The Australian bee bulletin. Vol. 6, no. 12 March 28, 1898

West Maitland, N.S.W.: E. Tipper, March 28, 1898

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THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

VOL. 6. No. 10. MARCH 28, 1898. PER COPY, 6d

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The Australian Bee Bulletin.

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—MAR. 28, 1898.

MR. McDADE, of Forbes, writes :—"All the beekeepers about here are dependant on the trees of the Forbes Common for their bees. Some time back an alderman proposed to get the trees ringbarked, but he was induced to withdraw his motion. But last meeting it was proposed again by a man who will not withdraw. We want to know the best and quickest way to stop them going on with it. I do not think we would have any difficulty in getting the people to sign against it for I believe (up in this hot climate) the grass keeps greener under the green trees."

We advised Mr. McDade the petition be gone on with, and have forwarded Mr. McDade's letter to the secretary of the N.B.K.A. It is one of these cases which show the great need of the N.B.K.A. being strongly backed up by country members, and to have funds at disposal to secure the best legal advice when wanted. We have since learned that Mr. Ward, Hon. Sec. of the N. B. K. A., has started correspondence in the matter.

"Notes among Northern Beekeepers," will commence in our next.

Will Gippslander please send his address to Rev. Mr. Wilson, Manse, Kew, Melbourne.

Mr. C. U. T. Burke advertises in another page what he says is a most successful ant destroyer, and a regular boon to farmers.

To hand, "The Possibilities of the Dairy Industry," another valuable pamphlet issued by the Hon. the Minister for Lands of Western Australia.

Next month's issue will contain a proposed revised system of points of apicultural judging by Mr. A. Gale. Some thing for the N. B. K. A. to consider at next Convention.

We acknowledge receipt of "The Home Garden," published at Moss Vale, and is full of information on this very interesting subject. It ought to have a good future before it.

Were adulteration put a stop to it would mean better prices for honey, more orders for the queen raiser as well as the supply dealer. Surely they will both work to put a stop to adulteration. Or if not, why?

The following advertisment appeared in the *Pacific Bee Journal*:—EXCHANGE—Good gold mine in Southern Oregon to trade for a bee ranch and bees in Los Angelos or San Diego counties. Address, W. A. Johnson, Santa Monica, Cal.

POINTS IN JUDGING.—The man who works for himself, 1 ; the man who works simply to make money, 1 ; the man who is jealous of other workers, 1 ; the man who works only to see his name in print 1 ; the man who works for the good of others, 46. Total, 50. Judge, The Unseen One. Prize, A good conscience that knows no anxiety and fears no foe.

TWO GOOD BOOKS.

Messrs A. Hordern and Sons of the Haymarket, Sydney, are announcing in our business columns that both of the above can be obtained post free by writing for them. No. 1 is a general catalogue of 560 pages, which are profusely illustrated. No. 2 is a portfolio of Autumn and Winter Fashions, containing 250 sketches. Send and get them.

AUSTRALIAN HONEY IN ENGLAND.

T. HADFIELD, JUNR., GLENROCK, GRAFTON.

With reference to your enquiries re my trial shipment of honey to England, I am sending you account sales, &c, also letter from W. H. Waterhouse. I think they speak for themselves. But what I cannot understand is the number of charges in connection with the sale of the honey. If I had sent the honey to a

Sydney agent for sale, the only charge would have been his commission.

It seems that there are rings in the old country and they are the cause of all the trouble. You can see that the price is even lower than in Sydney at present. But for all that the consumer in England has to pay from 9d to 1/- per lb for honey, at least that is what Mr. Waterhouse told me, when he returned from his first trip to England; that is why he was sure there would be no difficulty in disposing of honey at a paying price.

The honey season has been very good up to Christmas, but since the cold weather started, the flow has been slow. The swarming fever was very bad here from Christmas until the early part of this month, but I think the worst is over and expect another flow of honey if the weather keeps fine. I will conclude with sincere sympathy to the beekeepers and farmers in your district in their recent heavy losses by the floods.

78 Forbung Row,
Upper Clapton, London, N.
September 9th, 1897.

Mr. T. Hadfield,

Dear Sir, Enclosed please find cheque and account sales for honey.

To account sales £7 18 7
Money left for cartage from Sydney N. C. S. N. C. to Orient Wharf. 2 6
To Commission & Invoice 10 0
12 6
£7 6 1

Cheque herewith.

"I regret the price is so low and certainly would not advise further shipment. The tins in your shipment were faulty, two at least had a seam down centre of side and presumably by the handling, or it may be heat, they opened and nearly all the honey was lost. This coupled with the charges as you will see per account sales render the return small. Well, I tramped miles trying to sell direct to the wholesale grocers before I placed in the hands of a broker at all, but it was of no use; they will not buy direct. I could have possibly got the price now attained, three weeks ago, but acting on the advice of my friends held out for 25/-, but instead of going up the market is going down. The market at present is overstocked. Queensland honey unsaleable. Jamacia and California hold first place, two tons of which were sold same day as yours at 6d advance.

With kind regards,
I am, dear sir,
Yours faithfully,
W. H. WATERHOUSE."

Account sale of 10 cases of honey ex Cornwall from Sydney sold by auction 23rd August 1897, for and on account of W. H. Waterhouse, Esq.

10 cases 11 1 24 Draft 19				£9	19 5
Tare 2 1 17	9	0	7 at 22s per cwt ..	0	5 0
Discount 2½ per cent ..				£9	14 5

CHARGES PAID TO BULL WHARF.				
Landing Rate 11 1 24 at 5½ per cent	0	5	4	
Customs Examination ..	0	1	0	
Coopering cases and repairing tins	0	2	6	
Opening two cases, unpacking, repacking, nailing down, &c.	0	1	8	
Sampling while open & 2 pots supplied	0	1	6	
Taring and re-soldering 2 tins and 1 empty case	0	3	6	
Opening 2, re-soldering and 2 gallipots	0	2	6	
Rent 8 weeks at 7½d per ton	0	2	11	
	1	0	11	
Discount 10 per cent	0	2	1	0 18 10
Freight 10 cases 20 at 20/-, and 5 per cent ..				0 10 6
Fire Insurance				0 0 6
Advertising catalogues, use of rooms, etc				0 4 0
Brokers commission 1 per cent				0 2 0
				1 15 10
Nett proceeds due 11-9-97				£7 18 7

ARMIDALE.

