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THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

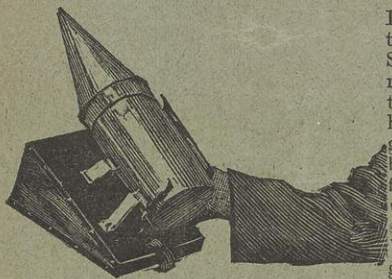
VOL. 3. No. XXVI.

MAY 28, 1894.

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TUESDAY, JULY 17TH.

TUESDAY, AUGUST 14TH.

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The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—MAY 23, 1894.

THE N.S.W. CONVENTION.

AS most of our readers are aware, the time is now close up appointed for the holding of another beekeepers' Convention in Sydney, and as we solicited suggestions in our last issue re the same, it seems to us to be a part of our duty to also give a few of our own thoughts on the matter. It will be remembered that great expectations were held as to the results likely to accrue from the establishment of a Beekeepers' Union, but it appears to us the hopes anticipated have not become matters of fact. It behoves us, however, being deeply interested in the welfare and progress of the industry, to express a few ideas which we are vain enough to believe, if acted upon by the general body of beekeepers, would result in permanent good to the industry at large. One of the first things that strikes us most forcibly is, that some concerted action ought to be made to thoroughly test our home market, and this can best be attained by a co-operation of beekeepers. To put the matter into a practical form, we believe that the creation of a co-operative society, having a branch in every large centre of population, composed of beekeepers who are honey producers as shareholders, would answer this purpose. Every such centre of population would then be thoroughly tested, and much if not all of our present product would find a market at remunerative prices. This organisation could consist of say honey-producers possessing not less than five hives, and holding shares value 5s. each, to the limit of say £10 per man. Consignments from shareholders could be made to the nearest centre, where a competent man, or

men, appointed by and under the control of a managing committee, could grade and blend the various samples; judicious advertising could be done; buying and reserving to control the markets be a portion of its duties; and a system of house-to-house canvas be adopted which would in a short time so popularise pure honey that it would no longer be included among the luxuries of the age, but become a household necessity. Each shareholder would receive a genuine market price for his honey, and at stated periods would participate in whatever division of profits might accrue.

The management could be elected in the way usual to all co-operative societies, and apart from the primary function of making the association a payable concern, such duties would necessarily devolve upon it as would further the interests of the industry at large, such as using their influence on the legislature, in the making of laws, or those who have the carrying out of laws, in the matters of Forest Conservation, Adulteration, and Foreign Markets.

Perhaps better ideas than the above may be evolved, but we would strongly urge upon every beekeeper in the colony to use his utmost endeavour to be present at the forthcoming Sydney Convention, on July 4, 5, and 6, to assist in forming some such practical scheme as we have suggested.

The following suggestions re the Convention have reached us in reply to our request for same since our last:—

R. MANKIN, COWRA.

The best means of putting our honey on the market, also the establishment of one central honey depot, so that customers would be able to go straight to the depot or market.

REV. J. AYLING, PITT TOWN.

As to the Convention, I do not know that I have any suggestions to make, only that the topics should be largely suggestive in the way of practical work, such as engaged the Hunter River Association on the occasions when it was my privilege to attend the meetings. Dry

legislation, of which we had so much at last convention, is not at all attractive.

W. SHAW.

The next Convention should be held at such a time as will enable country school teachers to attend. The chief business to be discussed is in my opinion, keeping up the price of honey, and also in opening up markets in Great Britain.

HENRY NANCARROW, WELLINGTON.

With reference to the Convention, I hardly understand what is meant by "suggestions," unless it is the advisability of holding it in Sydney or not. I would favour in Sydney, being more central than Newcastle or Maitland, and not too far from your beekeeper to attend, where on the other hand a greater number would not go from the West on account of the distance.

WILLIAM NIVEN, EUGOWRA.

For suggestions re Convention I think the marketing of honey should be an all-important subject. Carriage of honey, timber for making hives, tins and other vessels for holding honey, should receive attention. Each speaker should be limited to time, and only allowed to speak once until every person present who wished to express themselves had had an opportunity of doing so on each subject.

DAFFODIL.

Let the H.R.B.K. Association and other societies have printed, a large number of circulars setting forth in concise and simple language, the benefits to be derived from the use of honey. Methods of extracting, &c., and a few simple recipes. Secure the aid of large distributing houses in Sydney and provincial towns, and ask them to distribute to their customers. As this is an "advertising" age I am quite sure many of the large retail establishments would do this if they were given an advertisement on the back of circular. On the circulars could also be printed the names and addresses of leading apiarians. £10 expended in this manner would I think have a tangible effect upon the honey trade, and the various

B.K. Associations would then be conferring a boon on their members and the general public.

I would also suggest that each association make a levy upon each member for two pounds of honey annually to be forwarded as a contribution to the large hospitals and thus introduce it into our public institutions.

BINNI.

Your request to beekeepers to forward suggestions for consideration at the forthcoming convention is seasonable. I hope many will comply. Quite a number of important questions affecting the industry still remain unsolved. Owing to progression many new ones continue to appear. One of great importance, if not the most important, appears to me to exist in the unsatisfactory (to a beekeeper) laws of the land touching on ringbarking trees. If I am rightly informed, the State looks upon ringbarking as an improvement to land taken up. It is I believe in some cases made a condition of selection. With regard to freehold property of course beekeepers have no alternative but to submit. It appears however to me that leaseholders have very little trouble in obtaining permission to ringbark. Taking into consideration the fact, that the existence of native flora is of vital importance to the industry at large, the bulk of our honey coming from that source, do you not think it would be wise to obtain an expression of opinion from the beemen who will gather together shortly in Sydney, as to whether a deputation should be formed to wait upon the Minister with a view to establishing a limit, say nine inches in diameter, under which no tree shall be "rung" on Crown lands? To further our views it might be well to seek the co-operation of those gentlemen of the Royal Society who are interested in the development of the exportation of hardwood "blocks" for wood-paving.

£5,047 worth of honey imported into the United Kingdom in January, and £1,739 in February.

THAT PROTEST.

To the Editor A.B.B.

Dear Sir,—When I wrote my letter to you on the 17th March last protesting against any alteration of the law or laws relating to the admission of persons to that Union, until the beekeepers of New South Wales have had an opportunity in Convention to discuss or amend those laws, I had not the slightest idea that it would have such an affect on Mr. Mansfield as it appears to have had. So far from being curt or dictatorial I merely wished to make my communication brief and concise, as I understand you wish all communications to be.

I plainly saw all Mr. Mansfield intended me to see and perhaps a little more. I saw that the passing of a resolution by the H.R.B.K.A., recommending certain action to the Union, was tantamount to that resolution being adopted by the Union, as was aware of course that the majority in the Union are composed of H.R.B.K.A. men.

Mr. Mansfield says "that the rules for the Union were adopted in a hurry and are in many respects unsuited to the requirements of a Union." Though not very complimentary to the committee that framed these rules or to the Convention that adopted them, his statement he must admit is a complete justification of my protest, for which I tender him my sincere thanks.

When introducing the subject of the formation of an Union at the Convention, I suggested that it should be formed on a representative basis, and be composed of the Presidents and Secretaries *ex officio* of each Association in the Colony, and say two representatives, not necessarily members of the Association electing them but specially selected for the time being to deal with special subjects. Such a body would naturally possess greater weight, influence and authority than an irresponsible crowd.

I am &c., &c.,

T. H. BRADLEY.

Appin, 17th. May, 1894.

QUESTION.

22. Is it necessary to specially prepare hives for winter in any part of Australia? and what preparation do you advise?

H. L. JONES, Goodna, Queensland.

22. Not with me unless to contract the entrances of some of the weakest colonies.

W. SHAW.

22.—The chief preparation lies in the bees having plenty of stores to tide them safely over the winter and well into the spring.

T. BOLTON, Dunkeld, Victoria.

22. Not in my part of the country. I find them do as well with their supers on as not. It is not winter but in spring, not May but August, the attention or preparation is advisable.

R. MANKIN, Cowra

22. Don't think it necessary in this part; I simply leave them plenty of honey, and they get on all right. Of course they must be attended to in the spring, and room made so that the queen has empty frames to lay in, else the stock will keep small, &c.

WILLIAM NIVEN, Eugowra.

22. It is necessary before the close of the honey season that the beekeeper should see that each hive has a sufficient quantity of honey bees, and a queen, to carry it successfully through the winter. In the colder parts of the colony more care would be required to protect them from the cold.

REV. J. AYLING, Pitt Town.

22. About the Blue Mountains or Manaro, and similar places, it may be necessary to make special preparation, but anywhere in this latitude I should not think so. My plan is simply to see that the bees have ample winter food, and contract the entrance. My hives have no shade, except that of the trees, summer or winter.

HENRY NANCARROW, Wellington,

22. As far as our climate is concerned, the hives require no extra trouble or expense than will be required in Summer. But, in Orange, only 60 miles distant, where they have snow and very cold bleak weather for about four months, I consider it necessary to protect them. Our bees will work all through the winter here, starting out about 9 or 10 o'clock a.m., and finishing up about 4 p.m. We are blest with a glorious climate, and abundance of honey producing plants and trees.

I might mention that nearly all of my hives are full of brood at present, and the queens are still laying away. I don't know if it is unusual for brood to hatch in winter, or not as I have had little or no experience until the last six or eight months.

DONALD G. GRANT, Muswellbrook.

No. 22.—The only preparation for winter I consider necessary in this district, the only one I am in a position to speak of, is to remove surplus receptacles, see that the bees have a good sound hive and perfect cover, a good queen (mine are all young queens), not less than 12 to 15lbs. honey, and at about this time I go through all my hives and equalise them as much as possible by giving to weaker ones brood from those colonies which can spare it. Any that have too much honey, I take a frame or two from, giving them empty combs to store the odds and ends of nectar that bees manage to find in winter.

E.T., West Maitland.

22. Here on the Hunter, the climate is so mild, bees can gather honey throughout the winter months, but that does not mean that no winter preparation need not be made. Nights become cold. They do not require to be put into cellars here, but to a man who values his bees a lot of care is necessary all the same. With the approach of cold weather the queen nearly ceases to lay, the brood chamber becomes contracted, and the supers deserted. Therefore the beekeeper should now take the supers off, provide quilts (I prefer those of linoleum to any other material). Remove again all superfluous frames. Place what frames are left, with the bees on them, in the centre of the hive. On either side place a division board or follower, and fill up the spaces between these followers and the sides of the hive with chaff or other similar material. Above all, see that they are well provided with stores.

N.Z.

22. Most decidedly it is necessary to specially prepare hives and colonies for winter in Australia, and in fact any where else. Although we have not the winter of higher latitudes, we have a time corresponding to it, when there is little or no honey to be gathered, and bees cease or all but cease gathering honey. In even the warmer parts of New Zealand, we have about four months of winter, commencing towards the latter part of May, when bees have a spell, so far as their work is concerned, although they will be flying every fine day. During this time the hives should not be disturbed unless something special happens. Now it is necessary to see that they (the colonies) are in a condition to pass that four months successfully, and in preparing them to do this we call it preparing for winter. This will apply more or less to all parts of Australasia. It is a very easy matter to prepare for winter in this climate compared with the Northern States of America, and the colder parts of Europe. The most we need to see to is, that the bees have sufficient food, sound dry hives, and an extra mat or two, and with this, to see that the colonies are strong.

