The Australian bee bulletin. Vol. 2, no. XVIII[b] October 23, 1893

West Maitland, N.S.W.: E. Tipper, October 23, 1893

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

THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

VOL. 2. No. XVIII. OCTOBER 23, 1893. PER COPY, 6d

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

Contents.

The Foreign Trade..	127
Paragraphs	128
The Special Subject—"Queen Rearing" ..	129
Special Subject next month	131
Question Column	131
The English Market	132
The Fray-James Swarmer	133
Bee-stings for Rhenmatism	134
The Musclebrook B.K.A.	134
Foul Brood Act of California	134
Heredity of Bees—Gale	135
Fertility of Queen Bees—Abram ..	136
How to Prevent Swarming—G. James ..	138
Victorian Convention	139
Do Bees Transfer and Steal Eggs—Abram	142
O'Connell	142
Dunkeld, Victoria	142
Mr C. Mansfield's Apiary	143
The Benighted Beekeepers of the Lower Richmond	143
Currabubula	144
Eugowra	144
Tatham	144
Paragraphs	145
H.R.B.K A.	145
Beekeepers' Directory	146
Scale of Advertising Rates	146

The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEE-KEEPING

WEST MAITLAND.—OCTR. 23, 1893.

THE FOREIGN TRADE.

We have a very important matter in connection with the above to lay before the consideration of our readers this month.

We spoke in our last that Mr J. W. Pender was being assisted in his efforts to open up a London market by Mr B, W. Levy, a merchant of that city doing a large trade with Australia. Mr Levy submitted the samples left with him to a number of supposed experts, who all reported unfavourably both as to the quality of the honey and as to its value—the former having a "twang," and the latter being from 22s 6d. per cwt.

Many of our readers must be well aware that Mr Pender is a gentleman well and favourably known in the Hunter River District of New South Wales, and we have not the slightest doubt took home samples of good honey, straight from the bees, who had previously obtained it also straight from Nature's warehouse alone.

The Agricultural Department of New South Wales have placed themselves in correspondence with Mr C. B. Stuart Russell, of London, who says:—"When in Australia a few years ago I had opportunities of testing the quality and flavour of honey produced in the neighbourhood of Sydney. Since my return to England I have not yet met with any honey to be compared with it. The demand in England is not at present great, but I think it is partly because of its inferiority, much of it being adulterated, and much of it being produced by artificial feeding of a wrong kind." He says he "used to pay from 4d. to 6d. per pound in Sydney for honey sent to him from the apiaries. Here in England I have paid as much as 1s. 6d. per lb, the lowest price being 8d and 9d. for inferior stuff."

Will our readers carefully read the correspondence elsewhere.

How can we bridge these two communications? Is it that there are those who wish to gain by depreciating the value of our honey and so reap the profits that should go into the pockets of the Australian apiarist?

The Parliament of Victoria have granted the Beekeepers' Association of that colony a shipping bonus, for trial shipments, up to 25 tons, packed under the supervision of experts nominated by the association and under the seal of the Victorian Government, and to receive a bonus of one penny per lb, provided no expense should be incurred by the Government, and Mr Chambers, the energetic secretary, writes us they could have obtained a greater bonus had it been asked for.

The above is a most excellent step, and

with or without the bonus, the governments of all the colonies should be urged by the beekeepers in them to adopt a similar course.

But a step further than that is required. To control those who have the selling of that Government branded honey. And that can only be done by persons living in the large centres of population being duly licensed by an Australian government, and under a heavy bond to sell nothing but pure Australian honey marked with the Government brand. The fact that such a person had such a license, and was under such a bond, would be a guarantee of purity, and would be bound to create a good trade in every locality where such licensed person was established.

We have given facts and our ideas on them. Will some of our thinking beekeepers follow it up?

Over 100 added to our list of Australian beekeepers during past month.

Held Over to Next.—Want of space compels us to hold over several very interesting communications till our next.

Quite a number of queens have arrived dead from America by the last Californian mail.

In future all communications for insertion must reach the office of the *A. Bee Bulletin* not later than the 20th of each month.

We have to congratulate the Beekeepers' Association of Victoria on the success of their application for a bonus of one penny per pound. It seems to us hitting the nail right on the head.

We have quite a list of *very respectable* beekeepers who have not paid their *first* year's subscription. Now, whoever the cap fits, do be honourable. Paper, ink, compositors, and machinery, all cost money.

As we were going to press we received from Mr Major Shallard, the secretary of the New South Wales Beekeepers' Union, a copy of the Canadian Foul Brood Act. It is rather long to publish in full, but we will give a digest of it in our next.

A big advance step next month.

Mr. C. Mansfield, Secretary of the last Convention, has handed us the questions that were sent in to the question box during the sitting. We shall utilise them in our succeeding issues.

The Beekeepers Association of Victoria have held their second annual Convention. Good useful work was done, and several valuable papers read, which we will favour our readers with in succeeding issues.

We acknowledge receipt of the first copy of the *Canadian Bee Journal*, under its new proprietorship, Goold, Shapley, and Muir Company, with Mr. R. F. Holterman, editor. It says:—"It is our intention to make it a first class monthly in every way, one worthy of Canada and the Beekeeping industry." We wish them every success.

A gentleman connected with Messrs. Hebblewhite's, in Sydney, lately made a "Crane" smoker. He filled it up, and lit it, then closed the room door. Smoke soon issued from every crevice. Two fire brigades were summoned, and the door burst open. The smoker, having burnt itself out, quietly held its sides and grinned—that is, if ever a smoker did grin—to see the firemen hunt for the cause of the smoke.

Mr. L. T. Chambers, the energetic secretary of the Victorian Beekeepers' Association, in a communication dated October 18th, says:—I must again congratulate you upon the full and interesting matter of the *A.B.B.* We succeeded in obtaining a shipping bonus of 1d per lb to enable us to try home and foreign markets. This grant was passed last night upon the estimates and we no doubt could have obtained a greater amount of help had we asked for it. I am now busy arranging details of this business and propose to unite in a company 20 to 50 of our largest producers, and work concertedly over this matter and do the thing in good form. I feel confident there is a market to be won, but we have to labour under many disadvantages and some prejudice.

Coming to the fore again.—Mr. R. Patten, of Bolwarra, is again coming to the front. Vines are planted, the supports erected for them to grow on, and enclosed and over shade a pathway to be cemented, on either side of which are brick foundations in which to place his hives. He has only a few hives now, but the queens are good, and he intends building up surely and steadily, as his great experience will dictate to him.

Mr. Thos. Ellerton, Muswellbrook, writes:—"September 25th., Dear Sir,—I find on looking through my hives on Saturday last one of them has a tremendous amount of drone brood, sealed over with a few hatched out—in fact nearly half the brood seems to be drone, and every frame appears to be alike – Will you kindly advise me what to do in this case. I thought of putting them in the upper story and replacing in bottom with full sheets of foundation with honey board between stories, but in that case they would consume a lot of honey and I should have to catch and kill them one by one, which would mean some few days work. On the other hand if I leave them where they are and put on a trap the queen would lay in the same cells and I should be no better than I am at present. [Should supersede the queen by another at once, and give combs of worker cells or room for building them in place of the drone combs.—Ed.]

If the Government of New South Wales has an officer who earns his salary, and repays the cost of his employment, it is Mr. Albert Gale. His last trip in the northern portion of the colony occupied seven weeks. The country papers every where gave good reports of his meetings, and if ever a bee inoculated the spring flowers, Mr. Gale inoculated his hearers with the bee fever. We know it by the increased interest in the A.B.B., wherever he has been. He completed a tour of seven weeks on the 7th inst, comprising the districts from the Williams River to Narrabri, during which time seventeen centres were visited, and 31 lectures delivered, to an aggregate attendance of over 3000. In some centres courses of lectures were delivered. It was very encouraging to note how enthusiasm grows in bee culture. His first lectures in places were seldom attended by more than fifty or sixty people, afterwards the halls were always filled, and very often almost immediately after he had left a place petitions would be sent to head-quarters for his return. We understand his next tours will be to Bowral, South Coast, and Stroud.

THE SPECIAL SUBJECT,

QUEEN REARING.

J. F. MUNDAY, WOODVILLE.

I prefer Alley's system of queen-rearing, but for my own use I have always been able to obtain as many good queens as I wanted by simply removing the queen and *all* eggs and *newly-hatched larvae* from a *strong* colony, and then giving that queenless colony a frame of choice eggs, generally get a comb which has newly laid eggs, along the bottom or sides, and pare a small piece of comb from the bottom or side.

I remove the cells about the twelfth day. There is very little trouble in the above method, and the queens thus obtained are always good ones.

J. WILSON GREEN, LOGAN RIVER, Q.

The last two seasons I have followed Doolittle's method as described in his book, only I give the bees the empty cell cups to embellish, &c., before putting in the royal jelly and larvae, as they seem to take to them better when I do that, but this year as the bees are swarming earlier, and the majority of queens desirable to breed from, I simply divide up the old hive into nuclei all round the old stand with one or more royal cells in each. Then, as the young queens lay and are used I unite to the parent hive, by which time all danger of afterswarms is over, and at the same time producing the best of queens.

C. MANSFIELD, Largs.

As is well known, at least among professional bee-keepers, there are several plans for raising queens, such as the Alley, Doolittle, and most recent of all the Atchley plan. To explain these even briefly, would more than fill the October number of the A.B.B., so I will content myself by giving in brief, a simple and practical plan, suited to the requirements of beginners, and those who have made moderate progress in the industry. Of course it is assumed that the bee-keeper has at least one queen suitable for breeding purposes; if not he must get one. First

then, make a small cage of wire cloth, say three quarters of an inch in diameter, round or square, an fill each end with a plug of wood or cork. Go to a strong hive, catch the queen by the wing, and place her in this cage, Put her caged as she is in any vacant space among the frames of her hive. The bees will feed her through the wires. Wait for five days. Then place an empty comb with worker cells (not too old), in the middle of the brood nest of the breeding queen. Wait again for four days more. Remove the caged queen from her hive, and make any use possible of her or kill her. There will be no trouble in cutting out queen cells from this hive. All having gone well, the comb given to the breeding queen will now contain larvae just hatched, if not, it can remain another day or two. If a large number of cells are wanted, this comb can be cut into strips, and these can be attached with the cells pointing downwards, to the top bars of empty frames by means of wax, and an additional cross bar can also be fixed, to hold more strips. By destroying each alternate larva before giving to the bees, the cells will be formed a distance apart, and convenient for cutting out. On the tenth, or by no means latter than the eleventh day, lift out the frame containing the cells, smoke the bees well out of the way, and cut out the cells with a sharp knife. One cell can be given to each queenless colony, or to nuclei formed for the purpose. The hive which has raised the cells, as it contains many young bees, would form several nuclei, but it would be well to give one frame of larvae to each, to ensure the nucleus not swarming out, when the young queen goes in quest of the drone.