The following are the apicultural prizes awarded at the above, held on March 16th, 17th, and 18th:—

Six jars of liquid honey, 7s 6d; R. Pleffer, 1; R. Roberts, 2. Six 1lb sections of honey in comb, 7s 6d; C. Cooper, 1. Six jars granulated honey, 7s 6d R. Pleffer, 1. Queen and bees in a single comb observatory hive, 7s 6d; R. Pleffer, 1.

INVERELL.

The following are the prizes awarded in the apicultural section, at above, held on March 10th, 11th, 12th :—

Best Collection of Apicultural Products, in trophy form, to include extracted honey, comb honey, and beeswax, 30s ; 2nd, 10s ; Inverell B. K. A. 1 and 2

Best Leather-coloured Italian Queen and her Progeny, bred by exhibitor, in one-frame observatory hive, 10s ; 2nd, 5s ; G. H. Arkinstall 1 ; F. W. Penberthy 2 ; J. Jenkins, H C

Best Golden Italian Queen and Progeny, bred by exhibitor, in one frame observatory hive, 7s 6d ; 2nd, 3s ; J. Pennington, 1 and 2

Best 12lbs Extracted Liquid Honey, in 1lb or 2lb glass jars, 7s 6d ; 2nd 3s ; T Mather 1 ; G. H. Arkinstall, 2

Best 12lbs Granulated Honey, in 1lb or 2lb glass jars, 5s ; 2nd, 2s 6d : F. W. Penberthy, 1 ; G. H. Arkinstall, 2

Best 12 1lb Sections, raised by exhibitor, 10s ; 2nd, 5s ; G. H. Arkinstall, 1 ; J. Pennington 2.

Best 2 large frames of Comb Honey, 5s ; 2nd 2s 6d ; R. Cooper jun 1 ; G. H. Arkinstall, 2.

Best 2 half-size frames of Comb Honey, 5s ; 2nd, 2s 6d ; T. Mather, 1 and 2

Best 12lb Beeswax, soft, clear, yellow, 5s ; 2nd, 2s 6d ; G. H. Arkinstall, 1 ; J. Pennington, 2

Best and Most Attractive Display of Extracted Honey, not less than 50lbs, manner of putting on market to be considered, labels allowed, 10s ; 2nd, 5s ; J. Pennington, 1 ; G. H. Arkinstall, 2

Fruit preserved in Honey, not less than 3 kinds, 5s ; 2nd, 2s 6d ; Mrs. S. Turner, 1

Jam made with Honey, not less than 3 kinds 5s ; 2nd, 2s 6d ; Mrs. S. Turner 2

VICTORIAN NOTES.

R. BEUHNE.

Large entrances are becoming more and more popular, but the A.B.B. recommends reducing them to a one or two bee capacity. I should only do so if the hive contained less than six bees.

[Read again, friend Beuhne. That was for robbers only.]

That queen cells turned upwards does not prove that reversing a normal one will not kill the larvae, nor do we know whether it would have developed a perfect queen.

Aspinwall's experience (*Beekeepers' Review*) of swarms returning when smoke is blown amongst them while issuing, proves to my mind, not that they are guided by scent in clustering with the queen, but that the smoke delays and demoralises them. Contract the entrance sufficiently when the swarm begins to issue or block by throwing a sheet over the hive and they will nearly always return, although there is nothing in this to prevent them scenting the queen. Of course bees are guided by scent in finding the queen (for they will find the cage their queen was in anywhere within 50 yards), but Aspinwall's theory does not prove it. By the way, blowing smoke amongst them while issuing is about the best way to drive them to uniting with another swarm, should one happen to be about.

FASTENING FOUNDATION.

I have tried every known and some unknown methods of fastening foundation into frames. Hewitt's wax spoon in last A. B. B. reminded me of it. After trying all the usual ways I made a little wax can with hot water jacket heated over a lamp. It kept the wax just the right temperature and gave a 1-16 stream of wax from a nozzle. Next I made a somewhat complicated machine worked by foot power which put a sheet in at one slap, but it is now resting amongst a number of other discarded contrivances, and the method I use will be hard to improve upon for speed, simplicity and efficiency. I simply solder them into the frames (for I do not know what other term to use), with a small hatchet shaped solder iron, weighing two ounces, brought to a thin edge, which runs parallel with the handle, the handle is thrown upwards at the back end so as to keep the hand clear of the frame. It is kept hot over any lamp which will not blacken it and the heat is just right when it will melt wax at touch without frizzling. Two block boards for the frames stand in front of me, the foundation on my left and the lamp on my right. Each board stands inclined backwards and towards me so that the foundation leaning against the block which fills the inside of the frame half way the width of the bars forms a

V shaped gutter. I drop the foundation into the frame, pick up the copper hatchet with my right hand and a stick of wax with the left and while applying the wax to the copper, draw the latter along the top bar, just touching the foundation as a tinsmith does a seam. The copper firmly melts the wax on to the wood and unites it with the foundation. It will take a few seconds to set during which I do the second board and then return to the first. It wants a little practice. If the iron is too hot it will melt the foundation, if too cold its slow. When just right it will only show a waxwork on the wood. No daubs and the foundation will tear before coming off the wood. I have done over a thousand frames now and wish for nothing better.

SPIDERS ABOUT HIVES.

Say Hooray for the hornet, Mr. Tipper, if you like, but I am almost sure it was not black spiders they had imprisoned for their larvae, but some of those long legged chaps, only young. By the way, they do not kill them, but only maim them so they will be fresh when the grub hatches from the egg with which it is shut up and begins to feed on it.