R. F. HOLTERMANN in American "Bee Journal,"

Better preparation for winter and better wintering would very much increase the net profits of beekeeping.

Preparation for winter begins very early in the season. Our aim should be to have strong colonies for the winter, with bees in full vigour of life; that is, bees not old and yet fully matured. The queen should also be perfect, and in the full vigour of life, and plenty of wholesome stores for the winter. The careful and successful beekeeper must, after he has increased his colonies sufficiently, have more bees than he cares to handle the following spring. It then becomes a question of wintering and selling, or destroying the bees. At the present price of bees in the spring, there is no money in selling bees at that season. The hives, the honey they consume, the room they occupy in winter, and the work connected therewith, to say nothing of the percentage of mortality, make it undesirable (unless in exceptional cases) to winter bees for the purpose of sale.

There is another important advantage to be derived from destroying a number of colonies each fall—we are able to select the very best for wintering, and by such a selection much can be accomplished towards successful wintering. Other things being equal, colonies hived in supers will not be as strong as those hived on full sheets of foundation or combs; these hives are also likely to contain the old queen. In selecting the colonies which are to be wintered, we should look as much as possible for young queens which have shown desirable characteristics, more marked bees of desirable strains, and strong colonies.

Sufficient honey should be kept back to give each colony natural stores, unless the beekeeper is in an exceptional locality, and natural stores are injurious. If combs of honey have been kept, they can readily be given as soon as the brood hatches from the brood chamber; if not I take one of the strongest colonies I intend to destroy, place upon it two upper stories, and feed it a syrup prepared from granulated sugar, pure water and a little honey; and feed this as rapidly as possible. No better method can be devised than to feed beneath the brood chamber. Bees when not gathering settle down to a quiet condition, during which there is little wear and tear of the system. This quiescent condition should not be broken in any way avoidable. By making the bees you intend to destroy do the storing, there is no loss in this way. Next there will be less waste of stores and vitality all round. Even should you have no colonies to destroy, by disturbing a few instead of many, it is extremely likely much will be gained. Again, by means of such feeding winter stores are sealed, and in much better condition. The best means of feeding combs of honey, is to prepare the stores in a hive, place this under the old brood chamber and

shake the bees down. A few moments and the work is done.

I am no advocate of uniting bees at any time unless it be just before the honey flow. After having left the practice of contracting the brood chamber according to the strength of the colony I return to it and advocate that bees should fairly well fill their hive. I would contract by means of a close division board.

J. R. H. GAGGIN, Lismore.

22. "Is it necessary to prepare hives for winter in any part of Australasia, and what preparation do you advise?" Yes, even as far north as this northernmost corner of New South Wales. The following constitute the main points on which I rely in preparing hives for wintering. 1. Take off all top stories except in extra strong colonies which are well up in supers. When the colony is so weak as to only cover a few combs in the lower storey, remove the unoccupied frames outside the cluster and close up with a division board, which will conserve warmth and keep the bees snug. 2. See that each colony has sufficient honey stored. The amount will vary according to the strength of stocks. For a very weak colony covering only three of four frames, perhaps four or five pounds would be enough. An extra large colony may require fifteen or eighteen pounds. Should the combs not contain provisions sufficient for winter, the necessitous colonies may be given sealed honey combs from full stocks if they are to spare (the combs may be partly uncapped to encourage brood rearing, if considered advisable). This is the best and simplest way of provisioning the hives against winter, but it is not always advisable, from the want of surplus sealed combs. The hives needing stores should then, in the absence of spare sealed combs, be fed with either syrup made from white sugar, or diluted honey. I much prefer syrup to honey for the following reasons: (1) It lasts longer and stimulates brood-rearing far more (especially if not made too thick) than honey. (2) It is not at all so likely to give rise to robbing while being fed as honey. The feeder I use is simply a little tray of tin about 1½ in. high, 8 in long, and 4 in wide, holding about a pint. After pouring in the syrup a piece of mosquito netting should be drawn over the sides of the tray and left floating on top of the syrup; as the syrup lowers the net will settle down with it, allowing the bees to take every drop, but preventing danger of drowning. The tray should be pushed under the frames at about middle of brood nest. 3. Contract the entrance to about 1 inch x ⅜ inch. 4. Place a covering over frames, of American oilcloth, and over this two or three layers of old flannel (blankets) or carpet, or some such non-conducting material. 5. See that all hive covers are sound. 6. Towards end of winter keep watch for first symptoms of "bee paralysis," and treat the bees on its appearance with salt or oil of cinnamon, or some other antiseptic. 7.

Meddle as little as possible with the hives after they have been placed in winter form. I should add that before attempting to prepare the hives for winter, all very weak and queenless stocks should be united, or, if the expense can be borne, the queenless colonies are strong enough to be worth it, spare queens can be procured from some breeder who rears queens all the year round in sunny Queensland.

QUESTION NEXT MONTH.

21. The best situation for an apiary, as regards aspect, locality, shelter, and convenience of working.

DUNGOG.

The following were the awards in the apicultural section at the above Show on May 2nd and 3rd:—

Beehive—R. L. Pender, prize; five entries. Honey Extractor—R. L. Pender prize; three entries. Beeswax—A. Henny, first and second, W. Moore, highly commended; ten entries. Honey—Malcolm McDonald, prize; fifteen entries. Honey in Comb—Frank Curr, prize; seven entries.

HAWKESBURY AGRICULTURAL ASSOCIATION.

The following were the awards in the apicultural section at the above Society's 15th Exhibition. Mr. Geo. James, of Gordon, was judge, and Messrs. F. G. Daley and W. C. Barker stewards. Prizes—1st, 5s.; 2nd, 2s 6d.:—

6 1lb. Sections—F. G. Daley 1, J. Cadden 2 W. C. Barker C.

6 1lb. Jars Granulated Extracted Honey—J. Cadden 1, Fagan Bros. 2, F. G. Daley C.

6 1lb. Jars Liquid Extracted Honey—J. Cadden 1, Fagan Bros. 2, W. C. Barker C.

Display of Extracted Honey—W. C. Barker 1. (Only Entry.)

Beeswax, yellow—W. C. Barker 1, Fagan Bros. 2, J. Cadden C.

Best Collection Modern Appliances, in use and own property—Prizes, 1st, 15s.; 2nd, 7s 6d.—F. G. Daley 1. (Only Entry.)

Special Prize for most successful Exhibitor in Section, counting by points—3 for 1st, 2 for 2nd, 1 for C—Prize, 20s.—J. Cadden.

Judging was by points, as adopted at last Convention, 1892.

ROCKHAMPTON SHOW, Q.

The following are the prizes to be competed for at the Rockhampton Agricultural Society Show, to be held in the Society's ground, Rockhampton, on Tuesday and Wednesday, June 5 and 6, 1894. First prize, 7s 6d; second prize, 2s 6d; entrance, 1s 6d:—

Bees—Best Hive Italian Bees with Queen, to be shown in observatory hive.

Bee Sundries—Best 3 1-lb Sections Comb Honey; Best 12 1-lb Sections Comb Honey; Best Barframe Comb Honey; Best 1-lb Granulated Honey; Best 6 Samples Extracted Honey in Marketable form; Best 1-lb Cake Beeswax; Best Frame Hive for general use; Best Collection of Appliances.

WELLINGTON SHOW.

The following were the prizes won in the apicultural section at the above show, held on April 19 and 20:—

Judge—Mr. Albert Gale. Stewards—Messrs. H. Kennard and T. Broome.

The *Wellington Gazette* says:—This section was one of the best features of the show, and will induce many people to turn their attention to the coming industry in this district. Mr. Gale, the Government expert, said he had never seen anything like it in the colony except in Maitland, where there is a large number of associated beekeepers. The majority of the prizes went to local men, in some cases beating exhibits which took first prize at the Sydney show.

Collection of Appliances—Messrs Hebblewhite & Co. Trophy of Products—H. Nancarrow 1, W. J. Heath 2, Cureton Bros. 3. Bees in observation hive—F. C. Heath 1, H. Nancarrow 2, Frame and Section Hive—H. Nancarrow. Extractor—H. Nancarrow. 12lb. Sections of Honey—J. E. Taylor, Cowra. Three large frames of honey—J. E. Taylor. 6lbs. in jars—M. Ryan 1, Taylor 2. 3 shallow frames—M. Ryan. Most attractive display—Cureton Bros. 1. A. J. Murray 2, H. Nancarrow 3, Comb Foundation—A. S. Cureton. Beeswax—H. Nancarrow. Collection and trophy—H. Nancarrow. Display in Nuclei—A. J. Murray. Essay on Bees—A. J. Murray.

“Bee” in the *Wellington Gazette* says:—The most important exhibition on the ground was the bees and their products. The thanks of the P. and A. Society, and the public generally, should be accorded to those gentlemen who spared neither time nor money to place upon the exhibition such an interesting and valuable collection and display as was shown there. The secretary of the W.V.B.K.A. worked hard with the members to make this,

their first attempt, a success, and, beyond a doubt, they succeeded, for the Honey Section, which occupied the centre of the pavilion, was a centre of attraction the whole time. Messrs. Hebblewhite & Co.'s exhibit of bee appliances was really first class, and reflected great credit upon that firm for the energy they displayed in sending such a collection so far into the country at a great expense. The Cowra exhibit of Mr. J. E. Taylor was small but good, and considering he had taken some firsts in Sydney only a week or two before, it was gratifying to see Mr. M. Ryan defeat him for first place with extracted honey and shallow frames of comb.

Mr. W. C. Heath deserves the thanks of the beekeepers for his excellent display. His showcase with a globe of comb and bees at work on it was really a pretty sight, as also was his observation hive. Ald. H. Nancarrow also displayed much taste in arranging his trophy, and for the splendid observation hive of bees and collection of bee-keeper's goods which he exhibited. Mr. A. J. Murray, our popular bee farmer and school teacher of Maryville, deserves great credit for the expense he went to in introducing into the district three varieties of bees almost unknown here, viz:—Ligurians, Carniolans and Italians, all in single glass nuclei. Mr. W. Shaw, of Mudgee, also took great pains and went to some expense to send over two nuclei of Italians with four queens, also a swarm of native bees, which were a great novelty. Messrs. Cureton Bros. also had a fine collection of honey, wax, frames, tins of honey and appliances. Each of the exhibitors took some first and second for different things and were highly satisfied with their awards. Considering the short time that the W.V.B.K.A. has been in existence (about two months) the members have worked wonders to place such a varied collection before the public. Mr. A. Gale, the sole judge, was so highly pleased that he openly announced that in all his travels (and he has travelled a great deal in N.S.W.) he never saw such a splendid display of bees and their products as was shown, except at Maitland. This must be very gratifying to the Wellington bee-keepers, and should inspire them with fresh energy to still work for the advancement of this rising industry. Mr. Gale's instructive and illustrative lectures were eagerly listened to by the beekeepers and lady friends. I am sure they will be benefitted by his advice, and the thanks of the whole district are due to him and his department for the excellent manner in which he is doing his work.

A noted beekeeper on the Hunter a short time since was away from home, during which time he caused three hotel-keepers to start placing honey on their tables at meal times.

UPPER HUNTER P. & A. ASSOCIATION.