These young queens, even though they may meet black drones, will according to the usually accepted theory, produce pure Italian drones, and this will render it more probable for future young queens to be purely mated. By having a number of these queens on hand, one can be run into a hive, after sending out a swarm, being careful to remove all queen cells, and so obviate the inconvenience of after swarms.

W. S. PENDER, WEST MAITLAND.

As I have written a good deal on this subject in the A.B.B., it will hardly be necessary for me to say much in this issue, but I will give one method by which I have reared some very fine queens during this season and previous seasons. Just about this time—the swarming season—a large number of queen cells are started around the edges of the combs, indicating that the bees have an idea of swarming. These may remain in the hive and never have an egg deposited in them. As these cells are formed, I take the comb to my room turn it bottom up and deposit in the bottom of each cell a small quantity of royal jelly obtained from a cell of some colony that has cells well on the way. I now cut a piece of comb from the hive of my breeding queen, having larvae therein floating in a milky looking substance, and with a goose quill or piece of deal, sharpened to a fine soft point, lift out the larvae and place them on the royal jelly one at the bottom of each of the cells.

This prepared frame of grafted cells is now to be placed in the middle of an upper story of a hive prepared a day or two previous as follows:—Remove to one side the hive selected for queen rearing, which should be strong, i.e., have bees sufficient to cover twelve or more simplicity frames. Place a hive in the position of the old filled with empty combs except one frame. Hunt up the the queen and place her with the frame of brood she is on and bees with her in the new hive. Put on a queen excluding honey board and place one storey of the old hive on top. Any bees on the remaining frames may be shaken down in front of the hive and allowed to run in and surplus combs distributed amongst other hives. As many as ten or twelve cells may be given at a time and the bees will complete them. As soon as the cells are sealed, more may be given every four days for three weeks, when the hive may be treated again as at first, i.e., putting the brood over the queen excluder and empty combs with one frame of brood and queen below. By this method one hive can be made to complete cells all through the season and very good queens are the result.

J. R. GAGGIN, Lismore.

The method of queen rearing most successful with me so far, insuring uniformly vigorous queens, and the greatest number of queen cells, is Doolittle's plan of grafting artificial queen cups and placing them in the top story of a powerful colony for completion (queen excluding zinc shutting off the access of the queen from the lower brood chamber). With all deference I would however suggest one or two modifications to the rules Doolittle lays down in his work:

(1). Doolittle advises the insertion of a small lump of royal jelly in each cell, before transferring the larva into it. I have discovered this to be quite unnecessary, and so, instead of as formerly wasting valuable time skirmishing round the apiary, and pulling many hives to pieces in frantic search after a morsel of the precious jelly, I now calmly transpose the simple larvae as it were naked into empty queen cups. When picking out the larvae from their worker cells, however, I try to scoop up as much as possible of the jelly on which they float. With this process the percentage of complete cells is all but as great as it is in the way Doolittle recommends, and no difference in the queens can be detected.

(2) Doolittle says that not more than 15 or 20 prepared cells should be offered to a colony at a time, but if a swarm be in proper order for

queen rearing, I find that 30 or 40 cells will be completed just as perfectly as half the number. This fact is of importance to the large queen rearer.

It is best not to rear more than 3 or 4 successive batches of queen cells in the same hive. After having failed that number of times to rear a queen for themselves, it would appear that our indomitable little workers generally grow discouraged (from hope deferrred, which Solomon says, "Maketh the heart sick") will reject any fresh cell offered them, and so another colony would need to be selected for queen rearing.

If possible, queen cells should not be taken from the hive till the day before they are expected to hatch, as the slightest shake or jar will often destroy the queens if the cells be any younger. From my experience, I would advise always giving the completed cells to nuclei, or queenless hives, as the plan of getting queens fertilised in the supers of hives having laying queens has, I regret to say, so far been unsuccessful with me.

In conclusion, I would recommend any beekeeper ignorant of the Doolittle plan, to get that author's book on queen rearing. He treats his subject on scientific lines, yet in an exceedingly plain, practical style.

Special Subject Next Month.

Were you making a new beginning in beekeeping, what hive would you use? Give your reasons as brief as you can reasonably do.

QUESTION COLUMN.

Mr Evan Francis, Bega, writes:—I would be glad if some of your more experienced correspondents would, through the medium of your Question Column, enlighten me as to the following.—Several hives that I purchased a month ago are kept busy dragging out the bodies of newly emerged bees. These young bees don't seem to have properly developed, some of them being without a vestige of a wing, and others having only the bases of the wings. Some by their form show that they have been dragged from the cell, and are thrown out in a dead state, while others have emerged alive, and after being thrown out are seen crawling on the ground in a pitiful plight. At first I thought it might be owing to damage to the brood combs during transit, or in transferring; but as four weeks have elapsed since the latter operation, it would seem that the trouble arises from some other cause.

W. S. PENDER, WEST MAITLAND.

Perhaps your Bega correspondent shakes the frame of brood rather violently when handling them to get the bees from the combs, otherwise I cannot account for it. It is evident that the transferring or cartage has not been the cause, as four weeks has elapsed since the operation. If the bees being drawn out are dead I can understand it, as they would remain dead in the combs until the bees remove them.

J. W. HOPKINS, TICKHOLE, CARDIFF.

My opinion is that the moth has got under the capping. When that occurs the capping is in most cases destroyed, when the bee emerges, or is dragged out before being fully developed. That is one cause, as I have had a little experience that way myself.

J. WILSON GREEN, LOGAN RIVER, Q.

I should say that the bee moth or moth-worm is the cause of the trouble with the mutilated bees, as any damage from moving or transferring would very soon be repaired and injured bees removed. Try an Italian queen and see if her progeny would not remove the trouble.

D. CAMPBELL, STAWELL, VICTORIA.

I know of two things only that would cause the bees to drag the young out. The first is starvation, the 2nd is spring dwindling. Mr. Frances should see that the bees have a good supply of honey and that there is no brood exposed so near cold that there are not bees enough to cover and keep it warm.

BINNI.

I should say, the cause of this behavionr was, that at the time of transferring, steady honey flow was coming into the hives, and the bees were encouraged to breed up to their highest capacity, then this flow was suddenly cut off by rain, cold, &c., and the bees having no stores to fall back upon, had no option, but stop operations and turn out the immature insects.

GEORGE JAMES, GORDON.

I cannot from personal experience give any idea what can be the cause of such an extraordinary feature as Mr. Francis reports, and the only two suggestions I could mention are—first, Moth Worms have possession; or second, the queen must be defective. But still, may not there be some trouble in the mode of transferring, i.e., if pieces of tape or string have been used, the bees have eaten the adjoining combs and may thus have destroyed their brood. (Is it starvation?)

W. ABRAM, DEECROFT.

There are probably two causes which affect the result stated by Mr. F. The one cause is that the brood combs are infested by moths, the grubs of which, in working their way through the comb, from cell to cell, entangle the nearly ripe

brood in a sort of cobweb, which hinders the developed bees from leaving the cell, and most of them are pulled out by the older bees, who often have to destroy the adjoining cells to effect their purpose. The other cause may be, that there were not sufficient bees to keep all the brood properly warm, and the result is imperfectly developed bees. In the former case some of the affected bees show a web on their body, but not all. The Italian bees are best able to defend themselves against the moth.

W. NIVEN, EUGOWRA.

From the description which Mr E. Francis, of Bega, gives of his bees, I should think that they are troubled with the bee moth. He could easily ascertain if this is the case by examining the bottom board of the hive and the brood frames, when he would find the bee grub which is causing the destruction of the young bees in the cells. The plan which I adopt to get rid of the grubs is to look over the combs once or twice a week, oftener if necessary, and pick the grubs out, and keep the hive and fixtures clean.

MR. C. MANSFIELD, LARGS.

It seems quite clear to me that Mr. Frances's trouble arose from moths. The bees were of course blacks. The moths made a good lodgement among them and the larvæ reticulated the young brood, with their well known tunnels eating away the softer parts, wings, etc., of the developing brood. These at the proper time were unable to extricate themselves from the webbing spun by the larvæ of the bee-moths, and had to be removed by the other bees of the hive, in the condition reported by Mr. Frances. It would not be surprising if the moths drove the bees entirely from the hives. They should be Italianized, and that would end the moth trouble.

J. F. MUNDAY, WOODVILLE.

In reply to question re bees carrying out deformed bees from the hive. I desire to say that these deformed bees may have been occasioned by concussion while in the larvæ state. Say for example, when the honey was being extracted from the comb by means of the extractor, or when the bees were being violently shaken from the comb. If not occasioned by these means then the larvæ have not been sufficiently fed and consequently are not properly developed and the bees can tell that before they (the young bees) emerge and so without scruple drag them out of their cells and carry them away. Not sufficient warmth will also cause deformity when there is more brood than the bees can cover when the weather is cold. I have had experience in the above cases.

Mr A. Moore, Scone, writes:—Enclosed please to find Postal Note for 5s, one years subscription. I like your little pamphlet very much, and intend to make some practical use of its contents,

THE ENGLISH MARKET.

The following correspondence has been received by Mr W. S. Pender from his father in England. In our last it was stated a few 60lb tins of honey had been left with Mr B. W. Levy, with instructions to have some samples sent to experts for them to pronounce as to its quality and value. Here are *their* verdicts :—

2 Fen Court, Fenchurch st. E.C.,
London, 12th July, 1893.

Edward Davis and Co.,
Messrs. D. Cohen & Co.

Dear Sirs,—We enclose our report on your four samples of honey, but fear the price will not encourage any shipments. It is of no use overvaluing it, and the only way to make the industry successful is to feed the bees on something that will not give the disagreeable flavour and smell to the honey. For your guidance we are sending you a sample of good Jamaica honey we have now to sell, the value of which is about 32/6 to 35/- per cwt and the flavour of which is very fine.

We are, yours faithfully,
(sgd.) EDWARD DAVIS & CO.

[The Jamaica honey is no honey but a doctored stuff, only rubbish and dark in colour. J.W.P.]

37 Mincing Lane, E. C.,
London, 4th August, 1893.

Devitt & Hett.,
Messrs D. Cohen & Co.

Dear Sirs,—We have carefully examined the four samples Australian honey submitted to us for valuation and now have the pleasure to hand you our report.