[You may be right here. Next we see will be particular to notice.]

We are specially blessed with the black, red spot spider this season. Having had nothing to do about the hives for some months I made a raid on them and counted and killed over 500, not reckoning the very small ones. I think about 200 hatch from one of these egg bags.

REMOVING AN APIARY.

Following J. S. D.'s remarks in last issue, when I removed my apiary some years ago I used wire gauge over the ordinary entrance (9 x 5-16) and leno over the top held down by the honey board, which protected this rather frail material. Leno costs about 3d or 4d a yard. I was somewhat apprehensive of the bees gnawing through it, but they came the distance of 40 miles and were locked in three days without a bee getting out. My frames are fixed distances and needed no preparation. Supers were left on strapped together with hive and stand by a cleat at each corner. Leno and honey board on top of all. I packed 140 colonies and all belongings into a sheep truck, thus having two floors, a covering, and plenty of draught, the bees spread out over the empty (dry) super combs and there were no dead bees. After carting them to the new stands I allowed them to calm down first before releasing, as otherwise they would rush out without locating their hive, and mix, and perhaps wreak vengeance on their patron.

QUESTIONS.

146.—Do florets as a rule secrete only one drop of nectar or a succession of drops each day they exist? i. e. If wet weather occurs while a certain tree is in bloom, would the nectar in such be lost in each floret without being replenished?

147.—Have Australian Bee Conventions hitherto been successes? And if not, why?

148.—What is the average weight of a Langstroth frame of sealed honey.

R. H. JERVIS.

146.—A succession of drops, not each day as long as the bloom lasts, but for a few days when the flower is at its best.

148.—Six and a half pounds.

W. T.

146.—They secrete a succession of drops, so if wet weather comes there is always some nectar in, for if the rain washes it out there is more secreted.

147.—No. Because there is no unanimity amongst the bee men.

148.—I do not know.

F. SWAIN.

148.—I empty mine before they are thoroughly sealed, but when sealed or nearly so, they contain about five pounds honey when ten are used in a ten frame body, and a little more than five and a half each when nine are used. Emptied six a few days ago, not altogether sealed, which contained thirty-three and a half pounds of honey.

NO NAME.

147.—The enquirer seems, to judge from second half of question, to be of opinion that success was lacking. If so I think he is wrong. Bee conventions have been marked successes in many ways. The drawing together of kindred

spirits always does good. Those who go with their eyes open always learn something. "As iron sharpeneth iron so a man sharpeneth his friend."

J. SMITH, QUEENSLAND.

142.—Copper or brass vessels are surely the very worst to keep honey in. Zinc and galvanised iron are bad also. Tin receptacles are far away the best all-round packages.

T. BOLTON.

141.—Don't know of any method.

142.—Yes.

143.—See back, last year.

144.—The best authentic record I can recall is Mr. Williamson's 1000 lb. and one swarm from Cypro Italian queen, besides brood for queen rearing. Wax not recorded.

145.—Doubtful. A wrong and wasteful effort.

A. A. ROBERTS.

146.—I do not pose as an authority on this question, but in my opinion they secrete a succession of drops. This I know to be the case with the choko. Rain will wash the nectar out of the florets but in my opinion they again secrete the nectar when the weather clears, providing it does not last too long.

147.—They have been a success to a certain extent but not the success they should be, and never will until we get the whole of the bee-keepers united—country associations formed and affiliated to the N. B. K. A. and delegates elected by these associations to represent them, at the annual meeting, and settle down to real business. If the N. B. K. A. get the support they deserve they can make these conventions a success. Cannot we all pull together like the fruit growers.

148.—About 7lbs frame and all.

ALBERT GALE.

146.—The question is very ambiguous. If the interrogator means what he says, he appears to be doubtful as it regards *florets* but is satisfied in the case of *flowers*. A floret is a portion of a compound bloom, and many of them go to make up a flower, as is the case in sunflowers, daisies, etc. Both simple and compound flowers continue to secrete nectar while the anthers are distributive and the stigma receptive. In flowers that are fertilized by insects soon after the act of fructification is complete the nectar ceases to flow. When one globule is removed very soon after another follows until every embryo seed has received its grain of pollen or the stigma is injured or becomes too old to receive it. The colder the day, the slower is the secretion. In wet weather many varieties of flowers have a method of protecting their essential organs. Wet weather would not entirely check the honey flow unless the receptive organ had completed her office or in some way prevented from so doing.

147.—Yes, very much so.

148.—About 10lbs.

QUESTIONS NEXT MONTH.

EVERTON.

149.—Is there a method of making honey vinegar by solar heat?

150.—Is there a book published on honey vinegar making and the price of the book?

151.—Do you leave supers on or off during the winter months, and why?

F. SWAIN.

152.—What makes the best cloth or mat to put over the frames, to serve for summer and winter?

153.—Have you ever tried keeping bees in a shed or building of any sort, if so, with what successs?

W. MURRAY.

154.—What is the best size of hive for a nucleus? How many frames?

155.—Should the N. B. K. A. hold a Convention in June, and where?

THE NEW MANAGEMENT.

CONTROLLED SWARMING, No. 2.