The annual show of the above took place on Wednesday and Thursday, May 16 and 17. Although the Muscledbrook B.K.A. has only been in existence some two years, yet on this occasion they have produced a display of honey, bee-keeping implements and products that we believe we are quite safe in saying has not been exceeded in New South Wales. The stand with its four trophies, and on the table of which were arranged the bottled honey, honey in jars, wax, foundation, &c., was situated in the centre of the pavilion, and was in reality its chief ornament. In addition the B.K.A. had possession of half the adjoining transept, in which was a display of all kinds of things used in an apiary or of interest to beekeepers. Both places were besieged with visitors and enquirers during the two days of the show. Mr A. Gale acted as sole judge, and we believe his decisions gave every satisfaction. Very much of the appliances were home-made, and exceedingly creditable. Among such was the hive that gained the prize for members of the association is particularly worthy of mention. Mr Roberts made it during hours when his days' work out was concluded, and the greatest care in measurement and every minutiae was shown throughout. The same remarks fully apply to Mr Ellerton's live, which secured second prize in the same class. The adjoining half transept was occupied by Mr R. L. Pender, with a large and well-assorted stock of bee appliances, which was also much visited during the Show. The following are the awards:—

Collection of Apicultural exhibit in trophy form, D. Grant 1 and 2, A. A. Roberts very highly commended; four entries.

6lbs. Extracted Honey, A. A. Roberts 1, C. C. Paul 2 and very highly commended; six entries, 3lbs. 1lb Sections Comb Honey, D. Grant 1, T. Ellerton 2; four entries.

Frame of Comb Honey, D. Grant 1, A. A. Roberts 2; six entries.

3lbs Beeswax, T. Ellerton 1, A. A. Roberts 2. four entries.

Two-storey Hive fitted with Root-Hoffmann

frames, A. A. Roberts 1, T. Ellerton 2, A. A. Roberts highly commended.

Twelve 1lb. Jars Extracted Honey, Mrs. H. J. Clark 1, T. H. Moore 2, T. Ellerton and C. C. Paul very highly commended; ten entries.

Twelve 1lb Sections Comb Honey, D. Grant 1 A. A. Roberts 2; three entries.

6lbs. Beeswax, J. W. Pender 1, T. H. Moore 2; seven entries.

Six Bottles Honey, H. J. Clark 1, A. A. Roberts 2, C. C. Paul (two exhibits) highly commended. Wired Frame of Comb Foundation, J. W. Pender 1, S. H. Luscombe 2; eight entries.

Frame of Comb built on Foundation, T. H. Moore 1, D. Grant 2; five entries.

JUDGES AND JUDGING.

To the Editor A.B. Bulletin.

Sir,—I must ask a small space in your valuable journal in reply to Messrs. Mansfield, Seabrook, and Barker, and I will be brief. My object in writing on the subject in March last has been gained, and has resulted in some good, but the demand for good judges in all classes is increasing. In a few days our local show will open, and then I shall no doubt see a lot of empty coops, and buildings only partially filled, that last year were crowded, and one of the causes is small prizes; and another powerful one, because stewards of sections are also exhibitors in the same section; and having seen their little game, numbers refuse to exhibit, arguing that stewards have no more right to exhibit in their sections than the judges have. I voice the opinion of numbers when I state the foregoing. Again, I have seen judges who must have been colour blind, for in poultry for instance when yellow beak and yellow legs were standard points, *horn beaks* and *dirty white* legs secured first honours, and in apiculture *brown* beeswax first for *yellow* and *good yellow* exhibits passed over. The remarks of Messrs Mansfield, Seabrook, and Barker are in my humble opinion more abusive than otherwise. Mr. Mansfield says the dark bees were not the progeny of his queen. Well they wanted to visit the metropolis and his bees kindly said "All right, go with us." I refuse to say more for fear of space. In reply to Mr. Seabrook, I can

say that I fancy none of the candied honey shown at the Town Hall exhibited at R.A.S. except his, and my remarks are not affected by praise of his. I withdraw nothing, nor back down, and can prove my assertion, and I can count sections and number correctly. Mr. Barker's long effusion can be reduced to one word—envy. He occupies about two columns to tell us he was badly beaten at R.A.S. and fancies it was because a novice was one of the judges. Very flattering to my colleagues, who have been judging at R.A.S. for years. I will only add, I pass over Mr. B's sneer and say I am willing for my actions as one of the judges to decide my fitness for the post, and also the respect of my *practical* brother beekeepers for nominating me for judge. I did not seek it, and end by remarking, save me from such friends. Thanking you in anticipation

I am, Yours &c.,

J. D. G. CADDEN,

Roodmere Apiary, Windsor.

BRUSH-MADE FOUNDATION

To the Editor A.B.B.

Sir,—Several letters have lately appeared in the *A. B. Bulletin* re the above subject, and most of the writers seem to be producing a very imperfect article, with the impression of the cells upon one side of the sheet only, the other side being plain. Well now, I think that rather than use stuff of this description, I should prefer to buy rolled foundation. Though the other article would appear to be cheaper it would also be nasty, and dearer in the long run. But, sir, foundation can be made with a perfect impression on both sides without the use of a mill. I refer to moulded foundation in which the sheets are made by pouring melted wax over a plaster mould; and as this is a subject of great importance to a large section of the fraternity who cannot afford the expense of a roller mill, dipping tanks, &c., I will briefly explain the process. I may add, that I mould all the foundation I use, using full sheets in every frame.

The mould I use is made of two slabs of plaster, hinged together, and opening and shutting like a book. To operate, soak the mould in water for an hour or so before using; place it on a table or box close to the stove whereon the wax is being melted; pour about half a jam tin full of melted wax over one of the slabs, and quickly turn the other slab over on to it, just as if you were closing a book. Pause for a moment and then prize open the mould, and peel off as nice a sheet of foundation as you would wish to see, and equal to the best rolled foundation. Moisten the wooden frame of the mould with a wet rag, and proceed as before. When the mould begins to feel warm to the hand, cool it by dipping into a tub of water or pouring water over it. The sheets are afterwards trimmed on the edges and the scraps returned to the melting pot.

While this process is not as rapid as that of the roller process, and would not suit the large manufacturer, it is admirably adapted to the wants of ordinary beekeepers, who can make all the foundation they require in their spare time, and can even supply their neighbours, as the foundation thus made is quite a saleable article.

H. B. M'FARLANE,

Rooty Hill.

Mr. Oliver Pickles, Fassifern, writes: It has been a poor season for honey, but the bees are doing well at present, and are standing well for winter. Number of hives, 33; honey extracted this season, half-a-ton.

Mr Charles Peck, of Gosford, shewed us a very handy feeder he uses, consisting of the ordinary frame he uses in his hive boarded about half-way up on either side from the bottom, which is made liquid tight; when filled with the liquid a narrow strip of wood floats on the top enables the bees to feed without drowning. This feeder can be placed in the hive as an ordinary frame.

THE N. S. WALES
Beekeepers' Convention.

TECHNICAL COLLEGE.

Harris Street, Ultimo, Sydney.

Wednesday, Thursday & Friday, July 4, 5 & 6, 1894.

Beekeepers are invited to send suggestions as to matters they would like discussed, or be themselves willing to bring forward at the Convention, before Friday, June 8th, to Mr. M. SHALLARD, Prospect Street, Leichardt.

[COMMISSIONERS' CIRCULAR.]


Government Railways of New South Wales,
Secretary's Office,
Sydney, 15th May, 1894.

Sir,—I have the honor to acknowledge the receipt of your letter of yesterday, relative to a concession in fares to representatives attending a conference of beekeepers next month, and in reply am directed to inform you that the Commissioners have approved of tickets at single fare for the double journey, being issued on presentation of certificates signed by yourself as Secretary. This concession will not apply to those travelling from suburban stations to Sydney, where it is presumed the Conference is to be held. I enclose herein draft of certificate which should be furnished to each representative, and a few copies should also be supplied to the Department.—I have the honor to be, Sir,

Your obedient servant,

H. McLACHLAN,
Secretary.

MR. M. SHALLARD,
Beekeepers' Union,
Prospect St, Leichardt.

 The Beekeeper will tear off and sign this form and present at the ticket office of his railway station when coming to the Convention.

Dear South Wales Beekeepers' Association.

To the Station Master,.....1894.

I certify that the bearer, Mr..... is travelling to attend the Beekeepers' Conference to be held in Sydney next month, and is entitled to a return ticket from.....to.....at the reduced rate allowed by the Railway Commissioners.

Major Shattard,

Secretary, Beekeepers' Union, Sydney.

I certify to having received above ticket—

.....

HEREDITY IN BEES.

Mr. Gales' reply to my contribution on the subject of Heredity, will prove disappointing to experienced beekeepers, but there are others, such as beginners and the public generally, and for the information of these I undertake to reply to Mr. Gales' criticism.

Mr. Gale, in reference to my quotation on behalf of the food theory asks: "*Have I ignored it?*" My reply to that is: yes. Here are his own words: "*and long since have I come to the conclusion that the food theory is wholly untenable.*" Well, now, if Mr. Gale admits that he is mistaken, I am glad to hear of it, and apologise. I would sooner do that, than do Mr. Gale an injustice. He then takes exception to my remarks. "In a long and extensive practice, etc." Is this incorrect? But whether Mr. Gale classifies himself as a novice, or otherwise is quite immaterial. All he has to do is prove his statement. If he cannot do that, so much the worse for him to consider himself an expert.

Then Mr. Gale writes another sentence of mine: "Very often the bees, etc.," and he replies "*They do not*" (that is lack the conditions he named.) But he omits to explain how the heated air is admitted to the inmate of these cells to develop its generative organs. I said further: "These eggs were never intended for queen progeny, &c.," and he replies: "*This does not affect my statement in the least.*" It does very much so. These are his words: "*Whether it is to be a fertile or infertile female is decided at the point of the ova-depositor as it is ejected into a large pendulous conical cell, or into the small horizontal hexagonal one.*" These are Mr. Gale's words, and if they be correct no queen could be reared from the larva of a fertile egg, laid in a worker cell. But we all know this to be the case. Therefore all fertile eggs are alike and inborn with characteristics to develop into a worker, or a queen as the case may be. The food supplied afterwards causes the difference—not the ova-depositor.

Then Mr. Gale asks: "Have I ever found a queen in a horizontal cell?" Of course I have, and many a novice may have found them, but perhaps overlooked them—to his loss. I have had them horizontal and bent upright too, and perfect queens hatched therefrom. A little experience will prove all this. I wish Mr. Gale had fully ascertained his facts before writing as he does; it might have saved him from a false position.

He further asserts positively: "*The natural sized insect must have a natural sized cell.*" Not necessarily. A worker-bee may be reared in a drone cell, and a drone in a worker cell, neither of which is a natural sized cell. He continues—positively: "*All the food, etc., could not produce a queen in a worker cell, if it were equal in dimension to the largest queen cell, unless, etc.*" Let Mr. Gale prove that, and if he can, I invite him not to withhold his proof. Next Mr. Gale states: "*All in-and in-breeding cannot alter the natural condition why a bee's egg can produce a drone, a queen, or a worker bee.*" With assertions like these we are not served, and they are not worth stating without proof. As soon as Mr. Gale leads off with facts, pure and simple, I shall follow, and give my reasons why in-breeding proves a failure and ruin. So far I have only refuted his statements—which, by the way, do not bear very much on heredity in bees—and I have not failed to support my statements with facts and reasons. Mr. Gale is right in saying "I do not seem to know that all our new varieties of domesticated animals are produced by in-and-in-breeding." I do ascribe such to other causes. Will Mr. Gale produce a new variety of bees by constant in-breeding?