No. 1 Duilish color, thin consistency, *Value* 22/6 *to* 25/-

Nos. 2-4 Fair colour (amber), good consistency, not set, *Value*, 26/- *to* 27/6.

As is very often the case with Australian honey, these samples had not a strong honey flavour, otherwise the Nos 2 and 4 quality would realize about 40/- per cwt.

We are, dear sirs,
Yours truly,
(sgd) DEVITT & HETT.

Southall,
Abbott Bros. London, July 17th 1893.

Messrs D. Cohen & Co.,

Gentlemen,—We do not like the flavour of any of the honey, it is distinctly foreign, and we are afraid if it is all like this it will not sell readily.

Yours faithfully,
(sgd) ABBOTT BROS.

G. Neighbour & Sons,
127 High Holborn, W. C.
London, Sept. 4th 1893,
Messrs D. Cohen and Co.
Re Australian Honey.

Gentlemen,—

We have examined the samples sent. We do not doubt the genuineness of the honey, but there is a twang with it which is not likely to find favour with the English palate. We have had similiar offers from others but we have never purchased for the reason given above. You will we hope understand our position. We have to place before our customers an article that will be acceptable and lead to further business. We do not think the honey offered would realize more than 30/- to 40/- cwt in the market.

We are, yours truly,
GEORGE NEIGHBOUR & SONS,
(sgd) J. H. BLACKMERE

E. Davis & Co.,
Messrs. D. Cohen & Co.
2 Fen Court, Fenchurbh street, E.C,
London, 12 July, 1893.

Dear Sir,—We have the pleasure to hand you our report and valuation on the samples of your honey.

No. 1.—Pale and cleaf, but wanting in true flavour. Value about 20s to 22s 6d per cwt.

Nos. 2, 3, 4.—Pale with v slight grain, but with a disagreeable flavour and taste. Value about 22s 6d to 25 per cwt.

These are worth more than No. 1, in consequence of the slight grain or crystalization.

We are, gentlemen, yours faithfully,
(Sgd) EDWARD DAVIS & Co.

The following has been received by Mr M. Scobie, secretary of the H.R. Beekeepers' Association :—

28th. September, 1893.

Sir,—I beg to forward herewith for the information of your association, a copy of a lettter received by the Department from Mr. C. B. Stuart-Russell of London, dealing with the Market in England for Australian Honey.

I may say, we are expecting to receive shortly a full report dealing with the whole question from the Agent-General in London, a copy of which will be forwarded to you. I have the honor to be, Sir, Your obedient Servant,

WALTER S. CAMPBELL,
for the Under-Secretary.

The Secretary,
H.R.B.K Association,
West Maitland.

---

76 Boundary Street,
South Hamstead,
London, N. W.

To
The Honorable,
The Minister for Agriculture,
Sydney, N. S. W.

Sir,—In the interests of Bee farmers and producers of honey in the Colony of New South Wales, may I have the honor to suggest that consideration be given to conditions of the English markets in respect to honey, with the view to determinating whether or not it would be worth while supplying them with Australian honey.

When in Australia a few years ago, I had opportunities of testing the quality and flavour of honey produced in the neighbourhood of Sydney. Since my return to England, I have not met with any honey to be compared with it

Now, I used to pay from 4d. to 6d. per pound in Sydney for honey sent to me from the apiaries. Here in England, I have paid as much as 1s 6d per pound, the lowest prices being 8d. to 9d., for inferior stuff. I refer to prices in Lancashire chiefly. But all over England prices are very much higher than in the Sydney markets, and the honey in my opinion not so good.

I think, if it were sent, it should not be packed in metal of any kind, but rather in glass (for small quantities), and earthenware (for large quantities).

The demand in England is not at present great, but I think it is partly because of its high price, and partly because of its inferiority; much of it being adulterated, and much of it being produced by artificial feeding of a wrong kind.

About twelve months ago I had occasion to write to the Agricultural Department of Victoria respecting the branding of their butter cases, which should be done not only with the stamp of the Department, but also with the word "Butter," in a large and conspicuous manner.

At the same time I suggested the encouragement of the honey industry. I feel confident it would meet with success as soon as the public of England found out the goodness and cheapness of the article of food. I have the honour to be, Sir,

(Signed), C. B. STUART RUSSELL

THE FRAY-JAMES SWARMER.

Mr Geo. James, writes us :—I do give a complete denial to any statement that this Non-swarmer will cause the killing or "turning up missing" theory of bees or queens in hives which have the non-swarmers attached. A three months trial before any was placed on the market is what they gave the device in the very first instance. Now what next?

BEE STINGS FOR RHEUMATISM.

Mr. C. C. Wheeler, Casino, Richmond River, writes :—As it appears to be recognized that the poison from the stings of bees cure rheumatism, I thought I would send you particulars of a cure of headache, that came directly under my notice. For four years my wife was a great sufferer from headache, seldom being free from it. Twelve months ago in hiving a swarm that had settled 15 feet high in a peach tree, being in a hurry, as it was commencing to rain, she accidently pulled part of the swarm on to herself, and was stung very severely about the head. Although the stings made her ill for a day or two, I am happy to inform you, she has not been troubled with headache since, and as twelve months is a good trial, I consider the bees have made a complete cure. The above facts are well known here, but, as some sufferer may like to try it, I thought I could not do better than write to the *Bulletin*. If the *A.* B. B. keeps improving at the same rate it has done this last 12 months it will soon surpass the American Journals. Wishing you every success.

THE MUSCLEBROOK BEE-KEEPERS ASSOCIATION.

Silver Oak Apiary,
Musclebrook, 11th October.

The Editor A.B.B.

Dear Sir.—It may be of some interest to your readers to know that on Tuesday, 3rd inst., a meeting was held at our local School of Arts to discuss the formation of a Beekeepers' Association. The movement, set on foot by three beekeepers of this town, was so far successful that all present, to the number of twelve, including three non beemen, formed themselves into a "nucleus," which we hope soon to build up into a big two-storey hive under the style of the Musclebrook Beekeepers' Association.

The officers elected are :—Messrs Haydon, President ; Hazelwood, Vice President ; D. Grant, Secretary ; and Ellerton, Treasurer. A Committee of five members, in addition to the officers, was elected, to form rules, etc. This committee met on Saturday night and drew out a code of rules to be submitted to the general meeting on the 14th inst.

You will see by this that bee men up here are alive, and I think our little association has a good future before it.

The whole place resounds with bee talk, and the bee-fever is rapidly driving the measles out of the town.

Acacias are out in blossom, honey is coming in freely, and swarms are the order of the day. I remain, Sir, yours truly,

Donald G. GRANT,
Secretary Musclebrook Bee Keepers' Association.

(Well done, every success to you.—(Ed.)

THE FOUL BROOD ACT OF CALIFORNIA.

A copy of the above has been forwarded us by Major Shallard, Secretary of the New South Wales Beekeepers' Union.

CHAPTER LVIII

The people of the state of California, represented in Senate and Assembly, do enact as follows :—

Section 1. The Board of Supervisors of any county, wherein bees are kept, are hereby authorised to appoint one or more persons, as inspectors of apiaries, to hold office during the pleasure of said Board.

Section 2. The Board of Supervisors shall fix and determine the compensation of the Inspectors of Apiaries, to be paid out of the funds of the county not otherwise appropriated.

Section 3. Upon complaint being made to the inspector, to the effect, that, in complainants opinion, the disease known as "foul brood," exists in any apiary in that county, it shall be the duty of such inspector to inspect such apiary as soon as practicable, and direct the person in charge thereof to destroy all hives ascertained to be so affected, together with the combs and bees therein, by burning or burying the same in the ground the following night.

Section 4. If the owner or person in charge of any apiary, by his own inspection or through any other source, discovers foul brood in any hive in said apiary, it shall be his duty to destroy such hives and contents in the manner provided in section three of this Act.

Section 5. Any person failing to comply with the provisions of the last section, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than five dollars nor more than twenty-five dollars for the first offence, and by a fine of not more than fifty dollars, for each subsequent offence.

Section 6. This act shall take effect from and after its passage.

Mr L. F. Woolrich, Beehill, Kenthurst, writes —I notice a writer of yours mentions the blue martin as a bee eater (sometimes called the blue jay). My own experience, and I have shot many and examined them, has been that I have only found drones in the gizzard. I should like to hear a general opinion on the subject from reliable men (observers), through your columns. My bees are flourishing, and this year I hope to have a fair show of hives and honey.—[Would some of our friends give us a little further information about the blue martin.—Ed.]

HEREDITY IN BEES.

(BY ALBERT GALE.)

(*Concluded from our last.*)

The foods given to larval bees are of two kinds. The earliest food is analogous to the milk supplied by the dam of a mammalion to her progeny for the first few days after birth, or that fed by the mother pigeon to her young for the same period (males are incapable of produciug it). After a time these are fed with more solid materials, as their strength will admit. As the larval worker advances in development, she is very gradually weaned from milky food, and a stronger kind is substituted. This stronger food is composed largely of pollen. The larval queen is never supplied with this pollen food. Why? Pollen food gives muscle. Milk food, which is largely composed of honey, gives heat. The working bees require strongly-developed muscles for the active life they have to lead and the heavy loads they have to carry. To that end they are supplied with muscle-forming, strength-giving nourishment. The ovarium in the queen bee requires a greater effort of nature to produce it than that required to produce the external organs of worker bees, and a greater amount of heat-giving food is necessary to keep up the waste of the larval queen's system. A queen has not to lead the active out-door life of a worker, therefore the muscle-supplying food is largely withheld, and she is supplied during her larval life with that highly-nutritious food—royal jelly. Neither the pollen food nor the heat-giving food produce any difference in the physical structure in either insect—queen, worker, or drone.

The conditions exacted by nature to evolve a perfect bee from the ova to the imago I have already stated, but time or rest must be added thereto. A drone requires more time to develope than a worker, and doubtless he is supplied with more food, but of this we have no proof. The heat-giving food he first receives is gradually replaced by a muscle-forming nutriment. A worker bee requires less time to develop than a drone, but more than a queen—about mid-way between the two. The first three stages in the metamorphosis of a bee or other insect are infantile. When they enter the fourth or last stage they are adults, capable of almost immediately entering into all the adult duties required by nature. The procreative organs of nearly all females become receptive much earlier than is the case with the distributive organs of males of the same genus or class. This accounts for the various terms required for the development of the queen, the worker, and the drone. In the case of the worker the extra time she requires is not for the perfecting of sexual organs but for perfecting strength-giving muscles.