T. BOLTON.

Before proceeding to explain in more detail than I have yet done the operations which enable me to accomplish this control of bees in swarming time, and the other matters claimed in my last article, I would from the recent copies of *Gleanings* lent me illustrate the importance of the subject in the language of other and American beekeepers. Mr. R. C. Aikin, in *Gleanings* for April, 1897, page 276, says, "My method of controlling swarms is by unqueening. This, with ordinary hives, requires removing queens, then nine days later removing all cells but one —or even all—and giving a queen. This ninth day work comes after the honey flow has begun, —a busy time—and the labour increased because of much honey in the combs." This method, as will be seen at a glance, is almost the same as that advocated by E. France in the same journal some years ago, and reprinted in A.B.B., April 1895. The system of managing in both cases involving very much and very careful handling of frames, and then not being sure you have not missed *one* cell, and so defeated your object. The amount of time such a system involves in carrying it out becomes immediately its condemnation, at least to one who has seen a way to do without this loss, and run two apiaries where working on that plan he could only have cared properly for one. Then again, to *un*queen

a colony in our Australian *prolonged honey flow* is to lose, by the three weeks' or so stoppage of brood rearing before by Mr. A.'s method it has again a queen laying, nearly as much in ultimate results in honey, as to allow natural swarming, with the chances of losing a good percentage of the swarms. True, Mr. A. has an alternative *proposal* for cutting off the labour of unqueening, and pulling down cells as commonly practised by him (a proposal which is only possible to him because he has adopted a divisible brood-chamber hive —take note) and this is to restrict the queen by zinc to one section of his brood chamber, and about ten days later it will be manifest at once which of the two cases she is in, without having to hunt her up; the case containing her is then removed (he does not explain further its fate), the other cell shortly after has a cell or virgin given it, and when this queen is laying all the old brood is hatched, and they are like a swarmed colony with a young queen and empty combs. Well, in this we have a step toward my ideal "control of swarming without handling frames," but there is this against it—the restricting of a queen to half her brood nest at a time when we rather desire her to expand her limits of laying—the tendency doing so has also to promote the desire to swarm—and the fatal weakness that very often the insertion of that queen excluder will lead to cell building in the queenless section of the brood nest, and the consequent defeat of his proposal as it stands. In my own plan, as will be seen later, the tendency is to spread and expand the brood nest rather than restrict or decrease it before swarming. If Mr. Aikin had only *inverted* his cases instead of inserting the excluder on the one visit, and on his next had spent the time artificially swarming the colony, as a whole with their own supers on top of cases of starters, his troubles would have been less, and his results more certain. This subsequent visit three or four days later to give a cell or virgin would be unnecessary.

As another instance of how every man who has out-apiaries must face the swarming question take up the July, 1897, *Gleanings* and see Mr. V. Burt's plan. It is simplicity itself. E. Root is interrogating him "How do you manage about swarms during your absence *without an attendant*"? Reply by Burt, "All my queens are clipped, and I make sure they have plenty of room."

E. Root. "Well what do you do when swarms come out when you are away"?

V. Burt. "I let them come out and go back again. I visit the apiary *about every day* and if they come out when I am away, they will also be likely to come out when I am there." This is nothing then really but a *watched* apiary; the other alternative, as hitherto taught, to plan akin to Mr. Aikin's dequeening or Mr. Frances' cell-pulling and their necessary frame-handling. Now it will be easily seen that either system involves much loss of time in carrying out when time is precious to a beekeeper, and both are positively uncertain and untrustworthy as to securing from loss of swarms—Mr. Burts particularly so--for as often as not--at least this is my experience with bees in L hives left to swarm naturally—the prime swarm does not come out till virgin queens are on the point of hatching, and when this does occur, and a virgin leaves with a swarm they "go out and come back again,"—theory on which Mr. Burt depends would not work. Besides this, Mr. Burt is restricted to an out-apiary close at hand so as to be able to reach it daily and readily; and to one such it need hardly be pointed out that while he is at out apiary, some one must be watching his home apiary, for his hours away will of necessity be those when bees are prone to swarm by his own statement. The very real limit such considerations as I have endeavoured to point out, place upon the expansion of any beekeeper subjecting himself (by the adoption of a non-invertable hive) to them will soon be discovered and cannot be avoided, and they should be studiously thought out by anyone aspiring to become an extensive producer of honey. It was no doubt these considerations, more or less clearly grasped, which have led men like Alley and Pratt and others to spend so much effort in the endeavour to perfect some device for self-hiving of swarms and thus secure an out apiary from loss, but necessitating visits of much greater frequency than once in nine days. Even if such a device had been possible and perfectly reliable in working, yet it could never be generally adopted on the outlay of capital to provide one for every hive, or even every second or third hive. The nicety required and time also in adjusting these, and the storage, carting, and risk of so much extra and bulky plant condemn them at once, and the capital laid out on them might far better be invested in more hives. By the inversion method, nothing is needed of this sort, and the hive is fully equipped for this management in itself. The work actually performed to secure the *main* objects sought for, results at *the same time by the act of inverting* in two or three minor results much and highly spoken of, viz., securing combs built to bottom bars of frames; spreading of the brood; and getting the honey removed into supers from the brood nest. Hence the work of inversion is cheap work, not like dequeening, etc., negative in its results. But as all agree these are positive and profitable results, and if I may be allowed to put it this way, the man with L hives has to spend a good deal of time spreading his brood, getting combs built out solid, etc., as objects he very often and wisely aims at, and is prepared to pay for in labour. Whilst the man who by inversion controls his apiary at swarming time, gets these minor results thrown in free gratis, can't escape reaping them them in fact, as part of the har-

vest of benefits derived from better methods. Hence it is the writer feels, when thinking over the many points of apiary management, how much the industry loses by the ignoring on the part of all the writers of our day of the many advantageous features of such a simple thing as "inversion" of brood cases, and the general adoption of hives that do not permit of the most profitable management. At present the more generally adopted hive (the L) being more in request is cheaper, and requires less care in manufacture than such a hive as I adopt, but a 25 per cent. increase of outlay in capital will soon be repaid in extra profits. As many are exercised, and some have privately written to me about hives, it will be well to again state that the Heddon hive as made out here in exact imitation of Mr. Heddon's own is not calculated to give satisfaction, and if any orders are sent to supply dealers for Heddon hives it should be specified that the altered or Melbourne pattern should be followed with hanging instead of standing frames, and ¼ in. space between end-bars and case ends, and under no consideration should *end-bars* of frame be less than ⅞ in. thick x 1⅜ in., top-bars ⅞ in. x ⅞ in., bottom-bars ⅜ in. or 5-16 in. x ⅞ in., and a hanging follower with "B 18", screw eyes of iron, with point ground off for compression.