Further he asks: "*Whoever saw bees commencing working in a new hive by building drone cells?*" I believe anyone with more experience than Mr. Gale shows, may notice how eager are the bees in a new home to build drone cells, so much so, that the use of full sheets of foundation comb is advised to check their desire.

The spaces between comb and frame

are not left with the consideration to build queen cells, but to serve as passages for the bees and queen. If any queen cells find space for want of more suitable places, they are removed again soon after the queens emerge.

That a horn-shaped queen cell can produce the natural conditions of a pendulous one, as admitted by Mr Gale, proves that the conditions may vary, but the result is the same if proper food is in abundance.

On the whole, Mr Gale's statements are unnatural and unreasonable, and the unbiassed reader can come to no other conclusion but that Mr Gale has signally failed in his bold attempt to hold the "leading string."

W. ABRAM.

Italian Bee Farm, Beecroft,
March 17, 1894.

N.B.—Mr Gale's statements are in italics. I have read Mr Helms' article in favour of the food theory, and he supports his facts scientifically. How will Mr Gale overcome his proofs?

When I wrote the foregoing I firmly believed that Mr Gale's continuation of his criticism would be in accordance with facts, and undisputable. This, however, is not so. Facts and proofs are entirely absent, and Mr Gale overlooked or ignored the main point entirely, namely: That he is called upon to prove his assertions. When he has done that, he may venture upon criticism. But since he has neither disproved my points, nor proved his, I do not think it necessary to revise the whole of his remarks, but to show that each paragraph of his contains incorrect statements. I will cite a few of them.

"Bees frequently build upwards," Mr Gale states. Well, can he refer to one single instance where a swarm of bees commenced their combs at the bottom and built them upward to the top of their abode? A fine mess they would make.

Then he speaks about food running uphill, &c. This is simply another imaginary probability, and is not based upon

observation. It seems to me that Mr. Gale has yet a great deal to acquire in the life history of the bee.

I could go on and disprove his words paragraph for paragraph—but why? I have said enough to disprove them. One feels inclined to believe Mr. Gale must have studied some fine illustrations of queen cells by Cheshire or others, and drew his conclusions therefrom. However, my practical experience disproves them. What cannot be proved in practice cannot be sound theory; Mr. Gale's theory is not proved, therefore it is unsuitable. Good beekeepers are generally not professors, and learned men are not always good beekeepers. I feel I am labouring under a disadvantage in controversies with learned men like Mr. Gale, who by cleverly cavilling over the wording of sentences diverts the attention from the kernel of the question at issue.

Now, Mr. Gale, "let the dogs loose and throw stones." I shall take no notice of either. My house is built on a firm fundament of twenty-six years' practical experience, and no wind theory can blow it down.

In my first article is the sentence:—"In looking back upon Mr. Gale's statement," &c. The word "heat" before "producing" has been omitted by the printer, and I now rectify it. It will thus be seen that I "construed" nothing, however "simple" be my statement.

Before concluding this matter I will just allude to a few points on heredity. For instance, colour is hereditary. A constant race characterises its constancy—the black race the black colour; the yellow race the yellow colour. In crossing the two we obtain a progeny of some black, some yellow, and some slightly yellow. Here is physiological heredity observable. Then there is mental heredity, such as docility, industry; fertility or less fertility; or irritableness, laziness. These mental characters are hereditary, and we now know to a certain extent which of these characteristics are attributable to the male, and which to the

female; but still there are certain matters which we do not yet understand. Whether they may be understood hereafter is quite out of the present question. At present the fact remains—"Certain matters are hidden from our observation." This does not preclude anyone from making further investigation. Through investigating and experimenting we know what our ancestors did not know. Much more may be known fifty years hence. Science is aiding us; but science must go hand in hand with practice. Mr Gale's theory is neither scientific nor practical.

W. A.

April 16, 1894.

THOSE UNSATISFACTORY AWARDS.

To the Editor.

I certainly expected an explanation from the judges in reply to my challenge, but they have kept silent and I have no alternative but to accept their silence as a proof that they have no explanation to offer. Under these circumstances the matter would have to rest had not Mr. Mansfield felt soar (sore) about it and taken it up. This alters the case and I ask leave to reply to his remarks.

In the first place, the tone of his remarks is rather bold, and his sneering remarks are ill-chosen. Second, I may mention that the acceptance of a government "screw" does not prove much "for the love of the observation of bee life." take away the screw, and what will be left for, &c. What I stated in my first letter are facts which others have noticed as well as I, and as Mr. Mansfield was not at the show, what grounds has he to go upon to dispute my assertion? It may not be pleasant to him to read in the A.B.B. that his queen and bees were not the purest at the show, but that cannot be helped. Is it not reasonable to assume that, had the judges any reasons for their decisions to offer, they would have done so? But they have not done

so, therefore Mr. Mansfield's case is lost. He obtained the award but not on its merits. He must produce a superior product to mine to beat me honourably—that at the show was a very inferior sample, I have hybrids as good—I counted the black bees by the dozen and many others with one band only. Since he keeps no black bees, his must have stolen the eggs elsewhere and developed them for show purposes, and he just happened to lift out the frame they were on. No, Sir, that won't wash! The price for his queen was £1, Mr. Seabrook told me, and it was not sold. Mr. Cadden said he would not take 39s 6d for his. While I am at it I may refer to No 2 of Mr. Mansfield's reply to Mr. E Beattie. He has not the slightest doubt but it (the croaking noise) is caused by the drones. *Indeed it is not.* Be careful in giving advice. A wrong advice is worse than none at all.

I remain, yours very truly.

W. ABRAM, Beecroft.

JUDGES, JUDGING AND SOCIETIES.

To the Editor of A. Bee Bulletin.

Sir, I have read with great interest and very mixed feelings the correspondence in your last two issues in reference to the judging which has taken place at our Sydney shows. I allude to the National Horticultural and Pomological Society's Show held on the 2nd and 3rd March last, and the Royal Agricultural Society's show a little later. With the special qualifications of the judges at the Town Hall show or either show I have nothing to do. It would be entirely out of place for myself or the secretary of any other Society to attempt criticism in matters of this kind, even were he competent to do so, which I am not, but there is one view of the case which does not always appear to strike the competitors and that is, when the judging goes in any way at variance with the strict letter of established custom the unsuccessful

ful are very prone to begin abusing the Society as well as the judges themselves. This is in my opinion hardly the course to adopt. First, the intending complainant should satisfy himself as to whether the Society has done its best to secure competent judges. If this is shown to be the case then the Society has done its duty in the fullest sense of the term and any dissatisfaction arising from the personal decisions of the judges should only be considered in a personal light, and should be fought out on these lines alone. To bring in a public body as the whole for condemnatory remarks because the opinions of two or three gentlemen may be wrong, is travelling on wrong lines, because all societies of any consequence contain many hundreds of members and embrace many sections. So admitting that at times errors in judging may occur, it is manifestly wrong to mention (even) the Society in any way that might lead its hundreds of members to consider themselves in the slightest degree implicated.

To sum the whole thing up, every Society should do its best to secure competent judges and there its duty is ended. If the judges do not do right then let the experts who dissent go to work and prove in detail that the judges have done wrong or are incompetent and at the same time refrain from mentioning the Society or its management in any way except by way of thanks for having done its best and spent its money for the encouragement of any of the industries that come under its jurisdiction. It should always be borne in mind that Societies such as The National Horticultural and Pomological Society are supported by the cash contributions of *Ladies and Gentlemen by the hundred*, who know nothing and care nothing especially about either fruit culture, flower culture, or apiculture, but who consider it their duty to support useful public institutions.

I may mention that the gentlemen appointed to act as judges at the Town Hall were utterly unknown in two cases even by name to the officers and council

of the National Horticultural and Pomological Society. They were appointed at random from a list of competent persons stated so to be by the Beekeepers Association of N.S.W.—Yours &c.,

H. RAWES WHITTELL,
Secretary Nat. Hor. and Pom. Society,
Victoria Arcade, Sydney.

[Will the judges have a say in this matter and close it up.]

N.S.W. BEEKEEPERS' UNION.

A meeting of the committee of the above took place at Messrs. Hebblewhite's, George street, Sydney, on Friday evening, April 27th. Mr Scobie, M.L.A., occupied the chair, and the following were present—Messrs. Trahair, Seabrook, Tipper, Worrill, Abram, Mansfield, James, W. S. Pender, and Shallard (secretary). Apology for absence was read from Rev. J. Ayling.

Minutes of previous meetings read and confirmed.

Re the matter of ringbarking at Cowra the secretary said the instructions to ringbark had been given in July, and he considered it was too late to move in the matter when the complaint was made.

Discussion took place on a letter from Mr Niven, of Eugowra, re carriage of empty honey tins, and on which the railway authorities had refused to grant concessions. Mr Scobie said he did not see why empty honey tins should not be sent free of carriage same as empty fruit cases.

Several accounts were ordered to be paid, and the secretary read a list of persons who had sent their contributions to the Union. On being asked the secretary stated Mr Dick was a member of the N.S.W. Beekeeper's Association—not Union. Some surprise was expressed as to whether Mr Dick's intentions had been misunderstood by the secretary, Mr Mansfield stating Mr Dick's subscription had been sent six months ago, but he had received no receipt. The secretary

replied that no receipt was sent to members of the N.S.W. B. K. Association.

It was stated there were at present fifty-three members of the Union.

The forthcoming Convention was now discussed. The date of holding same was fixed for Wednesday, Thursday, and Friday, July 4, 5, and 6.

It was decided to ask for permission to meet at the Technological College, Sydney, or if rooms there were not obtainable, to apply for the use of the Girls' High School.

It was resolved that the secretary and treasurer prepare a report and balance sheet, and submit the same to a committee meeting to be held before the Convention, and that Messrs. Seabrook, Allport and James be auditors, any two of which may be sufficient.

It was resolved the secretary issue circulars, the same be advertised in the *A. B. Bulletin* for May, asking beekeepers to make suggestions as to what subjects they would like to be brought forward at the Convention. It was also resolved that short advertisements be inserted in the *S.M. Herald* and *Daily Telegraph*, inviting beekeepers to attend and send subjects for discussion.

The President undertook to see to the matter of cheap fares.

It was arranged the committee meet on Friday, 8th June, that being considered sufficiently soon after publication of the *A. Bee Bulletin* for the secretary to receive replies for information solicited.

The President now presented Mr. Mansfield with a handsome gold medal, subscribed by the committee, as an acknowledgment of his valuable services as secretary of the Convention of last year. On one side was a queen bee, and on the other a suitable inscription engraved. Mr. Mansfield expressed his surprise at the unexpected gift, and said it more than repaid him for the trouble he had gone to.

Mr. Mansfield read a number of suggested alterations of rules of the Union. He also stated that he thought an explanation was due from the Secretary why the repeated applications to call the

committee together had not been attended to, and when this meeting was at last called by the President the secretary had called a meeting of the Union in another place at the same time.

