the most of such cases it has, however, been observed that the offspring without exception were females.

During 1880 Dr. Osborne observed parthenogenesis with a species of the leaf-eating beetles (*Gastrophysa raphani.*) This occurrence is the more remarkable because about an equal number of both sexes appear in the broods of this species, and, besides, it has been observed that the same male may copulate with several females and that some females receive several males successively.

Coming to the most intelligent and physiologically best-developed insects, the *Hymenoptera*, parthenogenesis occurs more commonly than formerly was anticipated, and with most of the families of this order it has been observed in one or the other genus at the present day. In this order it not only assumes various characters, but quite a unique form amongst the *apidæ*, the family placed highest on the list.

To bring the character of this unique phenomenon into prominency I must first quote a few instances from other families of the order.

The quite frequent occurence of alternation of generation among the gall-wasps has already been alluded to.

Professor v. Siebold experimented with a great many specimens of the leaf-eating wasps, an order largely represented in Australia, and to which the destructive pear slug (*Selandria cerasi*) for instance, belongs. The results of his experiments showed that in some cases females were always produced from virgin eggs, occasionally, however, with some species a few males occurred and, again, with some nothing but males were the outcome. These observations are surprisingly paradox, more particnlarly because some of the most enthusiastic specialists have in several instances failed to obtain the male of some species after breeding thousands of them from larva they collected, and consequently entertain the opinion that the male may not occur at all.

Siebold also deovered parthenogenesis with an *Ichneumonid* wasp, but bred nothing but females from her eggs.

In reviewing the examples given, which by no means exhausts what mig ht be quoted, it will be seen that the parthenogenetically-produced offsprings in most cases are females, in a few cases, they are prepondering numerically, and in a few instances males were the result These last mentioned cases observed by Professor v. Siebold are as yet not to be considered as finally conclusive, for unless repeated experiments produce invariably the same results, the constancy of the occurenec of males as the result of unfertilised eggs is to be considered problematical, and at present merely an interesting record. It cannot be denied that power of parthenogenical reproduction must be an advantage to the animal possessed of it if the results are females, but if they are all males it cannot be directly so, and may even be a disadvantage; indirectly on the other hand, through the consequent greater competition and the probable achievement of the act of coition by the most vigorous, swiftest, or strongest, no doubt it may become an advantage as well,

Coming to the domesticated bee, it seems almost surprising that the fact of parthenogenesis occurring amongst them remained unrecorded so long, when we consider that for over 2,000 years this insect has been bred under the eyes of man, and by him was distributed at an early date throughout the known portion of the old world. It is another evidence of the fact that at any time there are but few men who are observers, and how little most psople trouble about but what presents to them an immediate gain. However, a full and comprehensive knowledge of everything in connection with bees is as essential to the beekeeper as the perfect understanding of an engine is to the working engineer. Unless the one is satisfied with the old-fashioned skep or the retrogade step from this, the gin case, and the other with the old fashioned coal devouring, primitive machinery, it becomes neces

to keep abreast with the achievements of investigations or inventions if the one or the other expects to reap the results of their bonificence.

It cannot possibly have escaped some one or the other of the old bee-masters, in spite of the greater difficulty of observations in the old-fashioned hives, that virgin queens, although these probably were rarely allowed to remain with a swarm, or worn out queens, and above all, laying workers, produced always drones, but the significance of this phenomenon certainly escaped them all till Dzierzon appeared among the literary apiculturists. "The father of the new era, and the most ingenious bee-master of all times," as Berlepsch calls him, at that time parish priest at Carlsmarkt, near Brieg, in Prussian Silesia, is now over 84 years of age, but still hale and hearty, living at Lowkowitz, near Kreuzburg, in the same Province. The most important advances in apiculture are due to him. The invention of the moveable frame and the introduction of the Italian bee revolutionised the old method of bee-keeping. Moreover, the introduction of the Italian strain into his apiary confirmed his renowned achievement—the discovery of parthenogenesis in bees—and what is still more surprising, it led to the perception that all drones are parthenogenetically procreated, whether the same spring from the eggs of a virgin queen, a laying worker, or a fertilized queen.

When, in 1853, Dzierzon introduced Italian queens into his apiary, it will easily be conceived that some of their daughters, which of course were pure, mismated, and naturally enough produced hybrids, with the colouring and the character of both parents—that is to say, as far as the workers were concerned, but the drones were pure Italians. This surprising phenomenon confirmed his already published hypothesis, and he consequently instituted experimental investigations, which ultimately led to the establishment of the knowledge indicated above. As already stated, the theory found at first many opponents, but when the number of its adherents grew it did perhaps more towards bringing the Italian bee into repute than anything else could have done. Dzierzon's main inducement to introduce these bees, which, it must be remembered, was in those days a much more difficult task than at the present day, when steam communication has reduced the time of transit to less than onefifth, was hoping that they would be able to utilise the red clover for honey production, the nectar of which it is well known cannot be reached by the black bee : but his discoveries made others long to have them practically demonstrated, and as this was much simplified by diversely coloured bees, the Italians became greatly in demand, and so their superior qualities were made known far and wide, which laid the foundation to the extensive traffic in them we see to-day.

As the matter stands at present there is not a shadow of a doubt left that all male bees from whatever mother they emanate are the result of infertilised eggs, which means that the drones have a mother and no father.

The most remarkable feature in connection with this occurrence of parthenogenesis among the varieties of domesticated bees is the fact all infertilised eggs invariably produce males and never females.

This fact is of the greatest importance, and without the thorough understanding of the same the beekeeper risks making a failure of it when he attempts improving the strain by selection, the advantage of which is too apparent to every rational beekeeper to be neglected by him, and if it were only to prevent deterioration by too close breeding. At first sight it appears as if the queen were not only the most important, but almost the sole factor in connection with the procreation of the drones, because they are entirely her own sons without a direct assistance from any male. No doubt directly, she is the most important element, not alone from the fact that she is a female, and as such is an essential necessity, under any condition, to propagate the race, but also in so much that her typical physical nature is impressed upon her sons, whilst her daughters strongly bear the effect of her mate. However, it is plainly obvious that indirectly the drone is of great importance because he is always the maternal grandfather of everydrone, and asserts his importance in the female offspring of his mate. On account of the indirect impression of his physical, as well as mental character, which he must leave upon his grandson who again perpetuates them, the selection of drones has to be more carefully studied, for any improvement of the races, than even the queen. I will ilustrate my argument by an example :— Let us take, for instance, an Italian drone and ditto queen possessing the characteristic colouring of the race. But the offspring we will presume, and such is a common enough occurrence, does not show the desired marking. If then the females do not come up to the desired standard of colouring, but the drones do, it proves at once that the father drone possesses a secret blemish. But, on the other hand, if the drones are not of the desired colouring, the mother is at fault, but this is traceable to her father, who asserted himself when begetting her, and must then also effect her daughters much as this may be obliterated by the purity of their fathers.