I know that it can be argued from the foregoing that as a drone is reared under nearly the same conditions as a worker bee he should have the same external organs—waxpockets, pollen-baskets, &c., as she has; but it must be borne in mind that he is designed from the beginning to be a complete and perfect male. A working bee is designed for a complete but imperfect female. The altered conditions of her infantile life to that of the queen bee have produced such a female; her external organs are the result of the check given to her procreative ones.

If M. de Candolle says, as reported by Dr. Metellis, "when the egg is still in the ovary of the queen, it shuts up within itself, in a latent state, the characters and instincts of the three elements of the hive—male, queen, and worker," he is undoubtedly in error. It has been proved over and over again that the eggs when in the oviary of the queen are all male, and it is only as they pass the spermathica in the ova-duct that the eggs become female, and *after* they are laid amid their contracted surroundings that the distinctive characteristics of working bees are given to them,

The egg whilst in the ovarium is masculine and at the will of the queen. Whether it shall remain masculine or become feminine the queen decides as it descends the ovaduct, according to the requirements of nature. Having decided it shall be a female, she fertilises it as it passes the spermathica. Whether it is to be a fertile or infertile female is decided at the point of the ova depositor as it is injected into the large pendulous inverted conical cell or into the small horizontal hexagonal one. If in the former it will be fertile and its chief instinct, its only aim will be that of reproduction, and that instinct is hereditary and transmits an insatiable love for perpetuating its species. If it be ejected into the small horizontal hexagonal cell it will be infertile and its instincts will be that of a mother's love without the power to become one, and this love is lavished on the helpless children of her own parents. Her love for the reproduced is as great and as strong as the love of reproduction is in the mother bee. This instinct, this love for the reproduced, is equalled by her architectural or constructive love, which she puts in force to prepare for the reproduction of her own species. Her foraging instinct is only her forethought, her providential, her maternal love. The worker's motherly love for the younger members of the hive, her constructive love, her providential love, and her maternal love, are all hereditary. We know that the inmate in the queen's cell will have the *love* for reproduction and the *power* to reproduce. We also know the inmate of the worker's cell will have the love of reproduction but *not* the power. We know, too, that she has the love and power of construction, &c. The power to become constructive and to become a gatherer and storer of food are produced by the altered conditions of the cell in which she was reared. There is no doubt but that the inverted conical cell of a queen is the normal cell belonging to *Apis Mellifica*. The altered conditions and position of the worker's cell are abnormal. It must be so whether we take a creative or an evolutionary theory. The modification in the posi-

tion and size of the worker's cell has necessitated the transposition of its inmate, from its inverted erect position as seen in the larval queen, to that of the horizontal cell, its inmate lying longitudinally, as in the case of the worker and drone.

We know that a worker bee has a mother's love without having the power to become a mother, and that love has been transmitted from the mother bee. Who is to say that the mother bee has not the constructive and storing love of the worker, but is debarred from the power to exercise it and yet has the power to transmit it! It is as reasonable that this should be so as that the worker has the love of offspring without the power of reproducing.

If it be "the variation in the quantity and quality of nourishment (accompanied by a condition of minor importance the size of the cell) results in the most marvellous differentiation of structure," how is it that a *working bee* can become fertile? The theory why some working bees become abnormally fertile is, that they have been fed for too long a period with chyle food; or, in other words, weaning has been more or less delayed, consequently this accidental supply of royal jelly has caused the embryo ovarium to develop until a sudden stop is put to it by the larval worker being fed with pollen food. All writers in stating the extra chyle food theory, causing the worker to become fertile, are very careful not to state it in positive terms. That such a theory is not trustworthy is very evident from the fact that a working bee never becomes fertile in a colony where there is a healthy laying queen. A worker only becomes a laying bee when the last avenue to procure a queen has been closed—when there is no egg or young larvae from which to evolve a mother bee. The love of home may sometimes cause one of these hopeless survivors to make a final effort to continue the existence of the colony; it is the catching at a straw. The effort made by these laying workers prolongs the struggle, and there is something produced upon which to lavish their motherly instincts; something to nurse and to care for, if it be only drones. The *desire* to prevent the breaking-up of the colony is a far more reasonable theory than the non-weaning one. She has the tongue, the eyes, the organs for secreting wax, and the useful appliances on the legs; in these respects she is as perfect a working bee as any in the hive and was produced exactly under the same natural condition as any other worker bee; yet her ovary becomes developed, and in this respect she becomes as complete a queen as any hive ever possessed. She has all the characteristics and powers of a queen combined with the characteristics and powers of a worker, only her spermathica has not been impregnated. In this latter respect she is equal to a queen that has been supplied with all the aids that nature has designed, except fecundation.

Does, "the variation in the quantity and quality of the nourishment" produce fertilization?" It cannot.

It may be considered that the facts that I have advanced relative to a fertile worker are equally faulty with the food theory, but it must be borne in mind that a queen's cell is built to evolve a complete and perfect female, and designed to be such from the moment the egg comes in contact with the paternal influence as contained in the spermathica of the mother bee. The structural modification is not made in the queen's cell to produce a complete and perfect female; it is the worker's cell that is modified to produce a complete but imperfect female—a bee with a mother's love but whose reproductive organs have been sacrificed or replaced by a constructive and providential instinct. The ovaries in a worker bee are always latent but are sometimes excited into activity. The sexual organs of fertile workers are never receptive and can never be excited to become so. The worker's cell in which she was reared was designed for the purpose of destroying or preventing the developing of sexual powers, and it very effectually carries out that for which it was designed.

It is the conditions and agencies that are hereditary, these produce the modified structural differences as seen in the queen and worker. These conditions transmit to the elements of the hive the reproductive, the social, the domestic, the constructive, the energetic, the intellectual, and the providential habits from generation to generation and from century to century.

FERTILITY OF QUEEN BEES.—FACTS AND FIGURES.

BY MR. ABRAM, BEECROFT.

Continued from our last.

In the autumn, when the bees leave off working, they stop breeding also; and have no brood during the cold weather in winter; and they are weak in early spring, when breeding again commences. Assuming there are 2lbs. or 10,000 bees in the hive on August 10th, and the queen starts laying, these bees will live to the beginning or middle of October, because they are flying scarcely in August, At first the queen lays only 100 or 200 eggs per day, as the weather is yet cool; but gradually she increases the number, and on August 30th lays about 1,000, or 12,000 in 20 days, at an average of 600 per day. These 12,000 cells cover a space of 240 square inches of comb. From September 1st to the 20th 12,000 bees have hatched; and the total number is now 22,000. As on September 1st bees begin to hatch, and the weather is warmer, the queen increases laying and in another twenty days—September 1st to the 20th—she laid 25,000 eggs, or 1,250 per day. These cells cover 500 inches of comb. From September 20th to October 10th these 25,000 bees have hatched, and there are 47,000 bees on the latter date. Reduce therefrom half the number of wintered bees as being lost, there remain 42,000 bees. The queen has

by this time reached almost the maximum of her laying capability, and her field is large. About 35,000 eggs have been laid in 20 days, or 1,750 per day; and they cover 700 square inches of comb. On October 30th these 35,000 bees hatched, and 77,000 is the total number of which reduce the last 5,000 of wintered bees and 2,000 of those first hatched this season, and 70,000 remain, which weigh about 14lbs., and besides there is brood in all stages to the enormous extent of about 40,000 cells, so that 2,000 eggs were laid each day for 20 days. These 40,000 cells cover 800 square inches of comb. Should the immense number of 70,000 bees not feel inclined to swarm yet, then on November 20th, they would have increased to 110,000, irrespective of loss, which amounts to about 10,000; so that the actual number of bees is 100,000 or 20lbs. Whether this colossal number now swarms or not is henceforth of no difference to influence the fertility of the queen. She has reached her maximum and from now decreases in laying, remaining stationary for a couple of months at about 1,000 to about 1,500 eggs per day, while at the end of March or in April she ceases altogether, to begin again next spring. The large number of bees also decrease gradually, and towards winter there are not many above 20,000.

I have used round figures as near as possible to the point, and the dates are also as near as possible; although in some warmer districts the breeding begins earlier; but the thinking bee-keeper can easily correct them for himself.

Occasionally a queen has laid 3,570 eggs every day for 14 days, which is 150 per hour and 2½ per minute. Of course, a queen cannot be expected to lay without stoppage or resting. Let us assume she lays 10 hours and rests 14 hours, then she must have laid 357 in an hour or six in a minute. Perhaps others have watched their queens as well as I have, and if so, they will agree with me that it is exceedingly seldom to see her lay six eggs in the minute, and the circumstances must be extraordinarily favourable. This was once the case with me. A hive had lost its young queen just before her impregnation. The bees might have numbered from 12,000 to 15,000. All the combs were a year old worker cells, and mostly polished and ready for the queen to lay. A day or two after a swarm issued from a pretty strong hive; but on account of it being windy, and I think because the queen was heavy, she fell to the ground and was only discovered when most of the bees began returning again; so that only about 12,000 settled with her. This being a weak swarm, I put it into the queenless hive. Fourteen days later I found 50,000 cells or 1,000 square inches of comb full of brood in all stages to 14 days old. I removed immediately three frames and placed empty ones instead; but when looking in again six days after I found these combs mostly filled with honey, undoubtedly because honey was more plentiful now. This queen laid 3,570 eggs per day for 14 days, She proved hereafter always very fertile, but never to the same extent again. In another hive a young and lately impregnated queen was introduced to a strong colony. Fifteen days after her commencement of laying the brood covered 900 square inches, equal to 45,000 cells. She laid 3,000 per day. The given empty combs were also mostly filled with honey, although they were placed in the centre of the brood nest,

Another hive with a very fertile queen had a wide passage from brood to honey room, of which passage the queen made use, and I found 1,324 square inches, or 66,200 cells of brood. The queen laid 3,310 eggs every day for 20 days. The bee hatches in 19 or 20 days after the egg is laid.

Again, another hive had 800 square inches of brood. I removed the first and last comb, which contained honey and pollen, and inserted two empty combs in the centre. The queen was soon hard at laying, and five days after they were full of eggs and young larvæ. These were removed and two others given, and they were almost full in another five days; but the next two were filled with honey from top to bottom as well as other cells that became empty by hatching bees. As the 800 square inches were kept full of brood and the four combs which I removed measured 400 square inches, the queen laid 60,000 eggs in 20 days.

Although a few queens have laid such large number of eggs for a short time, it must be borne in mind that these were exceptions that prove the rule. What some queens can accomplish and what most queens do accomplish, that is a great difference. My experience resulted from the Italian bees; but other races prove about the same.