Mr. Major Shallard stated he had been busy owing to his father's death going backwards and forwards from Melbourne to the Williams River, and had not called the meetings because he could not attend them himself.

Mr. Trahair asked was it necessary the secretary should be present at the meetings so long as he sent his books.

As it was late and most of the members had to leave to catch their last trams the meeting closed.

CLIPPING QUEEN'S WINGS.

Mr R. Helms writes:—I believe the clipping of the wings of the queen is considered by most apiarists a rather modern practice in connection with bee-keeping. No doubt it has become more general during the last quarter of a century, and is oftener resorted to than during any former period. The reason for this lies unmistakeably in the fact that people at the present time more frequently import valuable queens to their apiary than formerly was done; but it is also due to a great extent to the invention of the frame hive that gives such perfect control over the bees and makes the practice an easy matter. However, this manipulation was known to the beekeepers of former times, as the subject may be found mentioned in some of the bee-books of the 17th century, but perhaps rarely made use of. It seems in fact to have been brought down from the Greeks and Romans, which I gather from a paragraph contained in a quaintly-written bee book published in 1608, by one Thomas Hill, of London. I cull from it the following:—"Virgil writeth, that the kings sometimes flie forth for a vain delight, to sport them flying in the aire, which you may easily stay, and let, if that you plucke off the king's wings,

that he cannot afterwards fly." Whether Virgil only thought that the queen flies out for *vain* delight, or whether when he wrote it he was old, and like Solomon was getting in the habit of saying things vain, the paragraph does not make plain; to stop her from flying, however, he knew how to do. That is clear.

TASMANIA.

A Tasmanian correspondent writes :— I am pleased to say I receive your very valuable journal with great regularity and I confess I look forward to its coming with much interest. I consider it worth twice the amount paid for it. Every beekeeper should be a subscriber to the *A. B.B.* I have read with great interest the many opinions held by different apiarists in reference to hives, frames, and management of the apiary generally. The reading of such matter has always proved instructive and useful. As I am only a beginner among bees I felt anxious to secure that style of hive that would prove the most effective, but as there are so many beekeepers who advocate so very many different kinds of hives I came to the conclusion that, to use a shooting term, much of the non-success lies "behind the stock" or in the management of the bees. That whatever kind of hive is used, success cannot be attained without close attention to, and a full knowledge of the requirements of the apiary. As we should be guided more by results than theory, I think Mr Peterson's yield at Wattle Flat shows that he at least is working a hive that is well suited to the requirements of the bees. Could you inform me of the kind of hive used by Mr Peterson, for granting that he is an expert and in a favourable locality his hive must also be a good one. I am thinking of trying the Carni-Italian cross next season, Could I procure bees from Queensland safely for the purpose, or would they be better from some cooler place? The Carni-Italians are highly spoken of by

some beekeepers. I want a bee to do a maximum of work and a minimum of sting. The honey season in this district has not been good, the summer being too dry, though the honey is of first class quality, it is very hard to extract being too thick to run.

[Mr. Peterson uses what is termed the long-idea hive, i.e., one story, with a good many frames. We see no reason why bees from Queensland should not be as good as those from a cooler climate.]

WESTERN AUSTRALIA.

Mr. Robert Wolfe, writes :—Being a subscriber to your paper, and living as I do, afar off, I thought you might like to have a line from me. I have just made a start in beekeeping, and not knowing personally any one who understood apiculture, I was at a loss how to act. By good luck, I may term it, I heard of Mr. John A. Ayre. I called upon him and was treated as a friend at once. He has taken great pains to instruct me, and I have now 23 colonies, all having Italian queens. 17 out of 23 I reared myself. As far as I can judge they are all doing well. In Western Australia very few have gone in for scientific beekeeping as far as I can learn, and we are lucky to have such an experienced apiarist in our midst, and one who is so ready to give a new chum at the game all the tips. I must take this opportunity, through your paper, to thank Mr. Ayre for his kindness, and I hope to turn out a credit to his teaching. My place is 93 miles from Perth on the S.W.R. It is surrounded on all sides by native timber. At present the country for miles around is white with the blossom of the red gum. The country is full of bees. One can find them all through the bush. About here I am getting the bush bees and Italianizing them. The settlers here who have kept bees tell me there are blossoms nearly all the year round and they say bees work here all through the winter. But no one knows much about them from a scientific point of view.

EUCALYPTI AND THEIR TIME OF BLOOMING.

Mr. E. Penglace, Narrang, Victoria, in *Home and Farm*, says:—I think a good deal depends on the season—i.e., whether there be much rain or the reverse. Generally, if we get heavy rains in the winter, a good honey season follows; but if we get a very wet spring, the season is almost sure to be poor and late. In this district the peppermint trees bloom in November some years, but sometimes they don't come out till Christmas. This year they did not bloom at all, although the bud formed in November, and is still on the trees. It is my opinion they will not burst till spring. Red gum generally misses one season out of three. Red box seems to be more regular, but Stringy bark varies a good deal. We have two varieties of Stringy bark, some seasons it begins to bloom at Christmas, at other times it doesn't come out until March. This year it is very scanty and late. One variety of white gum blooms here in October, and another in March. Honeysuckle yielded more honey than any other tree about here this season, but the weather was unfavourable during the best of it.

JOTTINGS FROM FOREIGN BEE JOURNALS.

AUCKLAND.

In a late number of the *American Gleanings*, edited by Mr A. I. Root, Mr Wilder Graham gives a good wrinkle to those who keep bees near thoroughfares, often to the annoyance of passers-by. He tells us how he had many complaints from persons who had occasion to pass his apiary, and after trying many devices the idea struck him that if he could induce his bees to fly higher, and so pass over the heads of the people passing, the difficulty would be overcome. Many persons living in towns, or even in country districts, have probably been debarred from keeping bees fearing that they would prove an annoyance to their neigh-

bours or persons passing in front of the hives. This is how Mr Graham got over the difficulty. He says:—As a first step I built a trellis just inside the garden fence and covered it as soon as possible with some rapid growing vines. The trellis was perhaps eight feet high. This contrivance I have no doubt interfered with the bees at first, but gradually they learned to rise and clear the trellis. . . . After they are once up in the air they seldom drop much till they approach their stopping place—certainly not in the short interval between the trellis and the road. "It is a pleasure to drive past your beehives now," said an old fellow last summer. "It is interesting to look up and see that steady stream of bees going zip zip and no danger from them. I used to think they went out of their way to sting, but they don't now."

ROBBERS.

Dr. C. C. Miller in *Gleanings* gives the following for the prevention of robbing, it seems a simple remedy and is certainly well worth a trial. If there is anything calculated to rile a beekeeper it is certainly that of being pestered with a lot of robber bees in the apiary.—"Boil for a few minutes a handful of tobacco or cigar stumps in a gill of water, and you have a not costly chemical product that will put to route like enchantment an army of robbers. Apply a few daubs of it at the points where robbers try to enter and they will be totally driven away for a long time when the application must be renewed.

A FORAGE AND HONEY PLANT.

Of course everyone is aware that it will not pay to plant crops expressly for bees, but in many cases I believe it would pay a farmer who possessed an extensive apiary to plant at least a portion of his land to something which would be suitable both for forage and honey. In the Feb. Number of *Gleanings*, Mr. H. R. Boardman strongly recommends "Sweet Clover" for this purpose; he affirms that it is a first class honey plant, and that horses, cattle and sheep will eat and thrive upon it both as

pasture and dried as hay and that hogs (pigs) like it in its green state. It grows to a height of four or five feet and sends its roots down deep into the hardest and driest soil, thus withstanding the severest drouths as no other plant can. Surely a plant like this should be worth a trial.

THE BEEKEEPER'S REVIEW,

Is another interesting American journal and is brimful of interesting articles. Mr. Elmer Todd gives us his experience with foul brood. He denies that old bees carry the infection and recommends disinfecting hives by boiling. He also says: "In treating foul brood I always wait until the weather becomes settled in the spring. If I see it is likely to get the start of me I feed enough honey to keep up brood rearing, mixing carbolic acid with the honey at the rate of one part of acid to 500 of honey. This keeps it in check.

PREVENTING SWARMING.

At the recent World's Fair there was exhibited a long box of thick combs of honey, the exhibitor was Mr. F. H. Cyrenins of N. Y., who with reference to to the same has written the following as the manner in which it was secured, and the effect of the proceeding upon the swarming propensities of the bees engaged upon the work. I am not sure that in the building of the combs in the long box that you saw at the fair that I made a useful discovery, viz., that by setting two or three hives side by side with a queen excluder over each and a surplus case long enough to cover all, swarming may be prevented. This lot as well as several others were thus arrayed, the colonies made very strong and everything made ready for swarming, which was daily expected but did not occur; perhaps the bees thought they had too much room to need to swarm.

Mr. Henry Neal, Joadja Creek, writes:—I have been taking *Gleanings in Bee Culture*, from America, for the past three years, and on receipt of your valuable journal I find its contents are equally as instructive as *Gleanings*. Enclosed please find my contribution for twelve months. Wishing your bee journal every success in the future. I have 70 colonies, mostly Italian. Two years previous I extracted 3000 lbs. from 11 colonies, and increased to 22. This season has been very poor, owing to wet weather; bees could not work on the bloom. I intend increasing next season to 150 colonies, when I will report to you regularly on same. I make everything myself, viz., foundation, extractors, hives and solar extractor. Before Lord Jersey went home he paid a visit to my Apiary, when he complimented me upon my system of working, also quantity of honey and I was the recipient of a gold scarf pin with pearl bee. Any Bee Keeper desirous of visiting my Apiary I will be pleased to show them same.

Mr A. J. Murray, Maryvale, writes:—You have kindly offered to answer questions, &c., through the A.B.B., and I will take advantage of same. 1. How is the starch paste used as lubricant for foundation mills made? 2. Do you know of any other good lubricant?

[1. Rub your rollers well with the paste to prevent wax sticking when rolling. 2. Soap suds, &c.]

Mr W. D. Russell, Victoria, writes to a Victorian paper—Next season, from present appearances, will be the most bountiful we have had for years, and hundreds of tons of honey will be sprung upon the market right from the start of the season. Where are we going to get rid of it? Mr Editor, we are not going to find buyers for it all in Australia, even at a low figure. I would suggest that this be made a leading question for the next convention of beekeepers. I hope that all our live beemen will come determined to settle the business of an export trade, and not allow other matters to take up any time until this all-important matter be put on a sound footing.

Boracic acid is said to be an immediate cure for bee stings. A quart of boiling water to a teaspoonful of the drug.

The Rev. J. Ayling, Pitt Town, writes:—The season just past is the very worst I have known. But I have kept my stocks in good order, and hope for a good start in the spring. Allow me to congratulate you on your success, and to express a hope that the ferment so very evident in several places in your April number will have been subsided before next issue. Respecting the "Choko." I have one very exceptional fruit, weighing 22ozs., but to-day, I put six (6) of the largest in the scale, and they weighed 5½lbs. It is a prolific plant and worth cultivation. The fruit is cooked as the vegetable marrow, for which it is an excellent substitute. Like all its family, the choko is very attractive to bees.