If we could afford to leave nature to herself we need not perhaps trouble to dive into her secrets, except for the purpose of satisfying our inborn curiosity. But the progressive competition in every direction compels us to make the best use of these secrets when by observation they are revealed to us. A correct understanding is, however, essential to avoid making false deductions from them, and care should be ex-

ercised lest one arrive at illogical conclusions. The desire to improve the bee races is very commendable, and a careful selection to improve the strains behoves every beekeeper,and consequently ought not to be neglected. It appears to me, that at present, most beekeepers direct their attention principally, and often solely, to the queen to achieve this object, and neglect to pay sufficient attention to the selection of drones, which is equally important, but certainly more intricate. It has been done as far as the mere destruction of black drones is concerned, when Italianising has been the object, but beyond that very few beekeepers give it any attention. Nature to some extent does the selecting herself, but mostly in the direction of giving the swiftest and strongest drones the best chance of securing the coition with a queen; the production of the large number of drones in every hive during the swarming season must be explained to be for this purpose, otherwise such an excess could not be well accounted for, considering that a single drone is all that is needed for the fertilization of a queen, and hundreds have to die purposeless. Stamina may be achieved by natural selection, the importance of which must be fully appreciated, but as the aim of apiculture is to bring the bees to a state when they become most profitable to man, and not merely at what is most beneficial to the bees only, a careful study of the strain of the different colonies found in an apiary becomes necessary to reach this object, otherwise artificial selection is a mere tinkering with a snbtile problem. It is well known that throughout nature the offspringinherits its principal endowments from the sireand this maxinum finds no exception among the bees, althongh its essertion becomes somewhat dimmed by the peculiar existing procreation of this sex, by which it becomes latent, so to say, in one generation, to reappear in the succeeding.

The interesting phenomenon that after coition a queen may lay, at will, fertilised or infertilised eggs when these are required demands an anatomical explanation, will be dealt with in yet another article.

For dissecting purposes I desire to receive live virgin queens, worn out queens that have become drone mothers, and laying workers. As the laying worker cannot be distinguished from any of her escort one of her wings ought to be clipped to mark her. Hermaphrodite bees would be extremely acceptable.

DIFFERENT METHODS.

T. BOLTON, DUNKELD, VICTORIA.

In your April issue appears a reprint from *Gleanings* of a most valuable article from the pen of Mr. E. France. I was glad to see it, even after the lapse of so many months, and your credit for being on the watch for all that is good in foreign journals, which was beginning to wane in my mind, has been agreeably restored. I wonder how many of your readers have carefully perused this article, or that one on "Hives" by Mr. Pender immediately preceding it, and have grasped the fundamental principles of successful out-apiary management contained, but somewhat concealed by other matter, in both these articles. I shall be doing all such as have not done so a good service if by reason of what I am now about to write they are led to again peruse and seek to get at the gist, not only of these two, but of many another helpful page or column that from time to time appears in your journal, and is to my regret, and no doubt that of others, passed into oblivion without comment or remark, reply or challenge, by either editor or reader. Sifting and gentle criticism, the drawing of attention to valuable and salient points, to divergences of opinion and practices and results should be encouraged, whether done by editor or correspondents, if the journal is to be of real value to our industry. One writes his opinion on some subject, another his on a different subject, and all go forth with equal weight, and the poor beginner has to arrive at his own conclusion, and if he bothers about such opinions at all it will only be till his own experience is more weighty in his own eyes than what he reads. Most of us are busy men; our occupation calls upon mind and muscle during the day, and when we are free to sit down to study our journals to seek for better light on our work, why we are apt to commence nodding, partly the effect of fresh air, partly the effect of the lack of what I have named in our journal's pages. But my object in writing is not to scold the editor or to blame my fellow readers and writers, but to draw attention to two main points in each of the two contributions to your pages already referred to, and by presenting them in contrast and as apparently irreconcilable statements and advice, endeavour thereby to give

force to certain principles underlying success or failure as it seems to me, and which being in some measure made plain and prominent, may prove at this time, when many are likely to be considering or reconsidering the matter of hives, and some the establishment of out apiaries, to be most opportune and helpful in coming to a right decision on these points. I trust in handling my subject no one will think I wish to reflect on the skill or success of the two gentlemen whose articles I shall from time to time touch upon. I only desire to use their articles and their appearance side by side in your columns as a good opportunity to present my theme, and to save future apologies I may say that their advice, though contradictory, is good and reliable under the circumstances and limitation they had in mind.

On carefully perusing Mr France's article, it will become apparent that he advocates a system of management in which there is very much and very careful handling of frames—in fact, *very* careful handling is essential to reliable results. "Take out all the combs" (page 10, 4th par.); "no queen cells left. Last time lower down," "Be sure no cells are coming on" (p. 11) and so on; all through comb manipulation is resorted to and advised. This is point No. 1, and point No. 2 is simply the result of this management, viz.: swarming controlled, and increase has to be artificially made. Let me here say that however well this plan may work with a short season, with three to four months swarming season, such a measure of success as Mr. F. seems to have would be very problematical, but I shall refer to this later on. For the present we may admit that perfect *control* of swarming can be achieved by management such as Mr France so clearly expounds, even in our lengthy seasons. As I shall have occasion constantly to use this phrase it is necessary, in order to make my argument clear, that I should point out exactly what I mean by "control of swarming." As commonly used it means either hindering, discouraging, or preventing entirely the issue of prime swarms, and more often of after swarms, and preventing excessive swarming and increase, or what is known as "swarming fever." In none of these senses shall I use it, but in a sense which, though it may be new to many of your readers, will, if they bestow a few minutes' careful consideration upon it, aided by what I have yet to say, commend itself to them as of vastly more importance than the accomplishment of the miner aims which the term is generally used to denote. By controlled swarming then, I mean that the bees in any apiary* shall be allowed to swarm, but only on certain dates, at fixed intervals, and that no colony shall swarm or reach that condition to do so known as having "Queen-cells sealed," on any other day or days during that interval.

Here then is one of the writers advocating frame handling of a minute sort, and achieving one of the essentials of success in apiary, particularly of out-apiary, management, viz., *perfect control of swarming.*; and this serves to present one broad view of present day apiary management more or less successful. On the other hand, we have on page 9 Mr Pender writing—I had almost said replying to the above—"How often does a beekeeper require to examine his brood combs? I say almost never!!" Here is disagreement between doctors with a vengeance! and a system of management, advocated diametrically opposed to the one already considered, and point No 2 of this writer's article is again simply the result of this plan of management, viz., uncontrolled and excessive swarming expressed aptly in these words, 2nd column, 1st par—"everything possible is tried to prevent increase, and with but little avail," It would be unfair to suppose that these two points were connected in their authors' mind as cause and effect, or that his individual management has not better results than that; still we know that the man who does not handle his combs, whether box-hive man or frame hive man, cannot have, as far as our present day leaders have taught us, control of swarms in the sense above