Besides those queens referred to there are many that never reach the mark of laying 2,000 eggs per day in the best breeding season. And the weather has great influence also; dry and windy weather checks breeding; moist warm and close with fresh honey not too plentiful induces breeding. A two or three year old queen is often as fertile as a younger one, and a big queen is not superior to a middle-sized one, while a small queen is short-lived and not much good.

I have thought that if young queens were reared from the most fertile ones only they might inherit that quality and remain constant; but I found that, no matter how it is executed, they only prove to be about middle class; while I have had excellent layers from poor laying mothers. Here again I came to the conclusion that when a certain extent is reached it goes no higher. The bees have undoubtedly a great influence over the queen. In winter, when the bees rest, the queen lays no eggs at all; again in summer a queen in a nucleus hive lays but a few eggs, but if introduced to a strong stock she lays a thousand and more after a few days. What is the cause? Surely the food the bees give her. When a desire for a plentiful brood arises the queen is fed accordingly to enable her to produce such quantity of eggs as her natural strength

will permit ; when no brood is desired the queen receives or takes such portions of food as is necessary for her existance only. Perhaps the queen's own instinct guides her actions as well as the bees theirs.

Adjoining to the above a few words in regard to the hive may not be amiss. The hive ought to be so constructed as to afford ample space for a good queen to lay 2,000 eggs per day, in which case 40,000 cells, or 800 square inches of comb are needed for brood, and as some space is taken up for honey and pollen store this must be added to the above. My hive with 10 frames in brood chamber has about 57,750 cells or 1,155 square inches of comb capacity. To use 55,000 cells for breeding purposes the queen must lay 2,750 eggs every day, when 2,750 cells remain for honey and pollen. If she lays 2,000 eggs per day, 17,750 cells can be utilised for storing honey, etc. And, as about 1,250 cells of honey in these combs make a pound, there is besides, 40,000 cells for brood space for at least 12 pounds of honey, while a very fertile queen has room for nearly 3,000 eggs per day and the number of bees may increase to 100,000. But I find usually that the bees do not allot all cells for brood if honey can be gathered. It is, therefore, evident that my hive with 57,750 cells is quite sufficiently large to be profitable. Some other hives, the Langstroth, for instance, has 1,445 square inches of comb with 72,250 cells. If these cells shall be used for breeding, for which they are designed, then the queen must lay 3,500 eggs per day to fill 70,000 cells, when yet 2,250 cells are to hand for honey. But the queens do not lay 3,500 eggs per day, and consequently there are at least 645 square inches of comb or 32,250 cells in reserve ; for what ? These 32,250 cells could hold at least 25 pounds of honey. The queen is no more fertile, she will lay no more eggs in a large hive ; the swarms are no bigger than in any other hive that holds 57,000 cells in the broodroom.

In conclusion I recommend these facts and figures to your serious consideration. See which come nearest to your observation on the subject and form your opinion—but adopt the best. Accept the assurance that only after long and careful experiments and studies satisfactory conclusions can be drawn. Avoid being led astray by mistaken surmises.

W. ABRAM,
Proprietor of the Italian Bee Farm,
Beecroft, Near Sydney.

HOW TO PREVENT SWARMING

This communication arrived too late for insertion in our last.

How to prevent swarming seeems to be the burning topic of all advanced beekeepers. Yet from a beginners' standpoint, the case is one of a different aspect. To a beginner, the possession of many colonies causes many smiles with fancies of large yields, yet after a few years' sound experience he settles down, and wants to learn how can he stop swarming, and secure a good honey yield, which all admit can only be got when bees are in swarming condition. I tell you friends, that there is a smile on the face of the experienced apiarist, when he finds his hives running over with bees at the commencment of the honey flow, which of course soon causes the swarming fever, and as one and all have said, "Swarm they will in spite of all you can do," We have had many plans given, as being successful, such as caging or taking away the queen during a honey flow, others have had success by running in a virgin queen, yet swarming seems to be "patented with all rights reserved." Again we have had the Alley and Pratt swarm hivers, but so far have not given a decided advantage as we must keep an extra supply of empty hives in readiness. Lastly we have the "Non Swarmers," which up to date promise a revolution, and a good demand, will, I fancy, spring up for the bees that "will swarm," at the opening of fruit bloom. About four years ago, I found I had more bees than time would permit me to care for properly. This caused me to try and stop swarming as much as possible, and when a swarm issued, I hived it on starters, placing the swarm on its original stand, moving the old hive about one foot away. In three to five days I gave all the brood and bees to the swarm, and put on a top storey with an excluder on ; then placed the frames of starters in the upper storey, first shaking all the bees off in front of their hive, and with a full width entrance, it was a very rare occurrence to have that colony swarm again until the February honey flow. (Destroy all queen cells, when uniting the swarm to their own brood). My next plan was to requeen all hives, that showed signs of swarming. I first prepared a good number of nuclei, and so soon as the young queens commenced to lay, I would remove the old queen or the one in the colony, that was about to swarm, doing this early in the day, At sundown, I would take the young queen in nuclei and two combs to the hive from where I had removed the queen, smoke them freely, and shake down the queen and all her bees in front of the hive ; see her safely in, and smoke all again. Half an hour afterwards I would listen, with my ear close to the hive, and if all was quiet I passed on, but if there was an unsatisfactory hum or hiss, I gave a good smoking and thumped the hive hard about one minute, and in all cases I have had the very best result. I claim for this plan, that 80 per cent would not swarm, but be in the very best possible condition to store honey, and know to a certainty that all your hives thus operated on would have young prolific queens. My next plan, was

to requeen the greater part of my hives in April, (Fall here), and for the present I must say it is far ahead of many plans yet given. Where requeening is to be practiced, as you will note, the queen is in her prime in the following spring, and can show you a rousing good colony at the end of July. Now just one word of advice right here. Don't go and requeen all your hives in the fall, because somebody said so, just try a dozen colonies, and watch carefully—somehow, bees wont do the same for everyone. All I have to recommend for the above combined plans, is that I have had eight swarms issue in three years, and have kept from 80 to 100 colonies each season. And now I suppose I must say a few words on the Fray James Non Swarmer, Beekeepers will remember, a few years past, Henry Alley gave to the bee world a swarm hiver in the shape of two Alley drone traps united by means of a gauze wire tunnell, which was placed at the entrance of a colony about to swarm, and an empty hive. By this means the issuing swarms were expected to hive themselves on their own responsibility. Out of this Alley self hiver, "the non swarmer hatched" and it only remains to see what place is to be allotted to the invention. It must stand on its own merits, and if there are any faults let us have them. A few who never used them claim dead and fighting bees will be the result, but such has not been the case with us. Practically the bees of both hives are working through the one entrance, and I believe if the device is operated upon every five days, the result will prove satisfactory. No half hearted go as you please style will do; attention to all the small details go to make a practical success of beekeeping, and I feel positive, that one man could easier manage 200 hives with the "Non Swarmer" attached, than he could 100, if allowed to swarm at their own sweet will. I don't desire for one moment to "boom" the Non Swarmer, I always advise to go slow, and try "New Fangled" traps with caution. A. Pettigrew, speaking in his book of apiculture, on the introduction of the Italian bees, said, the principle of novelty is implanted in the human mind, and the weakest part of an Englishman is his gullibility, and any new thing if well puffed up and advertised will command lots of custom, and I will add, if the Non Swarmer proves to the beekeeper what the Italian bee has, well then there is a great future before it.

GEO. JAMES, GORDON.

Mr. D. J. Lewis, Boowogum, Kilkivan Line, Queensland, writes:—Enclosed please find 5/6 in stamps for the *A.B.B.* for the coming year. I beg to inform you that I am no beekeeper, as yet, but at the same time I am very interested in reading the *A.B.B.*, and hoping to start beekeeping on a small scale very soon.

BEE-KEEPERS ASSOCIATION OF VICTORIA.

Second Annual Convention.

HELD AT MELBOURNE TOWN HALL ON AUGUST 31 AND SEPTEMBER 1, 1893.

FIRST SITTING, AUGUST 31, 10 a.m.

We take the following from the Australian Farm and Home.

The President (Mr J. Ellery) occupied the chair.)

The President spoke upon the desirability of having a Foul Brood Bill passed, as directed by the previous convention; but pointed out that the expense in administering such a bill would need to be borne by beekeepers themselves, who, by means of local associations, would take the work into their own hands.

Mr. Hind also spoke upon the subject, and also referred to the necessity of bringing the subject of adulteration of honey under the notice of the health officer.

The following gentleman were nominated to wait upon the Minister of Agriculture, as per appointment, to ask for shipping bonus of 1d. per lb. upon trial lots up to 25 tons;—The President, Messrs Fullwood, M'Farlane, Hind, Barton, Symes, Crawford, Bennett, and the Secretary.

The matter of adulteration of honey was again referred to by Rev. J. Wilson, who supplied a report given by the *British Pharmaceutical Journal*, showing that large quantities of so called eucalyptus honey had been foistered upon the British public as an Australian product, when, in fact, a small quantity of eucalyptus oil or extract had been added to honey to flavour it, such honey being recommended for its medicinal properties, and not of any value as an article of food.

Moved by Mr. Bennett, seconded by Mr. Symes—That the committee be empowered to take necessary steps to check the sale of adulterated honey.

Moved by Mr. Hind, seconded by Mr. Beuhne—That a deputation wait upon the Railway Commissioners to ask a reduction in the freight of minimum parcels of honey, similar to the concession granted to the fruit growers, the following gentlemen to form the deputation:—Messrs Hind, Russell, Beuhne, and Adams, to be accompanied by Mr. Wilson, the president of the Goulburn Valley Fruit Grower's Association, who supported the request.

The sitting adjourned until evening, the deputations going to the work assigned them.

EVENING SITTING, 7.30. p.m.

Mr. C. Fullwood (vice-president) in the chair.

The chairman reported that the deputation to the Minister was well received. The request of a shipping bonus, subject to the approval of Parliament, was promised under the following condition viz., Trial shipments up to 25 tons, packed under the supervision of experts nominated by the association, and under the seal of the Victorian Government, should receive a bonus of 1d. per lb., provided no expense should be incurred by the Government.

Mr. Hind reported that the deputation which waited upon the Railway Commissioners had obtained the reduction in freight of honey which was asked for.

The Secretary (Mr. L. T. Chambers) read a paper upon "Foreign Markets for Honey," showing the possibities of finding outside markets, and the conditions under which they might be gained, suggesting the formation of a joint stock company of beekeepers to initiate and carry on this work.

Mr. W. D. Russell read a paper upon "Bee farming as a Specialty Compared with other Agricultural Pursuits." He claimed for bee-keeping less financial outlay, better results, lighter labour, than that entailed in dairy farming or general agriculture. He drew a very rosy picture, but was somewnat criticised by the farming and dairying element in the room.