A BEE'S A BEE FOR A' THAT?

BY A DESPISED "BLACK."

Aft' times we meet a saucy bee,
Wi' golden bands and a' that;
Tho' ye sae black, no need hae we
To hang our heads for a' that!

For a' hat, and a' that,
Our birth obscure and a' that,
We're just as good as gilded folk,
A bee's a bee for a' that?

Our legions pioneered this land,
Without gold bands and a' that,
And helped to spread its forests grand
Wha' could dae mair than a' that?

Than a' tha, and a' that,
We're bravly proud for a' that,
And wad' nt change our homely claes
For golden stripes and a' that?

Gin ye maun hae your bees o' gold,
Wi' langer tongues and a' that,
See that ye wax not overbold,
Selecting drones and a' that?

And a' that, and a' that,
Wi' special stains and a' that,
Tak' heed ye dina gae too far
Gainst Nature law's and a' that?

And a' that, and a' that,
For auld lang syne and a' that,
Remember tho' they hae no gold
The "Blacks" are bees for a' that.

CORRESPONDENCE.

As this number finishes Vol. VII, of the *A Bee Bulletin*, we will endeavour to get index out by next issue, so as to enable those who wish to get the numbers bound, to do so at earliest.

R. H. Jervis, Moss Vale, March 19th:—Bees are doing fair, gathering from bloodwood. Have had a fair season.

J. W., Springhurst, Feb. 5th:—I have not much more than made the price of the A.B.B. this season through the long drought which we had in this district. We had only half an inch of rain from August till the middle of February, and it took them all their time to get enough honey in to live on, and some of them did not even do that, through them killing their queens, which I think was caused by the dry weather.

W. T., 16th March:—I have had bad luck with my bees. Winter before last a hive of bees was stolen, and this last winter the thieves came again, but the hive was too heavy, so they took the frames out, cut the combs and destroyed most of the frames with getting them out. There was a super on, 10 frames. The bees did no good after. This year I had only one spring count, the rest had lost all their queens, and I have lost the swarms this year through indisposition.

Mudgee March 10:—Bees in this part are doing splendid from the white box. The gums and yellow box are in full bud and every thing points to a splendid autumn flow. The swarming was extra heavy this year. I had one swarm from a queen which threw the largest swarm I ever saw. I put it in a 10 frame hive with the super on, and they went to work on 17 frames at once. Re inverted queen cells. I had that occur twice, so I thought I would try the experiment with one. She came out right enough but had a short stunted body, and as she was not very prolific, I killed her nine weeks after she started laying.

J. T., Moss Vale, March 20th:—Bees are doing well since the New Year, principally from Cape Dandelion. The worst of it is that the honey granulates quite hard in the combs, so I can only extract about 50 per cent. I sowed some sweet clover and it is growing splendidly on the railway embankments. I have one piece growing in my garden over six feet high, has been in bloom three months or more, bloom became covered with bees all day long. The place it grows best is on hard clay. I had a langstroth frame of honey 15 pounds two ounces.

F. S., Crows Nest, Queensland, March 12th:—My bees have not gathered very much honey up to the present time this summer. I have 17 swarms and intend to work them up to 21 before winter, and I hope to have that number ready for the following summer, and as I wish to keep to that number for a time, at least, the following is the way I propose to manage them, and I will be very pleased indeed if you and some of your readers will express opinions as to how its likely to work: Use queen excluders, keep queens not more than two years old, have them clipped and give the swarms up to 28 L frames if necessary. Of course some swarms will sure to be stronger than others. So I will say No. 1 the weakest, and No. 4 the strongest, which swarms. I take the brood chamber away and put in its place, ready for the swarm, a body with frames of combs or starters, and then shake all the bees off the old brood combs, cut out the queen cells and give the combs to No. 1 for about 21 days, when they could be used for another swarm, put where I took them from in the first place, or used in any other way I might think best.

In our next issue we will give the plan adopted by the Inverell beekeepers to raise non-swarming bees.

W. G., Gympie, Queensland, March 1st.:—This has been a good season, but honey is fetching a very low price. I am thinking my apiary is in the wrong place; six miles west the trees bloom five or six weeks earlier than where I am. The result is the rainy season commences when the the trees at my place are in full bloom. I can't account for it.

D. M'G., Rose's Gap, Victoria, Feb. 1898.:—Dear Editor,—Re foul brood Act, I may tell you that I am not against a foul brood act, but I say its not going to benefit every farmer that's troubled with foul brood. Most people put their blame on the gin case man. Now where I am I blame the gum tree man as I may call him, for I have no neighbours to fear. I have a very little trouble in clearing foul brood out of my apiary, but my bees go, to the bush and bring it back again. Its no use saying you are not to go, for they will, for that is where they get their food from and get foul brood too. I may say that in some directions from me you could travel 10 miles or 20 and not get a healthy bush hive. Last year we had 200 60lb tins from 70 stocks; this year none, as its our off year. I will either have to be very fortunate and shift foul brood away or it will very soon shift me for you know any man will get sick of too much of a good thing. If its possible anytime for some of our leading men to invent some remedy that would rid the bush of the cursed foul brood it would be a boon to this part of Victoria. I think I must give your *Bee Bulletin* credit for knowledge of getting rid of foul brood, but I must I suppose give the bees credit for fetching it home again.

Five conditions are indispensable to obtain good queens: 1. The queen furnishing the eggs must be of good stock. 2. The larvae chosen for queens must not be more than 3 days old; for it is known that the food for the first three days is identical whether fed to queens or workers, but differs afterwards. 3. The royal cell must have a position suitable for the workers to give it the proper dimensions. 4. The colony should be at the culmination of its development. 5. Finally, queens must not be reared by feeble colonies, for the royal larva may suffer from lck of care, nourishment, or heat.—*Gersung's Bienenzucht.*

WORK FOR THE MONTH.