Mr. Wm. Pacey, of Marrar, in writing says:—Mr Edwin Tipper,—Dear Sir. I myself, as well as other beekeepers, am well pleased at the way the *Bulletin* is brought out, which reflects great credit on you for the energy you have displayed in bringing the paper in so short a time to such perfection. "Nail the colours to the mast," and go on to prosper. In this district the present season is one of the best we have experienced for years; the trees bloomed well in the spring. The splendid rains that we have had here lately have brought out the trees in bloom again; fine season for bees. The moths are playing sad havoc with the black bees in this part. The leather-coloured Italian bees that I got are doing well—the moths have a rough time of it with them—they are the bee for business. Many beekeepers here are adopting the bar frame, and doing away with the old style. These new appliances, combined with the leather-coloured Italian bees, will give hopes of being able to procure some honey; this applies to those who have had the black bees in the past in this district. The bee fever is rapidly spreading here, and many are taking to beekeeping. The *A. B. Bulletin* has awakened a good many to the knowledge

of the art. Mr A. Wooden, of the "Pinnacle," is making extensive alterations in his apiary, in doing away with the black bees, substituting leather-coloured Italians, as well as the bar frame. Mr Isaac Jackson also, of "Fairy View," is greatly impressed with the leather-coloured Italians and bar frames, and is altering things accordingly. Altogether the bee industry is rising to some prominence in and around this district.

Mr. A. A. Grindrod, Dalwood Road, Auburn, writes:—Enclosed with this letter I send you my subscription for the *Bee Bulletin*. I find it a continual source of valuable information in regard to the state and progress of beekeeping in Australasia, such as I have no other means of gaining, and I hope it will receive the continued support of all interested in beekeeping. While reading the replies in last number on the question of increasing the local consumption of honey an idea occurred to me which I give you for the consideration of those who have honey for sale. Could they not advertise honey for sale, in say 7 and 14lb tins delivered by rail within a certain radius at a stated price? Take for instance a bee-keeper within 50 miles of Sydney supplying 7lb. tins. The freight by parcel rates would be 6d; price for 7lb. tin 4d; 7lbs. honey at 3½d, 2s 0½d; labels and cork, 1½d; total 3s. Beekeepers over 50 miles would not probably be able to supply 7lb. tins cheap enough to find a ready sale, but they might do it with 14lb. tins. It may be said that the extra trouble involved would not be compensated by the slight increase in price (I am taking Sydney wholesale quotations of 2½d to 3d per lb, out of which has to be paid freight and commission.) Even granting this, beekeepers would gain in the end by making the public acquainted with the genuine article. I may say that although I have taken special notice I have only in solitary instances seen the name of a beekeeper on the labels of honey offered for sale in Sydney.

We have received from Mr Whittell, secretary of the National Horticultural and Pomological Society, a paper setting forth the scheme of the First Experimental Export Fund. The report shows that while the fruit industry is in an almost ruinous condition at present, in the near future it will be far worse, and good and energetic men are taking steps in accordance and to get the industry on a sound footing. Let us hope the forthcoming N.S.W. Beekeepers' Convention will develop into as great activity and usefulness as the N. H. and P. Society is apparently doing.

Mr. M'Gee, Womera, concludes a communication with:—I may add that I find the *Bulletin* very instructive, and have got quite used to looking over its columns for hints on various subjects. I have my hives all in good order for winter. Have been troubled with paralysis but managed to get rid of it. The honey season is nearly over here. We have plenty of honey yielding trees here, such as box, gum, ironbark, apple, teak-tree (a first rate honey plant), five corner bush, carbene, wilger and numerous brush stuff, besides lucerne, corn and other various cultivation crops.

Novice, N.Z., asks:—ROOT HOFFMANN FRAMES.—Can any apiarist in Australia who has had experiences of these give me a little information? How is foundation fastened to frames when not using wires? Root advises using a roller desk tool for this purpose, but I am inclined to think foundation would not be sufficiently secured to withstand the weight of bees without the addition of wires. Of what object are the grooves on underside of top bar, and how are the cells next to same drawn out? It seems to me they would be of a drone pattern. Do not the grooves in top bar give extra work to bees compared with the old style top bar?

The roller secures foundation just as securely as any other method, and is equally good whether frames are wired or not. The roller is made to suit the grooves, and experience does not show the drawn out comb to be necessarily of a drone pattern, or give the bees extra work.

A correspondent writes:—The prize schedule of an agricultural show states —Best jar of clear honey, not less than 6lbs. One exhibit is clear liquid honey; the other is granulated. To which would you award the prize. Elavour was not taken in, so evidently it is a matter of looks.

We should decidedly say the clear liquid

Mr John F. Hofen, of Orbost, Victoria, reports in the *Farm and Home* that he has taken this season 14,000lb extracted honey, 1,600 sections, and left enough stores to carry him through to November, out of 65 colonies, or an average of 240lb per colony. His hive bodies carry 13 frames Langstroth size.

Bee King, Port Elizabeth, South Africa, writes:—I herewith send you sketch of colonial bee hive, with the Bee King. This hive is made to drive the bees below when they are or want to be on the rampage. It is very simple and effective, especially when they want to swarm. The box underneath has a wire ventilator, with slide to imprison the bees, simply by smoking them from the top, closing the entrance, and opening the bottom slide. When the bees see the light below they all make for it. When the box is filled with bees they are imprisoned until all danger is over, or all the honey taken from them. This photo was taken in the glare of the sun, as you can see by my contortions. On the 24th February I took a friend's hive out for him. The take was 80lbs. of honey, and that was not all of it. The next hive only contained 25lbs. of honey —section honey. The one that 80lbs. of honey was taken from I had extracted from two months previously, when there were only 45lbs. The veldt is very dry at present; we want rain badly. Business is also very quiet at present. Out of the hives on view I took 60lb. weight of honey about three weeks ago; will soon take it out again.

The photos duly came to hand, and we are sorry not to have yet started giving illustrations, but when we do our burly, good looking South African friend and his hives will be amongst the foremost.

THE BEE-WAX MOTH.

The *Agricultural Gazette*, of N.S.W. for April contains the following interesting article on the Bee-wax moths, by Mr. A. Sidney Olliff, Government Entomologist:—

The bee-moths, or bees-wax moths, are of two distinct kinds. The larger of the bees-wax moths properly known as *Galleria mellonella*, Linn., but sometimes called by the name *Galleria cereana* Fabr. appears to be by far the most destructive of the two insects. It is a very widely distributed species, being found throughout Europe and North America, in India and even in the cold regions of Northern Siberia; indeed, it appears to have a range that is co-extensive with that of the beehive itself. In warm countries it is much more abundant, and therefore destructive, than in temperate or cold climates, a fact which is probably accounted for by the varying number of broods or generations which occur in a season under different climatic conditions. With us in New South Wales the first brood of moths appears in the early spring, from caterpillars which have passed the winter in a semi-dormant condition, within the walls of their silken coverings, and only turned to pupæ or chrysalids upon the approach of warm weather. These winter or hibernating caterpillars feed very little, and usually confine their wanderings to the silken channels which they have made for themselves before the cool weather sets in. Upon the return of the desired warmth the caterpillars spin a complete cocoon for themselves and turn to the chrysalis stage, and in from ten days to a fortnight the perfect moth appears. The moth then lays eggs in any convenient spot, such as the sides and bottom of the frames, on the walls of the hive itself, or on the combs. In each case I have had an opportunity of observing the process. The moth chose the sides of the frames as near to the brood comb as possible, the young larvæ having a decided preference for this comb. The larvæ having once made their appearance, which they usually

do in from eight to ten days after the laying of the eggs, their growth is exceedingly rapid, the average time before they are ready to assume the chrysalis stage being only some thirty days. The average duration of the chrysalis period is about a fortnight, so it can easily be seen with what great capabilities for rapid reproduction we have to deal. As we have said, the number of generations or broods, which develop in the season, *i.e.* between early spring and late autumn varies with locality and climate, but it may be worth while to record that, in my opinion, we have sufficient evidence to prove the existence of four broods in the Sydney district under ordinary circumstances. I have myself successfully bred three generations or broods from a comb received in early spring from the Richmond River; and I am convinced that a fourth might have been bred from the same stock but for an unfortunate accident to the eggs obtained from my third brood. Upon first hatching, the larvæ is pale yellow in colour, with a slightly darkened head; and when full grown is of a dull greyish flesh colour, with a dark reddish-brown head. Its average length is about an inch, and like the majority of the caterpillars of moths, it has sixteen legs. The chrysalis of the larger bees-wax moth is of the ordinary type, and it is enclosed in a very compact cocoon of tough white silk, usually spun up in one of the silken channels or galleries made by the larvæ which we have previously referred to. The perfect insect or moth has reddish brown-grey forewings, which are distinctly lighter in colour towards the outer or hinder margins. The sexes may readily be distinguished by the outline of the wings.

The second species of bees-wax moth is known as *Achræa grisella*, Fabr., the lesser bees-wax moth, or honey moth, &c. Although not nearly so destructive as the larger kind, it does considerable damage in old and neglected hives. The moth is much smaller than *Galleria mellonella*, with which, by the way, I have found it associated in the same hive on more than one occasion. It is of a dead

grey colour, with a yellow head. This species is not nearly so particular in choosing its food as the former kind (*G. mellonella*), and may frequently be found feeding on the *debris* which commonly collects at the bottom of a neglected hive.

In an article by Mr. W. W. Smith, published in the *New Zealand Country Journal* (vol. xviii, page 13 1894), the following observations occur, and we venture to quote them here, as they appear to give some valuable information regarding the remedies for the attacks of these moths. Mr. Smith says:—"In suggesting means for the suppression of the pest (the lesser bees-wax moth), it is important, as already stated, to put swarms into sound boxes, and to fit them closely on their boards or staging. The entrance to the hive should not be made too large, but just sufficient to enable the bees to pass to and fro without overcrowding. These precautions lessen the chances of the moths gaining access to the hives. It is advisable not to put the swarms into too large boxes, as any vacant space in the hive enables the moths to fly about and also lessens the chances of their destruction by the bees. Another important matter is to examine the boards occasionally, and should any caterpillars or chrysalis be found thereon to replace them with clean boards. These remarks apply only to ordinary beekeeping in plain boxes such as is practised about farm homesteads and in the gardens of artisans. Should the foregoing hints fail to keep the moth in check, I would suggest that any hives becoming badly infested with the pest be destroyed with sulphur, and, after straining the honey to carefully burn every particle of the comb. In badly infested hives the comb becomes impure, and frequently smells strongly when the box is raised off the board. To be able to obtain a supply of pure honey in future, stringent measures should certainly be adopted at the present time to check the ravages of the honey moth. The use of bar hives, and carefully attending to them for a few seasons would practically annihilate the

pest. The interest, however, in beekeeping is not so general as to expect this to be done by ordinary beekeepers. It is nevertheless regrettable that this pest should be allowed to increase, when a little attention and care for a few seasons would exterminate it."

From the foregoing account of the habits of these moths it will be gathered that remedies are not difficult to find. They may be briefly summarised as follows:—

a. Cleanliness; and to attain this frame-hives are essential. Every larvae and every cocoon must be destroyed when found. Mr. W. Abram, an excellent local authority on beekeeping, says, "Take out every comb and give the frames a gentle tapping with a small stick, when every grub will hasten to get out its hiding place as quickly as possible, and will drop off, when it may be killed. Now with a knife, or other pointed instrument, pull out the cocoons, clean everything, and replace the frames."

b. Stored combs must be closely watched and, if found to be infested, fumigated with sulphur.

c. Lantern traps, such as are ordinary used by moth collectors, have been recommended for trapping the perfect moths, but I doubt if they are worth the trouble which they entail.