given ; though after-swarms may be controlled, as Mr Heddon shows, by a mehod of handling hives instead of frames. It will serve my turn if I may use the two points of this writer to present another broad view of present day apiary management and result, and the practice on this side of the other essential to successful apiary—particularly of out-apiary management—*non handling of frames.* We have then before us a choice of two theoretical lines in which to follow our pursuit and I think I am safe in saying our choice is restricted to these two broad lines, and that we at present know of no alternative or midway path. The one who deems he is saving time by *not* handling the frames will find he has lost all he gained, in much and erratic swarming ; if he aims to control swarming he loses so much time over his careful frame manipulation to that end that he might as well almost let his bees swarm at their own sweet will. In our individual choice of which line to pursue we will at our own apiary be largely guided by other circumstances, and the importance of the subject of *control of swarms* may be to our minds more or less great, as we expect to be more or less at home and present in or about the apiary and the *handling of frames*, and time spent thereon may not seem such a serious matter should other claims be few. But in the case of the specialist beekeeper who seeks to carry on successfully the management of as many hives as possible, and particularly when by reason of having started an out-apiary or two his attention has to be divided between one place and another, these two points become of vital importance to his success and the limit set upon his enterprise in whichever line of management he may choose to travel, by the disadvantageous features already shown to exist under either of them become soon apparent and very real. Should he deem it adviseable to aim adoption of specific hive or management to dispence with frame handling, or should he be the possessor of a hive, or desire to adopt one which will give him certain benefits or facilities in other directions, but which does not permit of ready and rapid manipulation of combs, he will have to provide for the consequent uncontrolled swarming either by investment in appliances (of doubtful success and causing loss of much time in adjustment, or by hiring assistance, or be contented to loose his swarms in large numbers. The wages he spends, the money invested in traps, or the loss of bees, become serious limitations to his enterprise, so that it is apparent he cannot atchieve the success with a given capital and amount of time that he might do if it were possible to pursue his system and *yet have perfect control of swarming.* So that we have here arising one principal to which as I said earlier I desire to give force and prominence and which we may state thus: It is essential to fullest success in extensive apiary management that perfect control of swarming be attained both in home and out apiary ; on the other hand let us suppose the out apiarist seeks to control swarming as in the other line of action open to his choice, there is of necessity so much time spent over the frame handling involved that a real limitation of his enterprise becomes soon apparent in that so few hives can be thus manipulated by methods such as are set forth by Mr France compared to the day's work that might be achieved *if it were possible to dispense with frame handling and yet have perfect control of swarms.*

(Here let me say for the sake of the uninitiated that in order to reliably work any out-apiary on the plan of periodical visits it is necessarv to have that apiary such size that it can be gone through in *one day*, hence if we by reason of much loss of time can only manipulate 50 hives in that day, whereas 90 to 100 would otherwise be possible, our system of management is faulty and limits us).

Here we see another and second principle which we may set forth as follows:—It is also essential to full success in apiary management that such management should not involve *of necesity*

the handling of frames. It is obvious now to those who have followed me this far that a *true* and *ideal* system of management is one that is in accord with not one only but with both of these principles, and as neither of the two broad lines of managements to which the apiculturists of our day are confined embrace *both* of these principles, neither of them can be looked upon as being satisfactory or such as we should rest content with following.*

That such is our position today is proved by the number of devices and ideas brought forward to control swarming, to prevent loss of swarms, yet the ideal is not reached by such things as these, they but show the seeking after a goal as yet unreached. It seems to me Sir, that the solution of this problem is at this time of far more importance than such questions as large and small hives, long or short ideas, spaced and unspaced frames, and the hundreds of minor points that are ever before us in the pages of our Journals, except in so far as they may contribute to our reaching our ideal. If by a right apprehension of the limitations to our enterprise, and of the principle underlying a better state of affairs, beekeepers are led to discover a system of management, and a hive that is applicable to that system, and are enabled to well manage two apiaries instead of one and are able to increase, their out put twenty-five, fifty, or one hundred per cent, without corresponding expense, there will be something achieved towards meeting the decline in prices, compared to which the gains, if any, derived from altering a hive this way or that way a few inches are but drops in a bucket; and any hive that complies with and makes possible such a system of management will tower above its rivals, whether it be shot-tower or long-idea, ten frame or eight frame, *it* will be the hive of the future.

With your permission I shall endeavur in a future number to show the result of my own seeking after this goal and how at my out-apiaries for three seasons past I have been able with more and more certainty to feel that swarming may be under control that it may be achieved, not by frame handling, but by inversion and our ideal be reached in apiary management.

My reasons for allowing prime swarms, rather desiring them, are set forth in an article on page 16, last volume.

[We are very glad our efforts to give a good summary of bee news have given satisfaction, to Mr Bolton as well as others. When however, there is such wide diversity of opinion among beekeepers on various matters, we think it is as well to do as Dr Miller does, "sit on a rail." For us to be dogmatical would perhaps give annoyance to those whose interests are being bound up with the adoption of particular ideas. Not being interested in either a supply or queen rearing business, our business, we consider, is to hold to the light all new matters bearing on the different points of discussion, leaving the beekeeping fraternity, as a jury, to determine on the best.

A RAMBLE.

To The Editor A B B

Dear Sir,—Just a few lines to let you know I arrived home safe and sound, which I hope you did likewise: after our trip to Sydney and up the Hawkesbury. By the bye, I received a communication from the Hawkesbury, the fishes are anxious to know when you are going that way again, as they are getting hungry; don't I wish I could give a photo of yourself examining the sides of the vessel, but the steward said he did not bargain to provide you and the fishes with lunch for 1s 6d.

How's your battle-axe; I hope you keep it well sharpened, but certainly we did not have much use for them the night you waited on the Minister at Parliament house. I think, after the very practical results this year to the benefit of beekeepers attained by the National Beekeepers' Association that the very least all beekeepers can do to encourage that association is to become members thereof.

I have heard it said that Satan finds mischief for idle hands to do, and as I am not very busy I am going to give you a brief account of some of my travels of late among various apiaries.

Shortly after last Christmas Messrs. Bloxham Bros. (who spent their Christmas with me at Cowra) and I went to Bathurst, and after a few days turn

round that district we started off in a buggy and pair of ponies to visit Mr Petersen a Nuggetty Hill bee farm, near Wattle Flat. Arriving at Wattle Flat about sundown, and after seeing our ponies well stabled and fed, we went to the tea table to supply the wants of our inner

Now, sir, comes the fun. Oh dear, isn't it the fun of the world to be a bee-keeper! Talk about snake yarns! They couldn't hold a candle to some of the yarns I could tell about my visits to different apiaries only with this difference of course that mine are not snake yarns.

Well, sir, just try and picture your humble servant, J. E. Taylor, seated at the table with Geo. Bloxham for his right hand supporter and Jas. Bloxham for his left hand ditto, a bottle of honey before us on the table, which I examined very innocently and ventured to suggest that it looked very nice, and said, I supposed they got it from Sydney. Oh, no! quickly came the answer from a lady, "That comes from a bee-farm close at hand." "Bee-farms," says I, "Why I never heard of such a thing. What! do they plough up the ground and sow the bees, or do they plant honey? How many bees does it take to the acre? That's rather too good, you can't make us believe that."