Mr. Greenwood stated that for two years he received 45 per cent upon capital invested in partnership in a bee-farm, but that the third year he lost most of the capital through foul brood; so he thought it a rather uncertain industry.

Moved by Mr. Beuhne, seconded by Mr. Wilson—That the committee endeavour to arrange a trial shipment of honey as soon as possible.

"The Wax press and its Use" was illustrated by Mr Beuhne, who exhibited a strong, well-made press, by means of which he claimed a much larger percentage of wax could be procurred than through the use of the solar wax extractor, particularly in the case of old combs. The machine could also be used for expressing thick honey which could not be extracted.

Mr. Cook supported the paper, stating that he had found the wax press to be a valuable adjunct to the apiary.

"Foul Brood" was introduced for discussion by a paper read by Mr. Hind, who combated a statement put forward at the last convention, that foul brood was the bee-keepers' best friend. He thought it was the worst enemy, and could only be conquered by radical measures.

Many members present were of opinion that the evil could be combated by care in breeding and selection of queens, and gave evidence of the suppression of disease through this means.

The chairman thought variation of temperature, coupled with inadequate protection to the brood nest during the early part of the season, were important matters in the questions of foul brood.

Mr. L. T. Chambers quoted American authorities showing that the introduction of Italian blood had in cases named eradicated the disease.

Sitting adjourned until following day.

MORNING SITTING, SEPTEMBER 1, 1893.

Members reassembled at the Town Hall at 10 a.m., the President in the chair.

The President congratulated the Association upon the result gained by the two deputations of yesterday. In the case of the deputation to the Railway Commissioners the result was that in future the maximum rate for the carriage of honey will be 1s. for parcels up to 1 cwt.

The President then read a most interesting paper having for title, "Honey: Its Origin, Constituents, Preservation, and Adulteration." Exhibits of pure honey, glucose, and corn syrup were shown, together with a sample of so-called "Garden Honey," the latter being put up and sold under the label of a well-known Melbourne firm. This last-named sample, on being treated with pure alcohol, gave a milkey appearance, showing that it had been adulterated with corn syrup. Mr. Ellery explained the use of the polariscope in determining the constituents of various honeys.

It was thought by some present that the publication of the facts might act detrimentally to the honey industry, but after discussion it was agreed that nothing could be gained by withholding the whole facts from the general public.

With the object of guaranteeing to the public the purity of honey, Mr. Ellery thought that the adoption of a registered label would meet the case, such label to be issued to bee-keepers who were members of the association. After discussing the point it was agreed to leave the matter in the hands of the committee, upon the motion of Mr. Fullwood, seconded by Mr. Greenwood.

The subject of the formation of a registered company to deal in honey was reviewed, but the secretary stated that at the present time the way did not seem very clear, but it would receive attention in due course.

Mr. James Bennett dealt with the subject of "Smokers," exhibiting samples in common use, pointing out their defects, and proposing improvements.

Others spoke upon the subject and endorsed Mr. Bennett's remarks.

Questions were asked about bee dysentry and spring dwindling. Mr. Beuhne attributed this form of disease to late honey stores, at times to inherited taint, and sometimes to infection.

EVENING SITTING, 7.30 P.M.

For the forthcoming year the following officers were elected, upon the motion of Mr. Fullwood,

seconded by Mr. Crawford:—President: Mr. R L. J. Ellery. Vice presidents: Messrs Shaw, Stephens, McFarlane, and Fullwood.

Committee: Messrs J. A. Grant, Baldwin, Barton, Crawford, Bolton, Cook, S. Webb, Beuhne, A. Hind, C. Willyan, Rev. J. Wilson, W. D. Russell, J. Bennett.

Secretary and Treasurer: Mr. L. T. Chambers, upon the motion of Mr. Fullwood, seconded by Mr. Ellery.

It was agreed that the time for next convention be fixed for the month of June.

Mr. C. Fullwood read a paper having for subject "How to Secure a Maximum Number of Bees, and a Minimum Number of Hives, to Reduce Labour Without Loss of Income." This was followed by a paper by Mr. McFarlane upon "Methods in Queen Rearing." Some very valuable help was given by these papers, and illustrations supplied. A number of questions by those present were answered by Messrs. Fullwood and McFarlane.

Mr. Beuhne took up the running with a paper, "How to Mate Queen's with Drone's of One's Own Choice," giving the results of his experiments in the line of latebreeding and stimulative feeding, showing that by such methods it was possible to obtain a large proportion of truly mated queens, this being especially valuable in breeding for non-swarming bees, and promised to give a further report at next Convention.

"Feeding: When and How," was introduced by Mr. H. W. Cook, who showed a model feeder, as used by himself, which enabled the apiarist to supply necessary stores by winter or early spring feeding when required. The exhibit was well made and regarded by those present as an excellent one for the purpose. Mr. Cook also showed some nice samples of honey vinegar of excellent quality.

The Convention then closed a useful sitting after passing votes of thanks to the mayor and corporation for the use of the rooms, and to the president and members who contributed papers, and to the hon secretary.

DO BEES TRANSFER AND STEAL EGGS?

In the first number of the *A.B.B.* Mr. Taylor, Cowra, tells Mr. Munday, Woolville, that the latter is quite right about the bees transposing eggs. I did not then think it worth while to correct such assumption, as no material harm could follow to the uninitiated if he believed such idea. But in last issue Mr. G. James, Gordon, says—"true enough." (?) If Mr James thinks the question is thereby definately settled to his and everyone else's satisfaction, he is in error.

I make the assertion. Bees do not transfer nor steal eggs. Under the present system of beekeeping one would not think it likely that observation as cited would take place. I am surprised that they are so easily misled and ready to mislead others. It is in bee-keeping as elsewhere, experience makes the master, but experience cannot be swallowed by the bucket ful. There is no bee book or journal equal to the bee hive. Here we must study and observe and gain knowledge and wisdom. I hope they will yet find that my assertion is the correct one.

For further explanation I may state that, the egg on its being deposited in the cell is fastened to the spot where it touches the foundation by a pasty substance, in which the egg is clothed and which keeps it in its position; otherwise the eggs would not stick in the centre of the cell, but roll down to the lower corner of the cell. Soon after the deposition of the egg the paste hardens, and if now the eggs is removed perforce, sooner than give way where it is fastened, the shell breaks and it is unfit for further use.

Apart from that the bees have no means by which to redeposit and fasten an egg likewise in its original and natural position. All bee-keepers of experience know that bees do not transfer eggs. But Mr. Taylor—Dr. Taylor—has seen it done over and over again. Well, now as you have seen it done, will you let us know, you know, how the bees have done it? Such interesting information ought to be known far and wide, and not be withheld. Then, as your bees have done it over and over again, could you get them to do it in the presence of strangers? Surely the one is as easy as the other, and I would consider it cheap to go to Cowra and see the thing done myself, if I was not absolutely positive of its failure. That the bees clear out the eggs outside of their cluster is well known. But Mr. James' bees go one better than that, they go and steal eggs from another hive if they have none and want to rise a queen. Well, if nothing is new under the sun, this is new. How if his bees get it into their heads, and steal eggs from black bees, and rear queens from them just to prove his assertion over and over again, too?

But fun aside, though it is funny. If Mr. James' case a worker bee has started to lay, and as the bees wanted a queen, the first egg—if it was the first egg,—was laid in a queen cell. Worker bees do sometimes begin to lay almost immediately after the removal of queen. In nucleus, some worker bees cease laying as soon as the young queen begins to lay, but they start again as soon as the laying queen is removed. In some stocks some eggs remain undeveloped for some time after laying, through insufficient attendance, but when most of the brood is sealed these eggs receive attention, and they develop as usual. The presence of such eggs enables the bees to start queen cells many days after the departure of the old queen, and the uninitiated are caught unawares in wrongful surmises.

Another aspect is this. When a hive of bees becomes totally queenless, they are an easy

pray to bees from mormal stocks, and are easily robbed. And now they are supposed to spy around normal stocks with the object of stealing eggs ? Never yet has a queenless stock become mormal by stealing eggs from another hive,—and never will.

W. ABRAM,
Beecroft, near Sydney.

P.S. I intend to reply to " Heredity in Bees," at some future time, if time will permit.

MRS. JENNIE ATCHLEY.

Mrs. Jennie Atchley, Beeville, Texas, writes :—E. Tipper, Esq.,—Dear Sir, I have the honor to acknowledge the receipt of a copy of the *Australian Bee Bulletin*, a few days since. I cannot afford to do without your paper, each month, so please mail it to me until further orders, and send bill for one year's subscription, and will remit it. Mark the price per year in American money, that I may understaud it. I am moving my large queen rearing business 400 miles south, to Beeville, Bee Co., Texas, just about as far south as one can get in the United States. I can there rear queens all the year round, and can send queens to your country any day in the year. Please do not fail to send me the *Bulletin* to Beeville, Bee Co., Texas, U.S.A. Many good wishes for your success in your far off land. Yours very truly,

Mrs Jennie Atchley.

N.B.—I have sold 4000 queens to date this year.

FEEDING BEES.

Mr. A. J. Vógele, Paterson, writes :—An old-time bee-keeper reads the *A.* B. B., and he is interested in feeding bees. He applied to me what I would recommend, outside or inside feeding, and why ? I hereby reply to him why and when I feed. I feed outside for pollen, and inside for syrup or honey. I would never think to feed honey or syrup outside. You never hear of a farmer feeding his farm stock in a paddock where not only his stock that don't want feeding but also his neighbours have access to the feed. The result would be that the poor ones would be driven off and the ones that could do well without it, get the feed. Not even to exite the bees into activity, for the reason that the activity excited by outside feeding is robbing, and for the second reason that bees that have to be excited to work arenot worth keeping.

O'CONNELL.

Public School,
O'Connell,
2nd Oct. 1893.

The Editor A. B. Bulletin.

Sir,—I must acknowledge with gratitude your prompt reply and good information re, foul brood. I have 29 hives from same yard, I opened five and they all have it, so I decided not to touch them again until there is a good flow of honey and robbers cease to prowl about.

I must also ask you for other information. Hitherto I have always pressed the foundation comb while warm tight on to the top bar and used the spur fastener after. But I used up 10 pounds of wax last week simply warming it and running the spur fastener over the wires firmly, and I see today that it all tumbles out when the bees warm it. Is it usual to fasten the comb to the top-bar in any way, or will some other fastener do what the spur will not ?