Summer is now ended, cold weather coming on, and preparations for winter should be made straight away. See that all your hives are in good order; no cracks where rain or draught can creep in; or no thin sides or tops through which the cold can penetrate. Do not extract any more. Be sure there is at least some 20lbs of honey in the hive. In some districts there will be a winter flow. We would rather it would delay to the spring, as in the winter the bees have fewer hours to gather it than in summer, and in cold weather there are not the number of bees in the hive there are as when the queen is breeding fast in warm weather. Still with honey coming in there is much warmth in the hive that will cause the queen to lay. Should you have little honey in the hive, and none likely to come in you must feed. Sugar or honey with warm water blended, poured from a height of a couple of feet on to an empty comb; a pickle bottle filled with such with muslin tied strongly over the mouth, and inverted, placed in the hive; a frame with lower portion closed in so as to form a sort of bucket, filled with syrup and a strip of wood floating on said syrup, so as to prevent the bees from drowning; also what is known as the Boardman feeder (to be had of any supply dealer) for feeding at the entrances—are all good ways for feeding. Many now unite weak colonies for the sake of getting stronger ones in the spring. This is done by gradually drawing the two to be united—a yard or two each day, and when close together, put a third hive in the permanent place. Well smoke the two hives. If one queen is better than another, kill the poor one, otherwise leave the bees to settle this matter. Then place the combs from each hive alternately in the new hive. You may assist the union by sprinkling some kind of scent over them. Bees know each other by scent, and thus to them foreign scent confuses and prevents fighting. This uniting is of service if you have as many hives as you wish. If otherwise, and you wish to increase steadily, the weak ones may be strengthened up and made strong by giving frames of uncapping brood from hives that can spare them, being certain the hives you give them to are sufficiently strong to cover the brood before it comes out. If the swarm is not sufficient to fill all the frames in a hive, the use of a "follower" or board the size of a frame, and made to hang as such, will confine the bees to the combs on which they fill, and keep them warm and snug. Still keep a good look out for spiders.

A good stout oil-cloth, one side absorbent, the other non-absorbent—should be placed on top of the frames under the cover, the absorbent side downward. When you have followed these directions open the hives as little as possible. If you have black bees and hives not strong look out for grubs. A strong Italian colony will take care of itself in this matter. The grub works along just under the surface of the comb, making a tunnel of network, preventing the bee grubs underneath from developing, and the grubs die and rot. You soon get to know their track. If no honey likely to come in during the winter it is well to take supers off, and hang spare frames in a rack in a room where they can be occasionally sulphured to destroy grubs.

HONEY.

J. J. PARRY.

I am thinking, Mr Editor, I shall be taking up too much valuable space in your paper, but I hope a little of what I write will be interesting to some of my brother beekeepers. If such is the case, that the crude nectar of flowers contain cane sugar, do I understand it rightly that this cane sugar is turned into glucose by the bees? Now, Mr. Editor, what about the glucose? Is there any further change takes place, or is this grape sugar when taken from the hive called honey? There is one thing certain that we know, that honey differs from sugar or glucose in taste and effect.

It is also said that honey under polariscope shows a rotation to the right,* the same as cane sugar, but grape sugar to the left. Why don't the honey rotate to the left? I believe the chemical formula are the following: Cane sugar, C^{12} H^{22} O^{11}; grape sugar or glucose, carbon C^{6}, hydrogen H^{12}, oxygen O^{6}. I am satisfied there is a difference; what that difference is I can't tell chemically. But if honey has the same chemical formula as grape sugar, then its the arrangement of the particles that gives it a different property. I see in December number of A.B.B., "Cappings," that W. A Selser, of Washington, writes *Gleanings* that he could detect one to five per cent. of commercial sugar (I take that meaning cane sugar) by analysis in honey. Now, I infer by this, that honey pure and simple should not contain any traces of sugar at all. Now suppose a jar of honey were bought and sugar was found in it, would that actually prove that the honey had been adulterated for the purpose, as we see by the above that the nectar of flowers contain sugar. If the honey flow has been very heavy and honey being collected rapidly who is to say that some of the nectar has not been long enough in the stomach to be changed; by the analyist that would be pronounced to be probably adulterated. Now Mr. Editor, I really believe by chasing the bees with the extractor in a honey glut it would not be as good for food as when allowed to thoroughly ripen in the hive because there is a chance of it being shifted from one cell to another and undergoing the required change in the honey stomach of the bee by certain secretion of that organ. And its also probable that some honey will find its way into the market that contains sugar.

I am trying an experiment with honey. I tiered a hive up, put in some nice frames of combs extracted from some while the other were being filled and capped. The extracted honey I've put away in jars in a nice dry place, and the other frames I am going to protect by wire basket so as to keep them in the hive till next spring without being touched by the bees. Now I am going to see what difference there is. Some beekeepers say there is no difference, but I am under the impression there is. Honey when good, there's no doubt is a valuable medicine. In conclusion, without trying your patience any more, I think that it would be very difficult to state whether honey was adulterated with cane sugar for the purpose or whether it were hurriedly collected and extracted honey.

*In reply we refer to Article by Dr. Guthrie, in A.B.B. page 144, Volume III :—

Honey consists principally of a mixture of two sugars, dextrose and levulose. A solution of dextrose observed in the polarimeter rotates the polarised ray to the right, levulose to the left. Levulose, however, turns the ray nearly twice as far to the left as dextrose does to the right, consequently a mixture containing equal parts of these sugars will exhibit a left-handed rotation, and this left-handed or levo-rotation will be observed if there is any considerable quantity of levulose present. Now, cane-sugar is also a somewhat doubtful constituent of honey. This substance is strongly dextro-rotatory; but after inversion, that is, after having been boiled with acids for a certain time it is converted into a mixture of dextrose and levulose in nearly equal proportions, and becomes in consequence levo-rotatory. Hence, in comparing the figures in columns three and four in the above table, any increase in the angle towards the left is attributed to the inversion of cane sugar, and any adulteration with cane-sugar may be detected by this means.