By this time all those seated at the table seemed to think they had a good thing on, and each tried to excel the other in explaining to us the wonderful ways of management of bees by Mr. Petersen and his wonderful crops of honey. Oh dear, I forget how many hundreds of tons he takes in a year, but I remember they said he had one queen alone for which he paid thirty guineas, and that he had big bees called drones, which stood at the entrance door of the hive and hunted their wives out to work, telling them where to go, and when they came back loaded hunting them into the hive and telling them where to unload. Oh Yes! They'd swear you could see the drones outside running after the other bees and hunting them away to work; of course, Mr. Editor, you will understand that we did not let on that we were bee-keepers, but gammoned that we had other intentions (in fact that we were going to Sofala. Naughty boy George to tell such a lie; but that our curiosity was so awakened that if they would guarantee that we would not get stung seriously, and after making inquiries as to whether there was a local hospital to receive us in case of necessity, and the kind offer of Jack, the champion water jumper, to guide us on the morrow, we agreed to run the risk of a visit to Mr. Petersen's bee-farm but, as I think I have already trespassed too much on your valuable space, I propose to leave the account of our visit till your next issue, if acceptable to you, and besides you know I might meet Petersen at the Conference, and he's a big fellow but a jolly good fellow. With kind regards, Yours &c.,

J. E. Taylor.

BLACK DRONES FROM ITALIAN MOTHERS.

W. J. M., Thames, N.Z.

Root says: "All daughters of a purely fertilised Italian queen produce drones *absolutely* pure, whether they have been fertilised by a black drone or not."

To this Doolittle replies: "If you had said *practically pure*, I would not have said a word, but when you say absolutely pure, I cannot withhold saying, "I don't believe it."

Now, I raised some queens from an imported tested queen, and all were purely mated, save one—nevertheless I kept her, thinking that all drones raised from her would be pure, if raised from unfertilised eggs, but this season she has given a large percentage of drones, all of whom were plainly "niggers." However, I will try her again for another season, and report. One queen I raised was quite black, indeed so black that I thought here was a game of stealing eggs, and she was marked for removal. However, having gone away for a short

holiday I left her, and when I came back I found her so prolific that I built up the nucleus to a full colony by the usual methods. Four months afterwards, having received another imported queen, I went to remove her black majesty. On opening the hive I found the bees unusually quiet, and on further examination I found the hive full of pure Italians, although the queen was to all appearances a common black one. Now for this reason alone, we should be careful when discarding dark coloured queens till they have been given a fair trial.

While on this subject I may mention that an imported Italian queen has given me this season drones with white heads. At first I thought they were premature ones, but this view turned out incorrect. I see Root's new edition *A.B.C.* mentions this queer feature. This hive eventually contracted foul brood. Will some of your scientific bee men have something to say on this?

CAPPINGS.

From Gleanings, American Bee Journal, Review, Apiculturist and other Bee Journals.

Dr. Miller —By repeated observations I have found that bees certainly prefer old to new comb.

Syrup should always be fed warm, and if given even to but one colony when the bees are flying and idle, it will excite the whole apiary, and start them to robbing. Feed only late in the evening, or upon days when the bees are not flying.

J. A. Golden firmly believes that ninty-nine out of every hundred bees in the first stage of paralysis can be cured by proper use of salt; and also quite a good share when in the second stage, or in the hairless condition; but when bees enter the third or swelling stage, death is certain to follow. Bees usually go out of the hive to die during warm weather, but invariably die in the hive during the colder season.

T. I. Dugdale,—Having several times seen it stated as being advisable to destroy combs when they become very old and black, I will now proceed to give a case which came to my notice during the season of 1893. I had some combs which had been transferred from box-hives, and were in use some 12 or 15 years after, and were very black, but otherwise in good condition. I had two of these combs in a colony which had swarmed, and I allowed them to rear a queen from a cell which I gave them. At the time I thought the queen should be laying, I went to the hive and was about to open it when I noticed that the bottom-board at the entrance to the hive was covered with a lot of brownish dirt. My first thought was that the moth worms had gotten a strong start inside, but upon getting the hive open, what was my surprise to find the colony in good condition, and on examining the two old black combs, I found the cells completely torn down to the base, and side walls started up to about the usual height of comb foundation. Each comb was torn down in this way in a circle where all the brood had hatched, and on finding the queen, which had not yet begun business, I closed the hive and resolved to keep an eye on the colony to see what they intended to do with the old combs. Next day I again opened the hive, and found the side walls raised to the length to ¼ of an inch or over, and the queen had then started laying in each of them. I kept watch of them daily for some time, and found that they tore down the whole of the cells on these two combs, but did not disturb any of the others, and had I not thus caught them in the act, I should not have known that anything of the kind had taken place, as the combs were still a very dark brown color. I have seen a similar case in another colony, and, strange, to say, under exactly the same circumstances, viz., having cast a swarm and no laying queen present, and as fast as the brood hatched the comb was torn down to the base of the cells and rebuilt. In view of these facts, who is prepared to say that a set of combs may not be good for all time, if properly cared for.

Mr Bordman, with square and deep hives, seems to winter better than his neighbours with the Langstroth. In fact, he appears to be the only man who winters year after year with no loss.

R. C. Aiken writes a paper in the *Review* maintaining that there is more profit in raising comb than extracted honey. Far less labour in taking off comb honey than in extracting. The cost of sections is cheaper than vessels for storing extracted and the labour of placing in the vessels.

T. J. Dugdale,—After having the bees 10 years, the party to whom I sold them had only two colonies of pure Italians in his yard, the balance being either blacks (to all appearance) or low-grade hybrids, although the original colonies were nearly all pure Italians. They had been allowed to replace their queens to suit themselves, and if the Italians are really the stronger race, why did they run out, as they were in the majority to start with?

T. J. Dugdale,—I have given eight Langstroth frames a thorough trial beside the larger number, with the result that I had to feed every colony on eight frames, while those on ten required no such fussing and were in better condition when the harvest came on than the others. Now which is the more economical course, to expend money to buy sugar to keep the colonies from starving, thus making an increased amount of labour, or to allow room enough for the bees to store a sufficient quantity of honey to last them?

Dayton likes to move bees by night, and succeeds without fastening them in. Drive them in with smoke when you put them on the wagon. When you are about to start I suppose if any have boiled out meantime they are to be driven in again. Proceed twenty rods on your journey and stop. This kind of a stop for five minutes or more is the proper thing, even if your bees are fastened in. If at liberty the smoker is used again on those that seem to need it—and it is not their habit to make any more trouble during the trip.

Editor York says,—For a few years it might be a good thing to spend more time in learning to sell honey rightly, and less time in trying to produce an enormous amount and then give it away. And yet, just now, as always in the past, it is underconsumption and not overproduction of honey. Pure honey, properly put up and presented to the consumers, will "go." But there must be an assurance of its purity, else any sales will not easily be made.