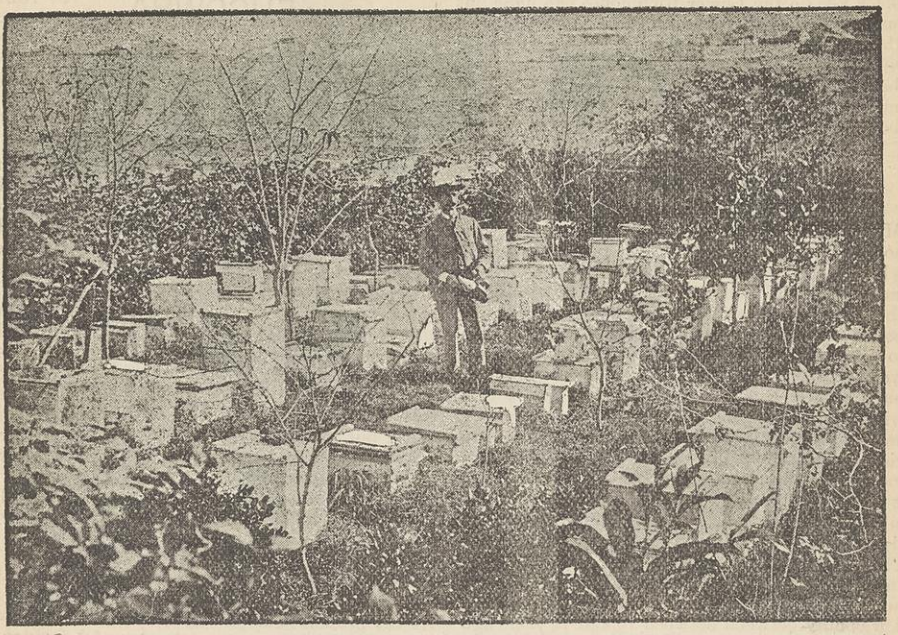
(2) I am afraid the climate up here is too cool for the Solar wax extractor, so I wish to know something about the Jones Has one to use some specially made boiler with it to generate the steam ? Is such supplied with it or will a kettle do ? I've not seen a wax extractor yet.

Yours faithfully,
A. M. ROSE.

[Fasten forndation to top bar with melted wax or foundation roller. The Jones steam wax extractors are complete, but as some parts are of zinc the color of the wax is not as good.—Ed.]

DUNKELD, VICTORIA.

Mr. J. Bolton, Grampian Apiary, writes,—Though late you may like to have another good report to give your readers, for last season. No of colonies of all sorts last spring just prior to swarming time, 166 ; No. surviving this winter, August 1893, 240 ; effective increase, 74 ; 1st. swarm, October 16th, 1892 ; largest take per week, 40 cwt ; total crop, 24,200 odd pounds, mainly extracted ; average spring count, 146 lbs per colony. Out apiary started six miles away, 60 colonies averaged same, included in above total- Hive, Heddon's principle, manufactured by Beekeepers Supply Co., Melbourne, to a slightly different pattern, a splendid hive for handling rapidly, carting to out apiaries, and after several years trial, alongside the Simplicity in my opinion much to be preferred. Source of main crop :—Red gum, (*E rostrata)*, Messmate, (*E obliqua*), Minor sources, cape weed, thistles, box, gum, epacris, styphelia, and native shrub plants. Characteristics of the season ;—wet winter and spring, and cool summer, rough weather right in the height of bloom for nearly two weeks, lessening the yield by two to four tons, *possibly* ; bestrewing the ground with blossom, yet followed by as heavy a flow as before.—[Very many thanks.—Ed.]



The above is a photo-lithograph of Mr C. Mansfield's Apiary, Largs, N.S.W. Should any other beekeeper have such we will be glad to insert same; or if they will forward a photograph will get block made, and return to apiarist after insertion, the cost being £2. Now who will follow snit in embellishing the pages of the A.B.B.? Recollect we do not charge for the insertion. Only for the cost of getting block made if you have not that done.

The Benighted Beekeepers of the Lower Richmond.

As the readers of the A.B.B., no doubt are highly amused, and have formed a very poor opinion of the Lower R. R. Beekeepers from a description of the "Jeremiad," which is not altogether justified. A few interesting facts about the industry in this district might not go astray, the large beekeepers being very practical men, and make their black bees pay.

Mr. H——is by far the largest beekeeper on the river, and is working out a system of his own; he does certainly only use a top bar, using an upper row of bars in the honey season, on the top box principle, cutting the honey from the top bars when sealed over (of course no brood comb is taken), which is then put into long straining troughs to strain, and when the honey is all drained out, the comb is then put into a large Solar Ray Wax Extractor, and converted into wax, which is next made into sheets and passed through a comb foundation mill, (the only one on the river), and made into foundation, which is afterwards returned to the bees, who take it better than they would to old black combs,

Mr H. says this is much faster than extracting. he working the whole of his large apiary single handed, and he gets a splendid quality of ripe honey, having sent already this season some four tons of honey to Sydney. Besides other things about this extensive apiary, Mr. H. has a powerful miscroscope. By observations made with this, induced him give up Extracting unripe honey, and taking to his present method.

Mr. B. is about the second largest beekeeper. His hives are an improvement on the Berlepsh, and are well made and painted. He believes in natural swarming, and extracting sealed honey, (but certainly not a sealed and nailed brood chamber). His extractor alone is worth visiting his apiary to see, and is capable of extracting a whole hive in one operation, and is far superior to any extractor at present on the market. Mr. B. sells most of his honey locally, and finds a ready sale for it.

There are also some other unenlightend beekeepers, although not going in for much show, who were the first to exhibit bar frame hives extracted honey, and sections, at the Lismore Show.

This district is a very good one for bees. Although last year was very wet, a few dry days in the autumn, enabled the bees to fill up from the ti tree, they also gathered honey all through the winter, and are very strong. An early swarming season is expected. Dear Mr. Editor, what can the matter be with the Italians about Lismore? One year it is spring dwindlings next year it is paralysis, while the poor despised

black bee on the Lower Richmond, can hang out on a small open limb, or build in rocks, and then come through winter quite strong. After all, are the Italians as hardy a race as the black bee, and why do the enterprising Italian bee men come down the river, and buy up black bees to strengthen their paralysed stocks?

CURRABUBULA.

Mr. F. W. Smith, writes :—October 16th, 1893, My bees are gathering but very little honey just now, and, in consequence of the surplus of drones which I am busy catching, and which, I believe, consume what little honey the workers gather, I shall, if this state of affairs continue, be compelled to feed them—which job I should not like to undertake just now. What makes things worse than they otherwise would be is that they have shared badly all through the past severe winter up to the present time, because they have not had anything within a reasonable distance to yield them sufficient food, but I hope there will soon be an abundant supply of honey. Perhaps it would not be out of place to write a few lines in reference to what I feel assured to be the principal cause of this insufficient supply of honey. The cause I must frankly admit is the suicidal and indiscriminate ringbarking of our beautiful and most valuable forests. I well remember it was only between 10 and 16 years ago I and my brother would go into the bush to find bees nests—and they were legion—and we would soon find one or more, and what was better there was plenty of honey, but ever since this reckless, injurious and unsystematical ringbarking has taken place the number of colonies of bush bees have diminished with a diminishing supply of honey. Would it not have been better for those who have ringbarked all the timber with the object of improving the pasturage for their stock, to have ringbarked only the worthless trees and left the sound and upstanding trees to protect the land from being sodden down by the heavy rain falls and from being baked by the scorching sun during the summer months; for wherever the trees have been all ringbarked the land as well as the stock has been exposed to the scorching sun and beating rains. And, still more, as the trees have died, and fallen to the ground, and not been burnt, they have covered large areas of land. I firmly believe ringbarking has done more harm in general than good and would ask my fellow beekeepers to impress upon their neighbours, whether they be beekeepers or not, the injury and harm they are doing not to the beekeeping industry alone, but to the timber industry.

Mr Adam Stewart, Bonnie Doon Apiary, Joadja Creek, via Mittagong, writes—Honey is beginning to roll in in this district, but the high winds we are having just now is a great drawqack.

EUGOWRA.

Mr William Niven, Eugowra, writes—It may be of interest to some of your readers to know how bees are doing in this district. This season we are working two apiaries; the home apiary of 105 hives, situated at Eugowra, and an out apiary of 75 hives situated near the Molong and Parkes railway line, sixteen miles distant to the north. At the home apiary the last honey which we extracted was on 24th December, 1892. Since then to the present time there has not been a sufficient quantity of flowers to support the large number of bees that are kept in this locality. The consequence is, that bees have suffered very much, some dying from starvation. During the spring there have been many cold wet days, which have been very much against the bees. Swarming usually commences here about the 2nd of this month, but as yet I have seen no swarms this season, which is a proof that things are backward, but as apple tree, gum and box are now in bloom, in a short time the bees will be in a more prosperous condition, although we are not looking forward to a more than average honey crop.

At the out-apiary ironbark, gum, apple-tree, wattle, and many other shrubs and flowers are in bloom. Bees would have been in most excellent condition had it not been for the many cold changes we have had in the weather this spring. At the present time they are doing well and we expect to have a very good crop of honey this season.

TATHAM.

Mr G. Crawford, Tatham, writes :—I am in receipt of my number two *Bee Bulletin*, and consider it a great improvement on the sample copy sent by you some twelve months' since, Now for a blunder I made when first I tried queen-rearing. In November, '91 bought two high-bred boxes of bees. One got smothered on the road out—too full of honey and not wired. Got two "dusty uns" in place—that makes three. They went along great, and in March, 1892, all had top stories, and took 201bs of honey. Saw an Italian ladyship at a neighbour's, and I, like most novices, wanted to see her dusky majesty, and late in May put off a nucleus and started three queen cells. One came. There being no drones flying she missed in her wedding flight and of course that started that pest, fertile workers. I thought I'd broke things when I saw eggs in the cells, but lo! the blime things turned to be those bullet heads. Mr. Root refers to drones all died out in the spring. Poor clumsy drones—for as swarm "uh"—great honey gatherers! September made up for lost time; got a tested Italian queen and went for bush swarms; Italianized as they came in; let them start their own cells, then grafted yellow jacket's eggs; got 16 that way; tried Doolittle cups; had not much luck

at it, but better now. Can't see why grafted queens are not equally as good. Got great layers for me at all events.