Our knowledge of the composition of honey is very unsatisfactory; but it is reasonable to suppose that it consists essentially of these two sugars, dextrose and levulose, together with a very variable proportion of cane sugar, and of 1 to 4 per cent. of substances whose nature is unknown.

The most reliable observations of pure honey would seem to establish the fact that pure honey except under exceptional circumstances, is levo-rotatory, and it will be seen that all the honeys in the above table of known origin are levo-rotatory. Now the substances with which honey is most likely to be adulterated are starch-syrup or cane-sugar. Glucose obtained from starch exhibits a strong right-handed rotation, consisting as it does of maltose and dextrin. Cane-sugar we have seen is also dextro-rotatory consequently we may regard a honey exhibiting a strong right-handed rotation as having received the addition of one of these substances. One other technical point and I have done. The sugars, dextrose and levulose, have the power of reducing alkaline solutions of copper. Maltose

possesses this power to a less degree and dextrin not at all. After inversion for three hours at 100° C. dextrin and maltose are converted completely into dextrose, and hence the higher percentage of glucose is due to the presence of dextrin and maltose.

CAUCASIAN BEES.

PERCY SULLIVAN.

Being a subscriber to the A. B. B., I feel it my duty to oblige you with a little bee-news when possible, so I write the following:—I am a subscriber to the *Town and Country Journal* and about December 1896, I noticed a small account of a new race of bees called Caucasian bees being recently imported into England, and cutting the account out I handed it to a friend to send home to Scotland to obtain all the information possible about these new bees, which he kindly did and received the following reply, which is clipped from the *Beekeepers Record* of August '97.

Query No. 994—I shall be obliged if you can give me any information regarding the "Caucasian Bees" referred to in the enclosed cutting which is from an Australian paper.—*Dumfries N.* B., August 10th.

Reply.—The cutting referred to reads as follows:—Some little attention has lately been directed to these bees, which are said to be somewhat distinct in their characteristics from most other bees.

The *London Times* of November 16th last contains a report of an address given by Monsieur Alexis Germoloff, the Russian Minister for Agriculture on Apiculture. He says "Apiculture has made substantial progress in Russia since effective measures were taken to prevent the adulteration of beeswax. Russia possesses a fine race of bees—very productive and quite harmless—that originated in the Caucasus." Some of these bees have lately been imported into England, so that we shall learn more about them shortly. For the information therefore of our correspondent—and it may be of our Australian contemporary also—we quote from our weekly the *B.B.J.*, the remarks of our contributor Mr. H. W. Brice, who is no doubt referred to as having introduced Caucasian bees into England. Mr. Brice says: "Amongst the condemned in my own apiaries I regret to have to record the execution of the Caucasian queens imported by myself last season from Russia. I had great expectations from these bees, but my hopes have not been fulfilled. They were not good enough. Nice tempered bees—quiet? Far too quiet indeed, for unless the weather was about perfect, you never saw them out. Good winterers? Yes, going to sleep seemed to suit them better than getting up and to work. Queens prolific? No, I have this spring literally had to keep the strength of their stocks up from other hives, and when after three months constant stimulation, one finds only four frames of bees with one frame of comb half filled with brood and eggs, I thought it time to pass sentence and execute it myself. They have "departed this life"—abruptly I confess—and not without much personal regret, but I feel it the proper course to adopt. Having called attention to these bees, I now make the fact known that judging them from my own experience I consider them worthless for beekeeping purposes in this country. In a word, I call them "wasters," and have in consequence cancelled my orders for queens of that race. I shall rely on the bees in possession till I can find a better race. Thus exit "*Reines abeilles de la race Caucasienne gris et guane de qualité eprouvée.*" I might add "*sic transit*" to my fondest hopes, but failures such as these are really helpful; they only need the exercise of a little "getting used to" and the disappointment soon wears off.

CAPPINGS.

From American and other Bee Journals.

Hanoverian beekeepers form a sort of guild by themseves. To become an Imker (beekeeper) a young man serves an apprenticeship of two years to a profes-

sional, that is, to one who has himself passed through on apprenticeship, and he is then ready to secure a position with a farmer to take care of his bees. The Imker neither reads bee journals nor writes for them, but he has his trade well learned, is keen, alert, and a successful practitioner. His rule is: Keep only strong colonies, for few but strong colonies bring greater results than many weak colonies.—*Centralblatt.*

Herr. Martin, in *Leipziger Bienenzeitung* reports that his wife suffered from fainting, convulsions, fever, exhaustion and other symptoms whenever stung, without being helped by medical attendance. On one such occasion he tried the experiment of administering whisky, thinking it might have the same effect that it has on snake-bites. The effect was surprising. The next time she was stung strong wine was given, being the only form of alcohol then available. The effect was not so marked, but the sickness was much less than on previous occasions. Therefore for such cases he advises that whisky containg at least 30 per cent. of alcohol be given as soon as possible.

Selling Honey—How to Develop a Demand.—C. P. Dadant. *In A. B. J.* Any method that will attract the attention of the public and create any enquiry will prove beneficial to the honey interest. Although honey is the very best of sweets, it is still considered as a luxury by many, and by many others there is such a fear of adulteration that they are afraid to buy it. Do away with the fear, replacing it with confidence, and sell at low prices, and the sales will be almost unlimited. The greatest trouble with our bee-keepers is that they dislike pushing their goods forward even among their neighbours. They prefer to ship in bulk to some commisssion-man who will perhaps return to them a price which they would have considered unaccceptable if it had been offered them by the home trade. Neither can we blame the commission-man, for it is not his fault if the market is glutted and prices ruinous. If our honey must be sold cheap, let us give the benefit of it to the home consumption. It may not pay us at first to sell to consumers or to small dealers at the price we would get in Chicago, but let us remember that the trade that is built up in one or two seasons may remain with us for years, and perhaps at higher prices, if we take care of it.