Dr Miller's straws seemingly at times get very much astray. Here is a sample from *Gleanings* :—"The *Australian Bee Bulletin* says, at the last of January, 'Swarming may now be said to be practically over.'—I should think so! That accounts for the big crops they get there. We could get big crops too if we would work the poor bees right through the winter."—The good doctor has evidently lost sight of the fact that while January is the middle of winter in the northern hemisphere it is the middle of summer here in Australia.

Ed. Jolly says.—The truth is, spring dwindling is not a disease all, but simply the earthly cares of the bee have been arrested by old age. As a means of prevention I would advise that when, in autumn, we see the honey flow cut short earlier than it should be, we resort to stimulating feeding, just enough to keep brood rearing going on nicely as long as we can do so in safety. By doing this we will wear out the old bees, that would otherwise be consumers all winter and die in the spring, besides having the hive full of young bees to take their place, and from which there is no reason whatever to fear spring dwindling.

Chas F. Muth,—Any colony in normal condition, *i. e.*, having a laying queen, will accept, without any trouble, any colony which has been queenless for at least 24 hours. Consequently, if you want to unite two colonies standing side by side, deprive one of its queen, and the next day, or the day following, hang the combs with adhering bees of the one colony in the second story of the other

colony, immediately above the bees below, and remove the empty stand. The united colonies will use the same entrance, and no fighting will be done. If you are preparing your bees for winter, and want to confine all to the brood-chamber, brush them down the next day, or any day thereafter. No harm will be done. It should also be understood that you can never unite a colony having a virgin queen with a colony in normal condition. If you do do it anyhow, and no matter what precautions you may take, the last bee of the one party will be killed before the fight ends. There are no infallible rules laid down by the bees, nor the bee keeping fraternity, but the above rule holds good in nine cases out of ten. Convince yourselves.

Jas. A. Minnick,—Strip of zinc is set in a saw-kerf in the end-bar to take the place of the V edge in the Hoffman, and projects ¼ inch, touching its neighbour the same as the Hoffman, and is much sharper than is possible to make soft wood; and it touches its neighbour at right angles instead of an acute angle. The bees are not so inclined to put in propolis, as in an acute angle, and they will not glue metal as readily as they would soft wood. If bee-glue is put in, a little side pressure will press the zinc edge through the glue, and it will rest against the wood, thereby *always* securing exact spacing. Now this new frame parts *very easily* from its neighbour, because the smooth zinc cannot be glued so tightly to the next frame as the V edge of the Hoffman. If tin rabbets are used, nothing more than the fingers are needed to seperate them. Now instead of letting the broad wood end of top-bar project past the end-bar, I instead drive a sixpenny steel brad in, and let it project just enough so the head nearly touches the back of the rabbet, which preserves the bee-space at the end of the hive. Again, this nail is not glued fast in the rabbet like a wood bearing; and it does not cover up the rabbet and bee-space, and the bees "get out" at once. A wood rabbet is preferred to a tin rabbet, as there is no "ditch" to hinder the bees from "going at once." Last, but not least, is the small window-blind staple that is driven in the lower corners of the frame, and projects a scant ¼ inch and always preserves the bee-space at the end of the hive, and prevents the smashing of bees, and aids in the rapid handling of frames—once used, never dispensed with.

C. J. H. Gravenhorst.—Lysol has been manufactured for a few years by Schulke & Mayr, at Hamburg, Germany. They produce it from coal-tar. It has a brown colour and smells like tar. Mr. Fulde purchased a bottle of lysol for 2½ cents, and therewith cured his bees, which were badly infected with foul brood. He took ten pounds of sugar-syrup, boiled and skimmed it, and mixed it up with 24 drops of lysol and 4 drops of carbolic acid. He gave a colony a soup plate full of this food. After three days he found the sick larvæ dry in their cells, and in a lapse of three weeks not a trace of foul brood was to be found in his colonies. They were sound and did swarm. Later he has fed lysol in the same way, particularly in the spring, to protect his bees against foul brood. He never saw a trace of it again. I used and have used till to-day, although I have not at present any apiaries near by that are infected with foul brood, carbolic acid—not the refined article you get at the drugstore in the shape of white crystals, but black and unrefined carbolic acid, which is intermingled with coal-tar, and mostly used as paint. Refined carbolic acid is too strong, and the sanative power of the tar is absent in it. I am of the opinion that just the tar, in connection with the carbolic acid, has much to do in the cure of foul brood. To guard my bees against infection by foul brood, I take ¼ gallon rain water, add it to a teaspoonful unrefined carbolic acid, and stir it with a brush dipped in this solution. I wash the bottom boards every spring, after the first cleansing flight. By doing this I destroy not only the germs of foul brood, but also the eggs of bee-lice and wax-

moth which may be there. In badly infected apiaries, I found now and then some traces of foul brood in some of my colonies. Then I applied such a washing every eight days. The steam of this solution disinfected the bees, the food, and the cells.

W. H. Putman,—As soon as the new swarm issues I remove the old hive a little to one side, placing it at right angles to the old stand. I place the new hive exactly where the old one stood; place the partly-filled section-cases on the new hive ; and in less than 10 minutes after swarming, the cases are again filled with workers ; each worker carries a sacful of honey with her when the swarm issues, and thirty or forty thousand bees can hold a considerable amount of honey. I have weighed new swarms that weigh 18 to 20 pounds without the hive—in fact, before they had been put into the hive at all. I have no doubt that two-thirds of this weight was the honey in the bees. With me the bees swarm during white honey flow; and by following the method here described no time is lost; they go right on, and more cases may be added. Meantime the old hive is moved nearer and nearer the new hive, day by day, until they stand side by side and very close. On the seventh day after swarming, in the middle of the day when the most workers are in the field, quietly and carefully pick up the old hive; carry it quietly, and put it down softly at the greatest distance possible in the same yard, from its former position. Notice the effect. Almost instantly you will see a swarm, as it were, collecting around the place where this hive had stood; they are the workers returning from the field; their home is gone, they are confused and fly aimlessly about for a few seconds; they alight at the entrance of the new hive; their mother is the queen there reigning; the bees have the same scent; they are received, deposit their load, and go again to the field for more honey. Likewise the workers that were in the old hive which we moved so carefully do not know their home has a new location; they go forth, but return to the old location; they are received and a rousing colony is the result. No wonder the honey-sections fill up quickly, as there are so many workers. But what happens at the old hive in its new location? Nearly all its working force has been drained away to the new swarm. In a day or two the new queen hatches. She has few bees to hamper her actions; she makes a tour of the hive, and murders her sleeping sister queens, yet unborn. She is monarch of all she surveys, and there is none her right to dispute. You will not be troubled with second swarms. No time has been lost since white honey began to flow, and now we have the whole working force concentrated on comparatively few sections. If there is any white honey, we get it. After a week or two we can put sections on the old hive and all our bees will be in shape for the dark or fall honey.