It is a well-known fact that the bees-wax moth do not attack the Italian or Ligurian bee to any serious extent; indeed they are rarely attacked at all. It is the ordinary black bee or hive bee that suffers so greatly.

Mr. Cadden, Windsor, writes:—"I am happy to say the cho'ko is fruiting now better than ever, and we have had slight frosts, but so far it is not affected. It was brought to the front at our show last week, and numbers purchased, and I hope it will be in abundance. We cook it, and it is superior to kohlrabi, or any of our turnip tribe, and Mrs. C. is preserving it in honey just to test it as a preserve."

A VISIT TO MAITLAND.

To the Editor.

Sir.—Being in your district recently, making holiday, I took the opportunity of visiting some of the Hunter River apiaries, and I have to thank the owners of them for the kind courtesy extended to me, and for the information they afforded me relating to various matters pertaining to the industry. I visited Mr. Mansfield's apiary at Largs; Mr. Munday's, Woodville; Mr. Tucker's, Paterson; and some others I had a passing glance at not having the time for a closer inspection. I also visited Mr. R. L. Pender's factory for the manufacture of beekeeper's supplies; and last but not least the publishing office of the *A. Bee Bulletin*. Nearly the whole of these apiaries named, I notice, have adopted the "Munday" frames, and although we of this district have adopted the Hoffman I must admit from what I saw that the closed topped Munday has this great advantage, that it is perfectly clean and free from all "waxiness" whatever between the stories, which from my experience I cannot say of the Hoffman. Mr. Mansfield, it seems, does not work for honey, but goes in for rearing queens, and his locality appears to be specially suited for that purpose. He kindly showed me some of his choice breeders and they seemed to be real beauties. He told me he intended to import some five banded queens for breeding purposes so that he may be enabled to suit all customers. Mr. Munday works both for honey and for queen rearing, which he is enabled to do in the place where he resides, for besides having the pollen fields which characterise Largs, he has also the advantages of a good forest as foraging ground for his bees. He also has some excellent breeding mothers and is able to supply an excellent quality of queens. Unfortunately at the time of my visit many of his colonies were suffering from bee paralysis, but he was about to treat them to a sprinkling of flour of sulphur, which he says is an effectual remedy. Mr. John

Tucker is a producer only of honey. He has at present two apiaries, but he is preparing to unite them on some land he has over the river opposite his orchard. As is quite proper, Maitland being the centre of a large number of beekeepers, the supply business is making rapid strides towards becoming an extensive industry under the management of Mr. R. L. Pender. In conclusion, and I must now conclude, as my screed is becoming too long already, I must congratulate you, sir, on your apparent determination to keep pace with the times with your journal. The bee industry in this colony is only just now at its inception. There is a great future in store for all who prosecute it with vigour, whatever branch of it any one of the fraternity may set his mind upon following.—Yours truly,
E. R., Wingham.

ARE THEY REALLY?

To the Editor.

Sir,—In that very excellent institution the Technological Museum, in Maitland, there is a colony of bees working, and upon the hive there is a label signifying that the bees are *pure* Italians. presented by Mr. J. F. Munday. Looking at the bees, however, I discovered that they were anything but "pure Italians," being all the way from three banded down to black. Upon enquiring I learned that they had been pure when presented to the Museum three years ago but that the breed had run out. Of course this may be true, as I have no doubt it is, but surely it is injurious to the reputation of a noted beekeeper, and queen breeder like Mr. Munday to have the colony labelled pure, with his name attached, when they are not so. Besides people are led astray by such an assertion—that is, people who are not experts in bee culture, who are those, I take it, the exhibited hive is supposed to instruct. Perhaps some of your local beekeepers may deem it worth your while to attend to this matter. E.R.

FOUL BROOD.

A correspondent writes:—

Shall we beekeepers advocate Legislation for the prevention of foul brood? My experience teaches me most decidedly we should. This is how I stand and have ever since I commenced beekeeping. My neighbour, about 200 yards away, had a few colonies dying with the disease, and would not try to cure them or destroy them. Eventually they all died and he got disgusted. That was about two years ago. It is almost unnecessary to say I suffered, and severely at that. At the present time another neighbour about the same distance has three colonies in frame hives all affected. Early this spring I had one affected, cured them, and now find I have another and am likely to be affected more or less till his die with rottenness. Sometimes I think I will give up beekeeping. Foul brood is far more prevalent than most think. I have made a lot of enquiries and find it from Albury to Sydney. Some two years ago a person that has 10 or 15 colonies in one of the suburbs of Sydney, said that his were very badly affected and that he would not trouble with them. Fancy what a treat for his neighbours. Mr. Gale advances the argument that it is useless to legislate, because we cannot deal with the bush bees. Who ever heard of legislation meeting every case—half a loaf is better than no bread. In fact that would be a bad comparison, as I think if we could get rid of the pest from amongst the domesticated bees we should have the whole loaf or near it. I maintain that bees in the bush are not affected to the extent one would expect in a foul brood neighbourhood. The facts are, they are isolated to a far greater extent, and one colony may die out with the disease and another colony within a few hundred yards not contracting it. It is a great mistake to think bees die out with the disease and leave a lot of honey behind, which robbers find and that it spreads that way. When bees are affected, they gradually grow weaker, sometimes very slow, and at the end of twelve months or so gather very little honey, and when winter comes they die of starvation. Weak colonies when isolated do not get robbed like they would if in close proximity to other strong colonies. For instance if one puts a weak colony some hundred yards from his main apiary, the chances are that they are all right, whereas if close to the rest they would get snuffed out. Mr. Gale has been lecturing at a town not far from here, and a few people have caught the fever, for which I am sorry for their sake. There is a beekeeper (nay, a bee slayer) in the place, who keeps 40 or 60 colonies in frame hives, almost all affected, and has been this last three years. He leaves frames, honey and comb all over the place, so his neighbourhood, so to speak, is a hot bed of disease. I know Mr Gale has the welfare of beekeepers at heart, and think if he had a neighbour like the one above he would change his mind re legislation.

A bottom bar not less than $\frac{3}{4}$ in. wide, and $\frac{1}{4}$ in. thick, is being recommended by writers in *Gleanings*.

Henry Alley, in the *Apiculturist*, contends that the golden Carniolan are the original yellow race of bees. The steel-gray Carniolan breeds into the yellow, while the Italians are only a hybrid, and the breeding tendency is to become black. We would like to hear some Australian experiences on these matters.

Mr J. E. Bailey, Canley Vale, writes. —The old saying is "Marriage is a failure," but I consider beekeeping is in this district. There was no honey last year, and very little more this year. Every beekeeper in this district has about a quarter of the swarms this year to last year's count. They take a fancy to come out and leave everything—young bees and eggs—and fly to adjoining apiaries. We have had very little bloom this year, and that was about February. There is nothing now. I went through all my swarms on a Monday in December, and every cell was full of eggs and brood—no room for honey. Five days after there was nothing worth speaking of, only about two combs in each hive having eggs and brood.

Mr. B. R. Doyle, Kaludah, writes:— I herewith hand you stamps to amount of 5s, being my subscription for your very interesting little paper, the A.B.B., and wish it every success. My bees are in good order for winter. I have all my hives Italianised, and all but one purely mated, and the queens, reared by Doolittle's methods, are very fine in colour and size, and the bees very quiet. I can handle them without smoke and without wearing a veil, and very rarely get stung. The black bees in the neighbourhood are having a bad time with moths, and have no honey to go through the winter with. The moths are worse this year than I have known them, and together with the wet weather have played havoc among the blacks in box hives.

SPECIAL WORK FOR JUNE, N. Z.

If the numerous hints given during the past two months have been faithfully carried out the bees should need no further attending to for some time to come, in fact the quieter they are kept during the winter months the better and stronger they are likely to be in spring. Still in every apiary there are many things in connection with the numerous bee appliances that can be now attended to, that could not be conveniently done during the busier seasons of the year. At the same time whilst advocating the non-disturbance of the interior of the hives during the winter time it will be prudent to frequently look over the apiary to see if no roofs have been blown off, &c. Particular attention should also be paid to the entrances of the hives, for, if there is anything wrong with the inmates of the hive indications of it will most frequently be found there. An abnormal number of dead bees near the alighting board is a pretty sure indication that something is wrong (perhaps robbing or starvation, and an opportunity should be taken as soon as possible to open and examine the hive.

HIVE MAKING, &c.,

Those persons who make their own hives should now procure the necessary timber and stack it away in a dry place until it is well seasoned; the careful apiarist who wishes to have his spring orders (for sections, foundation and anything in fact that he cannot conveniently make himself), promptly attended to, should now make his calculations as to the probable quantity of articles required and forward his order as early as possible to the supply dealer; as often, if put off until the last moment, the dealer may be unable to at once execute the order and much loss and inconvenience may be occasioned the beekeeper by the unavoidable delay.

EXAMINING SPARE COMBS.

Combs stored away for spring use should occasionally be overlooked, and if the presence of the wax-moth be detected

they should at once be fumigated with sulphur, directions for which were given in the March number of the *A.B.B.* The same remark applies to any comb foundation left over from last season. I have often seen comb foundation rendered totally unfit for use through the ravages of the larvæ of the wax moth.

SHELTER.

If the apiary is at all exposed to rough bleak winds it will conduce both to the convenience of the beekeeper and the well being of the bees if shelter is provided as soon as possible. Any quick growing shrub that will form a good hedge may be used such as *Cypress Cupressus Microcarpa* or any of the privets are also suitable.

Erica Arborea or Free Heath has been highly recommended, it also has the advantage of yielding a good supply of honey at the time when food is generally scarce. Shelter of any kind should however be kept within bounds, say from nine to twelve feet in height, as swarms often have the knack of alighting on the most inaccessible place possible, I may add that not only is it more convenient for the beekeepers to plant now but that it is the proper time of year for shifting evergreen shrubs and trees. Occiduous trees and shrubs are all the better for being shifted early, as the roots will be making growth during winter though the heads are at rest.

COMMENCING BEEKEEPING.

There are many, probably, who contemplate commencing beekeeping next season. Such I would advise to procure some thoroughly standard work on bees, also to subscribe to some reliable bee journal such as the "*A.B. Bulletin*," and thoroughly study them both during the winter months. Although it is impossible to become an expert from reading alone, still if he studies well the subject during the winter months and has the chance of a few days in a good apiary in the spring, he will be surprised with what ease he can manipulate bees when the time comes. His best plan will be, procure swarms from some reliable person early in spring, in preference to buying old

stocks, now, three or four will be quite sufficient to commence with. Of course everything must be in readiness for the bees, and I think the cheapest way to begin would be to procure a case of three hives in the flat and put them together during the winter months, for putting the frames together a frame form would be required, costing 2/-, but its cost will be saved in two hours work, also a smoker and bee-veil; also if he intends to work for extracted honey, an extractor, which however could be procured later on. As to the desirability of working for comb or extracted honey, some apiarist in the neighbourhood should be consulted, as honey in some parts of N.Z. cannot be extracted.

BEE FLORA OF N.Z.

To Editor A.B. Bulletin.