I see in your last a piece on the little native bee (Apis trigona). Mr. Grant says when they wish to enlarge their brood chamber, they simply build a bunch of cells. Well my experience says that they do build in layers for the brood, but for storing honey they build in a ball or bunch about the size of a pigeon's egg. I have seen them with wings, but they did not look impregnated. I have seen from 10 to 20 queens in one nest. He says that a pickle bottle of honey from one is very rare. I've got several with as much as a quart, the nest running up and down the barrel 3 ft 6 in, after the style of the black bee, brood nest below, honey stored above. Could not give precise data hatching, swarming, queen rearing, etc., but I've got several on spec, and will watch very careful and see if I can't find out. Mr. Grant says they don't bite. Just let him try half a dozen in his underclothing. He'll think he's got them greenheads for a few minutes. Certainly the pain don't last long. You'd think you had the prickly heat and just beginning to perspire.

Bees will leave the hive, go a distance of ten miles, and return in from 15 to 18 minutes.

Mr J. Wilson-Green, Gramzow, Logan River, Queensland, writes:—Bees are swarming and bringing in a good amount of honey, but I am afraid the flow will not last very long as so many of the principal honey-producing trees blossomed too early in the spring when the bees were too weak and cold to do much.

Mr. John Pollock, of Wingham, in writing to Mr. J. F. Munday, on his frame, says:—I think the frame if it is your invention, although not very mechanical, is the best top bar in the market. The enamel cloth is a piece of nonsense. Why the bees go through it just when it suits them, and then in two story boxes, no queen up stairs, no nothing of frames. Why, my bees last year tied the top and bottom frames together as tight as wax. The queen you spoke of me sending back, I told you was such a splendid layer, the ten Hoffman frames are full of brood, all but about one inch along the top of bars, and nine frames full of brood is quite common in my hives. I have not put on the top storey yet, I want them to swarm. If ever a man got a yield of honey from a few hives, I ought to, if boxes full of bees will do it. I am quite confident they cannot have more bees in a hive, and the forest is literally a flower garden—it is all in bloom, wherever you go, and the place is covered with clover. I have a swarm of the white native bee in my yard. I took two quarts of pure honey from it, and I saw one robbed of pure honey last year, ten feet six inches long, and the pipe four inches in diameter full of pure honey. I wonder if that would be a few spoonfuls?

Mr. D. Campbell, Stawell, writes,—Bees are very backward, it is still cold and wet here, not much doing in the bee line.

Mr Elliot J. Rien, of the Hawkesbury Agricultural College, Richmond, reports 633lbs. of honey was raised there in the season 1892-3.

Mr J. Smith, Eugowra, writes—Bees are doing better now. Had a hard time last winter. Have lost four colonies, but they were in box hives. Have transferred and got on very well, and hope to get a good flow of honey this season.

Mrs P. J. Fowler, Ashfield, writes:—I have to acknowledge your journal contains much valuable and interesting information to any one seeking knowledge of beekeeping in Australia, and I wish you every success, hoping your journal will become very popular and I think it worthy of praise, as the information is from practical and experienced men. I started here last year with one colony, increased them to four. Successfully wintered all. They are now in a very prosperous condition. The clover is in abundance, and everything points to a golden harvest. I use Simplicity hive, Langstrath frame, as I think them most suitable.

HUNTER RIVER BEE-KEEPERS ASSOCIATION.

The adjourned meeting of the above was held on Tuesday evening, Mr. Pullen was in the chair. The attendance was very good. Mr. Scobie read letters (published elsewhere) from the Agricultural Department of N.S.Wales, and Mr. C. B. Stuart Russell, of London, England. Mr. W. S. Pender, read opinions of London experts, also published elsewhere, remarking also that the four samples so adversely alluded to were all drawn from the same tank.

The election of officers resulted as follows:—President, Mr. R. Scobie. Vice-presidents:—Messrs J. W. Pender, Tucker, Patten, Hopkins, Dodds, Harden, and Foreman. Treasurer, Mr. W. S. Pender; Secretary, Mr. C. Mansfield. Assistant Secretary, Geo. T. Pender. Committee:—Messrs Munday, Pullen, Noad, Scobie, Tipper, Vogele, and Robert Pender. A hearty vote of thanks was accorded Mr. M. Scobie for his long services (6 years) as secretary.

On the motion of Mr. W. S. Pender it was resolved that at the next meeting the question of Foreign Markets for our honey be discussed.

On the motion of Mr. Mansfield, it was resolved the monthly meetings of the as-

sociation be held at different centres of the district, as follows :—Nov., Paterson ; Dec., Maitland ; Jan., Branxton ; Feb., Maitland ; Mar., Mulbring ; April, Maitland ; May, Lambton ; June, Maitland ; July, Woodville ; Aug., Maitland ; Sept., Morpeth ; Oct, Maitland

On the motion of Mr. Munday, it was resolved a portion of time at each meeting be set apart to discuss bee matters, relate experiences, and have discussion on same.

BEEKEEPERS' DIRECTORY.

How nice, when away from home, to know that, on that very evening, in the town in which you are stopping, there is a meeting of beekeepers, and that you can go and spend a really pleasant and profitable evening with them! Or can call, as on a brother, on one of the officers of the local association, close handy to where you are staying. Or be always able to make sure at any time of the right nights of meeting of your own association. To meet these wants we purpose making this page in future a beekeepers' directory. Will secretaries of associations assist us by forwarding before the 20th of next month, the names of the officers of their societies, together with the dates of meeting, and keep us supplied with same.

SCALE OF PRICES
—FOR—
ADVERTISEMENTS
IN THE
AUSTRALIAN BEE BULLETIN

Half page—Per annum, £5 ; per half-year, £3 ; per quarter, £1 15s.

Quarter page—Per annum, £3 ; half-year, £1 15s ; quarter, £1.

Eighth page—Per annum, £1 15s ; half-year, £1 ; quarter, 12s.

Single insertion :—First inch, 3s 6d ; Succeeding, 2s 6d.

MR. C. MANSFIELD'S HUNTER RIVER APIARY LARGS.

From Town and Country Journal.

The Hunter River Apiary, owned by Mr. C. Mansfield, is at Largs, near the junction of the Hunter and Paterson Rivers, about five miles below Maitland. The apiary consists of about 100 colonies of Ligurian or leather-coloured Italian Bees. It is situated some two or three miles from the forest—generally the chief source of honey supply, and the honey yield is drawn from orchards, cultivated plants, &c., of the adjoining Hunter flats. In early spring honey is stored from willows, which line the river banks for miles, also from the various summer fruit bloom. Then follow white or Dutch clover, lucerne, pumpkin, maize, sorghum, potatoes, &c., all of which are ransacked by the bees for the nectar their blooms yield, or the pollen of their anthers. During the winter, sufficient honey is gathered to keep the hives supplied with food from blind nettles and other weeds growing on the cultivated lands.

On reference to the picture it will be seen that the hives are on the ground, standing on bricks, and made plumb. They are painted white to keep them cooler in hot weather. Owing to limited space, the hives are somewhat closer than, perhaps, they should be. Fruit trees are grown between the rows, partly for shade, and partly as a guide to direct the virgin queens to their hives when returning from their "wedding flight." As the Hunter River Apiary is located so favourably for the purpose of "queen-breeding." Mr. Mansfield devotes his principal attention to this important branch of the Bee-master's art, and a few words on this subject will be of interest to our readers.

The queen is the mother of all the bees in the hive, and so, as she is, so they will be. If they are vicious—stinging without provocation,—lazy, wild under manipulation, much addicted to swarming, &c., the fault lies in the queen. She must be removed and replaced by one of good character, and that hive will be completely changed in the short space of three months. Many bee-keepers who are badly situated for breeding queens—being too much exposed to the contaminating influence of black and mongrel drones—purchase their queens by the dozen from reliable breeders.

The small hives shown in the picture are termed Nucleus hives, and the young queens which have been raised in the larger hives from eggs laid from imported or other choice mothers are kept in them until, being fertilised by the drone, they begin to lay. They are then termed untested queens. In the course of 21 days the young bees produced by these queens will hatch, and the practised bee master can at once tell what choice that queen made in her mate. If the young bees are of satisfactory breed, their mother queen would now be termed a tested queen, and would command a higher price.

The Hunter River Apiary was awarded a highly commended certificate in connection with the national prize competition both in 1891 and 1892. Mr. Mansfield imports direct from the most noted queen breeders in Italy every season, and sends bees and queens to all parts of the country.

The Proof of the Pudding is in the Eating of it.

———)o(———

Hence the large rush for our Comb Foundation, Bee Brushes, and Smokers.

The quality of our Comb Foundation, has sold for us such quantities, that we could not supply it fast enough. Our mills have been running night and day to meet the demand, and then we got behind. Why have we had such a rush ? Because our medium brood, (6 sq. ft. per lb.) is better than any other colonial made heavy brood (5 sq. ft. per lb.) We put the wax where it is most required, viz., in the side-walls, and not in the base of the cell.

Our "Cogshall" Bee Brushes have been tried, and are advertising themselves. When one goes to a district, it is not the only one, for it proves such a success, that orders come in rapidly from about that place. The cheapest form of advertising, is to supply a good article. Our goods go, North, South, East (to the coast), and West, and give universal satisfaction. We have just had to lay in another large stock of brushes, price 10d. each, by post to any part of the colony, 1s each.

SMOKERS :—We have not had one complaint about our smokers. The following is a sample of the testimonials we receive. "I could not handle my bees without being fearfully stung, they were so vicious. Now I have one of your smokers, I can subdue the most vicious colony. I have used the Clark and the Bingham."

Has your honey flow commenced ? if not, be ready to take the honey as soon as you can, and give the bees plenty of room to store more. Since the warm weather commenced, our tinsmith has began to feel himself a bit busy. Extractors and honey tins are beginning to be in demand for the honey crop, which bids fair generally. For very small apiaries the honey slinger is found large enough, price 12/6 ; for larger apiaries, the two-framed novice honey extractor, price 42/6 ; and for large apiaries, the Cowan reversible is best, price £3 10s 0d. Remember all the above are colonial made, under the superintendence of a practical bee-keeper.

We have been fairly rushed with orders for bees and queens. All orders are booked and filled seriatim. Doolittle sent us one queen by last mail, from America, valued by him at fifty dollars, but we regret to say, she arrived *dead*. Other valuable queens are following from Doolittle, and Alley, We may get some alive, and will then be able to supply queens from the American strain. Our imported queens from Italy are first class, daughters are proving to be very fine. We are breeding queens by the latest scientific methods, and by careful attention to minor details are producing very superior queens.

We have received our rubber stamp outfit, and are prepared to execute orders for rubber stamps. Send for prices.

All communications receive prompt attention, by

ROBT. L. PENDER,

MANUFACTURER OF BEEKEEPERS' SUPPLIE S

WEST MAITLAND.

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