P. D. Wallace,—Seperating Swarms, when two or three cluster together,—If for three swarms, tier up three hives, with an entrance to each on a stand; raise the bottom hive an inch from the board to give the bees room to go in; shake the bees in front of the hives, stop the entrances to the two upper ones and let them settle for half an hour; then take the top hive and put it on a stand, put the second on another, and let the bottom one remain, and your three swarms and queens are seperated. I have tried this plan three seasons successfully, but whether a greater number would separate I do not know.—A hand-barrow.—I will offer an improvement to what I call a hand-barrow, spoken of by a correspondent awhile ago. Instead of using 4x4 scantling as he does I use two boards 8 or 10 inches wide; slope all from one edge until you get handles on them, then nail half inch boards on top suitable for one or two hives, whichever you choose. Nail two laths across on the bottom to strengthen it. Leave the frame long enough so the rear person can see to walk. I have used one since I have kept bees, and it is light and convenient. A little boy or girl can carry one end with a hive on it anywhere. This style needs no legs.

SPREADING BROOD.

G. M. Doolittle says:—All colonies in any apiary cannot be treated alike. Take an ordinary year in this localtty, the date being May 1st. In the first hive we open we find a goodly number of bees, say enough to cover seven combs on a frosty morning. We open the hive and find brood in only five combs. The centre comb of the five has brood in it nearly to the bottom and side bars, as well as at the top. The two on either side of it are two-thirds filled, while the two outer frames have brood in each, to the amount of one-third of a frame full. Now, practical experience covering a period of more than 20 years, has proven to me that a gain of two days in bees can be secured by reversing those combs of brood, or, in other words, placing the middle combs or those fullest of brood, on the outside, and those from the outside having the least brood in them, in the centre. By this plan we have not really spread the brood, but we have placed it in such shape that we have made an ample number of bees desire all the brood which they could care for, and the result is, that in about a week or the next time we open that hive, we find these five frames all solid with brood—a state of things which always delights any beekeeper. We now put a comb of honey, having its sealing broken, in the centre of these five filled combs of brood, which so stimulates the bees by its removal, that should a cold night now occur, the bees will be so active that the required temperature is kept right up, and a gain of two or three days more is made. So we keep on with this colony till the hive is filled with bees and brood, and that at the right time to take advantage of the honey harvest when it arrives. Having the bees thus, they will make all the difference between a full crop of honey and half a crop, or in extreme cases or short seasons, no crop at all. Will not this then pay for the fun we have had in thus building up that colony of bees?

An admirer of Heddon writes:—Suppose our colonies are in normal condition, and ready for the surplus-cases at the opening of the summer honey flow. When we put on the first case we will interchange the two brood-cases—that is place the upper one below, and the lower one above, and then put on the honey-board and surplus-case. When this *shallow* case is sufficiently filled, we will add another on top of the honey board and beneath it, and so on with others as required upon the tiering-up plan. You will notice now, 1, that the brood nest is flat on top instead of rounding; 2, the brood extends to the very top of the brood-chamber; 3, that the brood-nest was divided where it was largest across, and thereby the brood was, so to speak, spread out underneath the surplus cases; 4, that placing the honey where the bees want brood, induces them to remove it and put brood in its place, thus filling the brood chamber with brood; 5, that, in adding surplus cases, we continually create a shallow opening between the brood and honey stored.

T. I. Dugdale.—I have always found it the safest plan to place the frames added to the colony at the outside of the cluster, and trust to the queen to spread the brood as she sees fit. Does she not know better about that than we?

Mr G. W. Gordon., Jamberoo, writes—Under the heading of "Covers you prefer" in your last issue, Mr G. Gordon gives his idea. To prevent any misunderstanding I wish it to be known that the said idea was not written by me. I also wish to draw your attention to another article on page 47, headed G. G., Jamberoo, in which the writer gives a very doleful account of his bees. As this is calculated to do this district a vast injury (if this part of N.S.W. is meant) I give it a most emphatic denial. I have only known three cases of paralysis in five years, and the whole article, from first to last, is the very reverse of my experience.

THAT NEW DISEASE.

Muswellbrook,
June 15th, 1895

Mr. Editor,—Dear Sir,—I note on page 45 of the May issue of the *A.B.B.*, Mr. Ayerst's remarks re new bee disease. I am sorry to say I have had some experience in the same line.

Myself and two other beekeepers shifted a part of our bees to a locality about three miles from town where everything looked promising. The colonies when we took them were very strong, two and two and half stories high. They went to work in real earnest and when we visited them after a fortnight we decided to give them more supers, and the following week we put them on and a week later we found they had started work in them (in one case sections). On this visit we fonnd a very large number of dead bees about the hives, but it was put down to a small swarm we found hanging on the fence close to the hives. We thought the swarm was trying to gain admittanoe and fighting caused the dead bees, but on our following visit the bees were still dying as thick as ever. We tried sulphur, which had no effect. The most striking part to me was on examining the hives we would find all young bees on the hive. It appears to me it is only the field bees that suffer. As Mr. Ayerst describes there was no swelling, the dead bees reminded me of bees after robbing has been going on as though they had been stung to death; they double up, both ends nearly meeting and kick and struggle as though in great agony, and die on their side, some of them laden with pollen in their baskets. Is it a disease? I think not. I think it is the pollen or honey that does the mischief, as all the bees that have solid capped honey (the first they gathered in their new locality) seem to be well on the mend. All the colonies in this state we left to give the place another trial. The rest, those in a weak state we brought to our home apiaries, and I placed mine in the centre of the apiary, not fearing it to be a disease, and as yet I have not found any ill effects of it. The best of these colonies would not cover three frames, so they went down from two and two and a half storey to two and three frames. So I put them into nucleus hives, one colony swarmed out and today their queen is missing. I did not do anything to these colonies (except one) as they all had sealed honey in the frames I gave them, except a little patch at each bottom corner, and honey is now coming in here slowly from white box. The other colony, which I may state was the worst as there was no brood in the hive except a larvæ here and there, though the queen was laying well in a nice patch, the eggs did not hatch. It could not be for want of heat or the eggs would not hatch. Here and there the eggs would schrivel away like a small white thread with two or three in a cell. This colony I put on entirely new combs (two in number) and are now doing well and the eggs hatching, and those that were left on their old combs seem to be doing well also, no dead bees in front of the hives and I don't think there will be until they uncap their old stores. However, as they are doing well I will leave them alone, and should they show signs of it again I will put them on new combs. Has the locality anything to do with it? It seems to me to point that way, as the bees at home have not showed any signs of dying and they are all queens reared from the same mother in my case.

I hope I am not trespassing too far on your valuable space, and I will conclude by asking Messrs Ayerst, King, or Pyman have they been shifting their bees or does this occur in the locality they have always kept them.

A A ROBERTS.

P.S.—I will forward this to Mr. C. C. Paul and ask him to make some remarks.

I can only endorse the above remarks. My fifteen hives when taken out were all that any one could wish. The queens were some of the best obtainable—tested Italians and Carnis., some of last year's breeding and some of this, but it made no difference. The whole 15 on my last visit would not make a decent hive. The distance from my home apiary to the out apiary does not exceed 3 miles. The timber is iron-bark and several species of gum and box. The whole thing is a mystery to me. The weak hives I kept at home and are now in splendid order. Can you solve the problem.