Sir,—I notice that your N.Z. correspondent, Rev. W. Horsfall, has alluded in his letters to the bee flora of this colony, and has made so many mistakes in connection therewith, that I feel constrained to correct him. I should probably have allowed the matter to pass, had he not referred directly to my manual, as though there were erroneous statements in it with regard to the honey producing plants of this colony, as "Maorilander" had already proved him in error. When I wrote the last edition of my book, I had had some twenty years experience in the colony, a great deal of that time in and near a mixed bush. Ten years of that time, the bee flora of the northern part of the colony had been my special study, as it should be of any one carrying on bee-keeping in a large way, in their respective districts, if they wish to be successful. Moreover, my duties as editor of a bee journal, had given me opportunities to study the subject that I could not have had otherwise, so that when I revised the last edition of my book, I was probably better acquainted with this particular subject than any one else could have been at the time. I also always took care to

compare my observations with those of others, so as to correct any errors, or to confirm my views before publishing them. Mr. Horsfall can therefore rely upon what is stated in my Manual, as to our bee flora, as being correct as it is possible to be in such matters.

Mr. Horsfall is most grievously wrong. The very plants he mentions as yielding no honey to bees are among our best bee flora. For instance Pururi, and Ti Tree (in the northern parts of the colony), Kowai (which is fairly swarming with bees in the spring), Flax (most of our bee-keepers who have flax in their vicinity, wish it did not yield so much honey, as it prevents them extracting any other it may be mixed with). I could in the same way take each plant he has mentioned and correct him, but it would only take up space that might be better utilized. I would like Mr. Horsfall to take time to correct his recent observations, for I am certain further experience will convince him of his errors. One season's experience is not sufficient in dealing with a subject of this kind. I am, &c.,

I. HOPKINS.

Auckland, N.Z.

May 11/94.

THE HOME (AUSTRALASIAN) MARKET.

The following suggestion on how to increase the home market for honey, from Mr. George Stevens, Taruheni Apiary, Gisborne, N.Z., arrived too late for insertion in our last issue:—The most important thing is to produce only honey of the finest quality. In N.Z. there is always a demand for first-class clover honey. I seldom produce enough of it to fill all my orders. Bush honey, on the other hand, is a drug on the market for table purposes, but large quantities might be used in making vinegar and confectionery.

Mr Peterson of Wattle Flat claims to have beaten the world's record, having in the seasons 1891-2 produced from a single hybrid 1,250lbs honey, a pure bred 1,120lbs, and two or three other colonies very close to it.

Is Pollen Fed to Larval Bees.

We take the following figures of Dr. Von Planta—which he published some two years ago, and had obtained by careful chemical and microscopical researches—from the *American Bee Journal*, which also remarks:—

Drone bees and worker bees, after the fourth day, receive an addition of pure honey, therefore the suddenly higher per centage of sugar, viz.: 9.57 to 38.49, and 18.09 to 44.93, and the drone-bees as well as undigested pollen. We see by this analysis that only royal jelly is constantly the same, and the richest and best, and that the drone and the worker-bee larve, during the first four days, get still better food, as far as albuminous matters are concerned, than the queen.

Worker-Larvæ, Average.	{ 40.62 6.03 31.51
Worker-Larvæ, after 4 days.	{ 27.57 3.69 44.93
Worker-Larvæ, during first 4 days.	{ 53.38 8.93 18.09
Drone-Larvæ, Average.	{ 43.79 8.32 24.03
Drone-Larvæ, after 4 days.	{ 31.67 4.74 38.49
Drone-Larvæ, during first 4 days.	{ 55.91 11.90 9.57
Queen—Average	{ 45.14 13.55 20.39
Albuminous matter	45.14
Fat	13.55
Sugar	20.39

We observe that Messrs Shaw, Kear, and Garling, proprietors of the *Western Post*, Mudgee, have purchased the plant, machinery, &c., of the *Mudgee Independent*, which journal has now ceased publication, after an existence of about twenty years. The Mr. Shaw above referred to is well known in bee-circles, and we feel sure his fellow apiarists wish him and his partners every success in their venture.

Just before going to press we received a communication from Mr Major Shal-lard, Secretary of the N.S.W. B.K.U., that the Government has granted the use of rooms at the Technical College, Harris street, in which to hold the Convention, and the Railway Commissioners will grant tickets at single fare for the double journey. In another portion of this issue is a perforated leaf, and any bee-keeper intending to attend the Convention, by tearing the same out, signing, and presenting it at his nearest railway station in New South Wales, will be able to travel at the reduced fare.

Mr James H. Colmer, Woolbrook, writes:—There is not much interest taken in the little bee in this part of N.S.W., except to catch a passing swarm, box and rob when nearing winter; but a hive of Italian bees giving 100lbs. of extracted honey from the super since March 16th has caused a dozen hives of English bees to part with their all, amounting to about 200lbs., which I am given to understand beats the record, and by my instructions has started two beekeepers making the Munday hive and frames. The chief honey yelder at present is the stringy bark tree; the white and red gum, also the peppermint and apple tree, did not bloom until March, and only an odd one or two at that. Many of the red and white gums, and also the stringy bark trees, are very heavily laden with buds at present. Can you tell me if the frost destroys the tree blossom or not. The frost is very late in coming this year.

As some of the gum trees blossom in winter, so they must be frost-proof. Others must naturally die off at that period.

TWO QUEENS IN A HIVE.

Mr. J. F. Munday has informed us that he cut the stings of two queens, an old and a young one. They lived in the same hive afterwards some four weeks, when the old one disappeared, probably, he thought, from old age. Would this cutting the stings be the solution of a problem? Will others experiment in these lines?

The honey of one of the leading honey experts in the United States has been declared by four different chemists to be adulterated with glucose, and an agent selling same fined in accordance with American law.

The Wilson Bill, recently passed by the U.S. legislature, lowers the duty on honey from twenty to ten cents. per gallon.

Mr. E. E. Luscombe, Jaspers Brush, writes:—Would you kindly answer the following through your paper:—What flowers would yield honey of a very strong taste something like a weed? Would pumpkin or bloodwood flowers do so? This flavour occurred last month and the early part of this. I had not the opportunity of seeing its source.

[Pumpkins would not. Bloodwood honey is not of the very best quality, but the strong taste must come from some other source, than either the above, probably some shrub.]

A subscriber writes—"Would you kindly inform me which are the most profitable bees for a bee farm, highbreed or pure Italians or non-swarmer. Also how long does a non-swarmer queen live, or do they want re-queening every season? Also, which is the best wood for making simplicity bee-hives, American pine or redwood?"

In reply we say you cannot do better than get pure Italians. We presume you mean hybrids, not high-breeds. They are the cross between any two races of bees, say black and Italians. Hybrids are good honey-gatherers. Re non-swarmer bees, the Italians are the nearest approach to such. Scientific bee-keepers are asking themselves if a non-swarmer bee is a desideratum. Swarming or non-swarmer can be regulated by the beekeeper. For our Australian climate red-wood is better than pine for hives.

Dr. J. Mason, Tasmania, writes:—We have had a poor season here generally. I last Saturday received five Carniolans, and have placed them in supers, with comb honey and food, over strong colonies which have queens; a perforated zinc honey board between nest and super; a queen below in nest. The honey board is, I should explain, part wood, part perforated zinc, with a tin slide by which I can at will cut off communication between nest and super. After I have induced and driven a number of bees from nest into super, I cut off communication, and leave them to

eat out queen from cage. Will this succeed? I am not good at spotting queens and removing, nor have I stock from which I can well spare bees to practice the Norwegian plan. My bees have been freely sipping at *Lobelia Inflata* and poppies, both held by some to be poisons.

You may safely introduce queens as above, but the two queens will fight when communication is again given, or the bees may desert the upper queen as soon as they get their liberty.

Mr E. M. Kendall, Milton, writes:—I would very much like to take part in discussions in your intensely interesting journal, but find it impossible to devote sufficient time to writing. The bees have done remarkably well for this season, considering the very changeable season we have had, and the honey has been of the finest quality. Two very fine flows of honey were almost completely spoilt by heavy rains and high winds. A visitation of paralysis so weakened some of the colonies, that they were unable to gather surplus honey. Super-seding the old queen with a young one, is a certain cure, at least I found it so. I had a few black colonies which suffered far worse than the yellow banded colonies. I mention this because some unwise beekeepers blame the Italian bees, when a little reflection would tell them that life in all its aspects is uncertain, and that the black bees are just as liable to suffer from any infectious disease as the Italians are. By destroying diseased queens, and introducing young ones, we did not lose a single colony from paralysis, and in some cases, which were let alone too long, the bees destroyed their queens and reared new ones, with the result that the disease left them entirely. The disease is very infectious, but it cannot be said to be hereditary. We have been very fortunate in queen rearing lately, considering that the weather was so unfavourable. With all young queens and plenty of honey, our bees should winter well, and be in a good state for next season. Wishing your valuable journal every success, &c.



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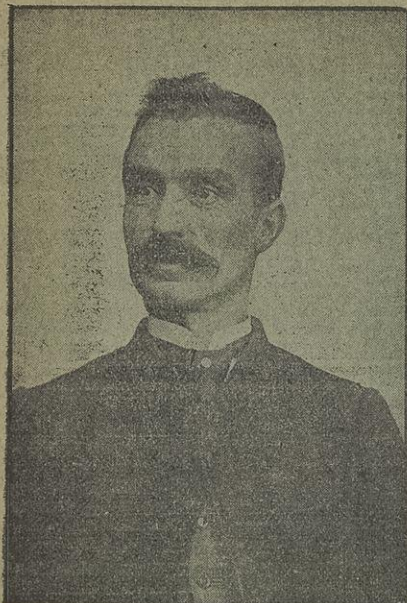
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Now that the breeding season is drawing to a close, I would ask all who have got queens from me that have not given satisfaction, to let me know, so that I may have an opportunity to do the right. Many persons run around in such cases and tell everyone but the only one who can put the matter to rights. It should not be so with bee-keepers.

Write for prices. It only needs a penny post card. I am always pleased to answer questions in bee culture.

MR. GEO. SPENCER, Brushgrove, writes:—"Would like you to acknowledge through the medium of the A.B.B. the receipt of two of Mr. C. Mansfield's double-tested Ligurians, from which I have re-queened eight of my hives, and any one is worth four hives of black fellows, the daughters being equally as good as the mothers, and the mothers being that good they could be no better."

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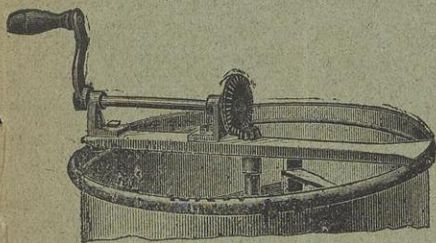
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MAY 23, 1894.]

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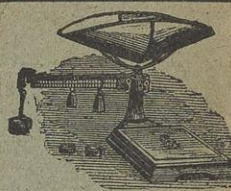
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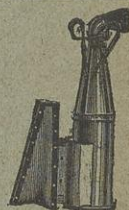
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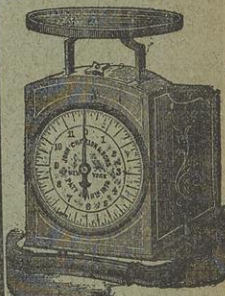
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