Yours respectfully,

C. C. PAUL.

[We have had similar experience with one hive. The mother of the queen was one that was sent us with a great reputation, but both her and her daughter have done no good. A week ago we united the two to another weak hive and will watch results.]

STRONG COLONIES ALL THE YEAR ROUND.

DAVID FISHER.

Editor A.B.B.—In your transcript of my paper from the "Australian Farm & Home" there is a typographical error which please allow me to correct. The last two lines on page 35 of A. B. B. for May, read "Until this season I never extracted an ounce of honey after the new year." That is an error. It should read "Before the new year." The facts are that until this season I got no honey before the new year, and very little afterwards, while this season I got 14 60lb tins before the new year and three tins afterwards. I could have taken a

little more afterwards had I chosen, so that practically my bees gave as much surplus after the new year this season, as they did in previous seasons, and the 14 tins I got before the new year was my reward for doubling them up in the previous autumn. I have doubled them up again.

In May A.B.B., E. P., Fernbank, Vic. advises T. W., to come to Gippsland. I advise him to stay away. Climate too wet and cold, and as a rule honey is dark in colour and strong in flavour, and not to be compared to honey from box trees. And, besides that, the most expert bee men get only moderate averages.

M.C.S., Kerang, V., wants to know if the neighbourhood of Perth, W. A., is a good honey producing locality.

I do not think so, for the reason that the bush all round is continuously lived upon to provide Perth with firewood. But I think from what I saw of the colony during the 18 months I lived there, 19 years ago, that, away from the town, W. A. is a most excellent place for a beekeeper. There are millions of acres of scrub and timber that will be left in a state of nature for generations to come. I was not interested in bees when I lived there and therefore did not take particular notice, but my remembrance of the timbar and scrub is that it is extensive, varied and florfierous. My wife was born there and she says that her father used to get lots of beautiful honey from gin cases, but she cannot remember anything about yields per hive. Perth is warmer than Melbourne, and not so subject to those sudden and extreme changes in the weather that we have here. One thing must not be forgot. If any great quantity of honey was obtained it would have to be sent to England. I think the W. A. market is already sufficiently supplied. Perhaps some of the W. A. beekeepers will enlighten us further.

Drouin South, Victoria

WESTERN AUSTRALIA.

J. B. Kline, W.A.—I was not well some time ago so took a change, and during my trip visited Mr Wolfe's apiary. He had suffered from a visit of foul brood, but he thought he had mastered it. I have not seen him of late so do not know how he got through the season. He has a nice place and I wish him the success he deserves. Ah! Mr John A. Ayre has taken up a homestead at Gin Gin, and together with his apiary, has taken a big queen for the big hive, and I'm sure all beekeepers, together with myself, wish him all the good luck in married life. As a peculiar place for a swarm of bees to make a home, I have been informed that a swarm took possession of a top of a beacon, to mark the depth of the Swan River, the beacon being fully 200 yards from either shore. They certainly had the advantage of working both sides of the River. After trying it for a couple of months, they left for I dare say a more sheltered spot. This is slack time for bee news, as I dare say you know. I presume you had a good display at the show, which I just think of is about taking place. I'm hoping to come across John A. Ayre soon and learn progress at his new home. I hope to have the pleasure to visit it someday, some 70 miles from Perth. Perth is still making big progress.

B. R. D., Werris Creek,—I have shifted my bees up here from Lochinvar and they are doing well, and any warm day are very busy. Brood rearing is still going on well and honey coming in pretty fast. The box trees are out in bloom, and if we could only get some rain it would keep the extractors going.

J. & E. T., South Lillimur, Vic.,—Please find enclosed 5/6 worth of stamps for my subscription to the *Bulletin*. We are very pleased with the paper, and wish you every success. The season has been a good one here, but the market disgusting. A good part of our season's take still in hand.

T. S. Fisher, Richmond River,—A fair bloom in the mountains, and bees doing fairly well.

J. Mc C., Moorside,—My bees are doing fairly well now, plenty of ti-tree yet, and swamp mahogany out like cauliflowers.

J. F., Chatsworth Island.—Bees have been doing very well lately, the ti-trees have just finished flowering, and as it was dry weather when they were in bloom, the bees gathered plenty of honey and are strong for the winter.

F. H., Bathurst,—Mr. Gale (Sydney Technical College) has been delivering valuable lectures here on "Bees & their Commercial Value" and the "Influence of Bees in Fertilizing plants and crops," but the poor attendance does not say much for local apiarists. Mr. Gale has promised to give a practical outdoor illustration next spring. The forthcoming convention is the topic with us now. It promises to be a huge success.

W. E. B., Broadwater,—We have had a splendid season and I am busy extracting on a good flow. This may sound strange to some, but, nevertheless it is a fact, we get a winter crop as well as a summer and autumn, but no spring crop in this locality. Say did you ever try saw dust on your honey house floor. It absorbs all drift and it is possible to feed back to the bees again.

Very good idea,

Mr. E. J. Rien, Hawkesbury Agricultural College,—Referring to Dr. Miller's remarks re fertile workers, I had a unique experience with them, and should like to know if any brother beekeepers ever had the same. I found in my yard a nucleus, some years ago, with fertile workers, so I thought I would try some experiments with them I only got to one, however, and that was: I introduced a queen-cell in a Doolittle cell protector; she emerged in due course and became fertilised, and commenced to lay. I found the fertile workers were laying at the same time, as further evidenced by the capping of the cells. I then introduced the queen into another hive, and gave the nucleus another queen-cell in a cell-protector. She also hatched and commenced to lay in the same way; the fertile workers still being in the hive. The same season I had another hive which acted in precisely the same manner. I have never heard of fertile workers being so good to a queen as that before.

T. O'Grady,—Dear Sir,—Kindly permit me to say a word to friend Jones about clipping queens which he advocates in last B.B. That the queen will get lost is not the only objection to the practice, for in many cases the clipped queen will be immediately killed on the swarm's return to the hive, as I have stood by and watched it done; and in almost every case she is sure to be superseded when the bees find she cannot follow. This involves a loss as great as if the swarm had been lost, especially if you have been cutting out cells; also with all due deference to friend Jones' long experience, as to swarms with clipped queens selecting accessible places, I find they cluster just where they like and if the queen cannot go to them simply pull her to pieces. I have tried clipping this season, but no more, until I have so many bees I do not mind losing a few; and if I get any more nice queens from friend Jones in the spring, I hope he will let me have them unclipped, even if I do lose a few while introducing. It has been a very poor honey season here. We had onegood honey flow in the spring but nothing until at the present time there is a fair flow coming in principally, I think from a flooded gum (probably *E. Tereticornis*) and Banksia, a very opportune flow for wintering, as frames were nearly cleared out.

J. E., Armidale.—Please find enclosed 5s (postal note), my subscription for *A.B.B.* May it long prosper, and its editor also. It has, I consider, become a stimulating work on apiculture. I am quite satisfied that beekeeping will pay well in careful hands. As I wrote you before, I obtained 2 tons 5 cwt. of honey from twenty hives, on the Richmond River. Last October I purchased five colonies (single) eight frames. Have now

seven two storey hives and one 1-storey, and have taken 900lbs. from them this year, and I think they have sufficient stores to carry them through the winter. I may say one of the five colonies purchased suffered from paralysis, and did very little good—so I may say my honey and increase came from four colonies; but we get a long and cold winter here, and how they will come through it has to be seen. I find one colony seem to fight between themselves, and I find numbers of dead bees in front of the hive. *It is not robbers.* Can it be that the queen is an hybrid, as some of her bees are black and others a fair colour? I am told by an extensive beekeeper, who has watched their movements, that, he thinks, it is the disease known as the "no name disease." Perhaps you might give me a hint as to what you think it is.

[The fact of the bees not being robbers, and yet fighting among themselves in the hive, we cannot explain. Will some other beekeeper do so for us? Their being hybrid does not necessarily make them pugilistic.]

J. A., Springhurst, Victoria, writes—I herewith give you a report of my apiary for the season 1894-5. I commenced with 18 colonies, and increased to 30 by natural swarming, but having only a little time each evening to look after my bees, I found that I could not manage the 30 hives, so I doubled them back to the original 18, and have extracted 2 tons 14 cwt. of honey. I winter my bees by placing an empty super over the brood nest, and put a folded flour sack in same, which keeps the bees warm and lets off all moisture. My hives are infested with a black spider with a red spot on its back. Can you or any of our beekeeping friends tell me how to get rid of same.

We know one beekeeper troubled with the spider, who goes to his apiary with a clean bottom board. He exchanges that with the bottom board of the first hive he comes to, which he cleans, and destroys any spiders on it. With this cleaned board he proceeds to the next hive, and replaces with the bottom board from the first hive, and so on through the apiary. Would not tarring the bottoms of the bottom bo rds abate the nuisance.

J. B. S., Pialba, Queensland, writes—It is said that we are prone to overlook a man's good qualities, and see only the bad, till he is dead. Now I think it is a great pity to withhold due praise, bottling it up till a man is beyond all need of it, then pouring it out most lavishly, and I'm very glad to see your subscribers are not treating you in that way. The *Bulletin* has certainly been on the forward march through the past twelve months, and I am sure it must have been a great help to beekeepers generally. The question box I find especially useful and interesting from the large variety of opinions it brings out, and the useful hints to be gleaned therefrom Another thing I like is the short report from different districts as to what the season has been like We have such different experiences, and it is interesting to know what others are doing. We have had a very poor time of it this summer up till the last two months. In April the ti-tree bloomed well, and gave a good flow of fine quality honey. Before they were quite done the wattle came out one mass of bloom; it is pretty well done now, but the bees are working freely in the scrub, and the ironbark is budding, so it is not starvation. My bees have scrub on one side of them, and forest on the other. No ringbarking is done here; it is coast country, and if you ring one tree seven more come in its place, so that the last state of that place is worse than the first, and people leave the forest trees alone. The only clearing that is done is in the scrub, and that is put under cultivation. I have got far and away more honey the last two months than during the rest of the summer put together. Last winter it was much the same; they stored surplus all through, but did very little from August to March, on account of an exceptionally dry summer. The scrub is a great stand by for winter. They always seem to be able to get something there.

Messrs S., Binniway,—Bees are doing splendidly here.

W. L. S. & Sons, Bayswater, W. A,—Just a few lines to let you know we are all alive. We have 36 colonies, but I am sorry to say they are not all so strong as I would like them to be, owing to the dry season. We have had bnt one honey flow this season and have only had 400lb honey since last August This don't seem a very great country for the little pets, there is nothing but the bush here; there are no fields of lucerne or clover here, the same as you have. I must thank Mr. Klyne for putting us on the bee track, also the journal, which is a capital little medium, for so many kind words.

W. S. P., Armidale.—I have had a desperate fight with foul brood for several years. I have tried medicated food with Calvert's phenol Nos. 1, and 5 carbolic acid, as a disinfectant inside the hives, and after a thorough trial I vote carbolic acid a failure. Last spring I had 9 colonies of bees, but they were so much diseased, and dwindled so in consequence, that by the end of October I had only 5, having united the weakest. The best time to unite I find is in the middle of the day. Take the covers off the hives to be united, letting the sun shine in for a few minutes, keeping the bees down on their combs with smoke; remove one queen, mix their combs, and open entrance full width, contracting again in the evening to suit requirements. November was a grand month for the bees, the cultivation paddocks were white with clover, and forest trees were starting to bloom. so I gave my bees new foundation in fresh hives that had been exposed to the weather for a month, destroying all the worst combs, but removing the cleanest looking ones and left them exposed to the air, useing them again as required without any ill effects. By the end of December things were beginning to hum and continued brisk to the middle of March, when dry weather set in and has continued ever since, stopping the honey flow, which is now at end for this season. Total yield this season from 10 colonies, 1,460 lbs:

W. J. H., South Woodburn.—This district is a fairly good one for honey production, being covered by large forests of ti-tree (broad-leaved variety.) This with clover, heath flowers, and some gums, keeps the bees well employed. The ti-tree, which seems to be confined to the north-eastern part of this colony, has been pronounced by an experienced bee-keeper here as one of the best honey producing trees in the colony. There is also the advantage that (owing to the land on which it grows being too low for cultivation) very little of it is likely to be cut down. Would you be good enough to tell me what qualities good honey must possess, such that will make it fetch the highest market value.

You speak of the broad-leaved ti-tree as giving a good honey. Our bees have just had a splendid flow from it, but we did not like it, it has a strong flavour, and we are leaving it in the hives for the bees to winter on. The following are the points of honey judging:—Flavour, 20; aroma, 5; clearness, 10; colour, 5; density, 10: total, 50. Candied honey:—Flavour, 25; colour, 15; fineness of grain, 10: total, 50.

MILDURA B,K,A,

The monthly meeting of the M.B.A. was held in Bain's Rooms, Deaken Avenue, Mildura, on Thursday, June 6th. There was a fair attendance of members present.

The president, J. Dundon, occupied the chair.

Minutes of previous meeting were read and adopted on motion of Mr. Boland, seconded by Mr. Wood.

The President briefly addressed the members on several matters requiring immediate attention, principally with regard to the marketing of honey.

The secretary read a paper on the advantages to be gained by the use of the shallow frames, which evoked much discussion.

Resolved on motion of Mr. Prince, seconded by Mr Agers, that the marketing of honey be the special subject for discussion next meeting, and that Mr Taylor be asked to read a paper on same.

Resolved that next meeting be held in same rooms on July 4th.

A PHOTOGRAPH.

We acknowledge receipt, from Mr. D. G. Grant, of photograph of honey display at the late Musclebrook show. It is an excellent photograph by Mr. H. B. Solomons, of Singleton. To look at the two splendid trophies of Messrs Roberts and Paul, with all the other beekeeping and honey exhibits, makes us feel that the Musclebrook beekeepers are real live men and up to the times. We will have it with our other photos, at the Bathurst Convention.

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