The *British Bee Journal* gives 334 lbs. from a single hive as probably the largest take in Great Britain. How about Vogel of Paterson, who took 1000 lbs from one hive, and Peterson of Wattle Flat, average spring count 750, and 1200 lbs from one colony?

E. R. Root in *Gleanings* says:—It is not unusual to find bees in bee-trees, wholly or nearly destitute of stores. Colonies found in trees are very often second or third swarms—swarming very late, and gathering very little in the way of stores for winter. In modern times it is very seldom that the first swarm gets away from the beekeeper. If these succeed in escaping, and are then found in a tree, they will probably have sufficient stores for winter.

In most countries on the Continent except Turkey and Greece, wooden barrels are used for holding honey. In Turkey and Greece goatskins are used, giving a peculiar and not agreeable flavour to honey. In Syria, Palestine, and over the north of Africa, unglazed pottery is used, the honey soaking into the pores so the vessels cannot be used the second time, but in Algeria glazed pottery is used.

A Bullocky Episode.—Quite a mild excitement was caused in Singleton recently in that portion of York-street between John and Bathurst streets, by the escapades of a bullock, which appeared to be of an inquistive turn of mind. He belonged to one of a mob being driven along York street from Foster's saleyards, and when near Mrs. White's baker's shop, the gate to the yard being open, the bullock in question rushed into the yard, and made straight

for the back portion of the premises, where a flower garden has been established, divided from the yard by wire netting. He rushed through the netting and played sad havoc with the flowers and plants, upset several boxes of bees, who resented this intrusion and fastened on their enemy in thousands. The bullock roared from the pain inflicted and eventually laid flat on the ground, being unable to move any further. Eventually a rope was brought and placed around the animal's horns, and it took four men to shift the beast, which was then trembling with fear of his tiny tormentors. After a while the bees were beaten off and the frightened animal rejoined the mob.—*Contemporary.*

Pastor Schoenfeld received four pieces of combs, cut from such combs of foul-broody colonies as their owner desired to melt up, instead of destroying. He found in them cells containing traces of dried foul brood, and spores on the edges of all the cells. To obtain the spores separately, some strips of comb, not including the three cells, were boiled in a small glass with distilled water. While still boiling the glass was well shaken, in order to disengage the spores from the melted wax, then inverted and allowed to cool. The water was then strained through a double filtering layer of filtering paper, to remove coarser bodies, and showed countless spores in every drop. Fresh water was then put in the glass with the wax, and the process repeated, showing almost as many spores as at first. The wax was next cut up fine, washed, boiled again with water, and filtered while hot. On being again cut up fine and examined under the microscope, even the smallest piece proved not free from spores. He concludes that every practical man ought to destroy the wax from foul-broody colonies and pour all water used into a hole in the ground and cover it up; or if one will melt up such combs, all utensils should be thoroughly disinfected. The spores lose their vitality only after the combs are boiled half an hour, or the wax raised to a temperature of 230 to 249 degrees F. This degree of heat, however injures the wax. It is difficult for disinfectants to reach spores in wax. Tests of the vitality of spores in wax are best made with a nucleus colony of bees, since sure results with cultures are only to be obtained with all the conveniences of a bacteriolgic institute.—*F. L. Thompson in Beekeepers Review.*

W. W. M'Neall, says in A. B. J.—The "idea needs encouraging," that a laying worker can be seen and told by her looks. But still I would not give much for a colony that was infested to the extent of capped brood from these workers. When they have reached this stage it seems so plain to me that anyone who will take the trouble to open his eyes and look, cannot fail to pick them out from among the others. Why, just hold the comb up before your eyes, and simply look at it, and if you can't see these workers by the deference the other bees show them, then you can't find a queen by the same means. These bees always have a soaked appearance from having become a gormandizer, just as a bee that has followed robbing for a few days assumes pretty much the same color from her gluttonous way of living. The others form a circle about a laying worker as though she were a real queen, and are constantly offering her honey, which she as constantly seems to accept; so again, she is almost constantly wiping her mouth. I have often taken these bees and caged them with a queen-bee to see if they would fight, but in no case did they do so. But give them to a colony that has a queen, and they will ball them just as they do a strange queen. I have never seen them in the act of laying, but I am inclined to the belief that they lay their eggs on the face of the comb, when they are then taken by others and placed, which accounts, perhaps, for the indiscriminate way we find them in the cells. I may be mistaken in this, for a good, prolific queen will often pile the eggs into the cells in much the same way, if not worse, if the strength of the colony

is not equal to her ability. My remedy for laying workers is just to break these colonies up. I find it the cheapest, quickest, and best way to deal with the few cases that occur in a well-regulated yard. These and moth-worms are the fruits of carelessness on the part of the apiarist. If I had no more to contend with I would think bee-keeping easy.

Common-sense Bee-keeping., *In A. B. Journal.* :—Have your wax melted in a dish somewhat deeper than it is wide, with water in the bottom to prevent the wax from burning ; then a small paint-brush (a sash tool) is all the machine you want for the business of making starters. Now take the guide-strip from the water and wipe it slightly with a damp cloth, and place it in position in the frame as above described. Don't touch the inside of the top-bar with wet fingers, or the hot wax will not adhere to the portions thus touched. Now dip your brush into the hot wax, and run it lightly along the top-bar against the guide-strip and there you have a starter. If you wish to make it heavier, stroke it again with the hot wax and it is done. Care should be taken to not thrust the brush so deeply into the hot wax as to reach the water that is under it, or it will not work as nicely. When I wish to let loose of my brush I have it fixed so that I can hang it inside the tin bucket that holds the wax, without falling therein. Hold the strip in place until the starter is cool, and then push the top of the guide-strip back from the starter, and it will loosen nicely. The cooling of the starter may be hastened by the use of a fan or cold water. When I found that the bees were delighted with these flat starters, I began to make them wider by using a board that would fill the frame in the place of the guide-strip, and a wider brush, and was surprised at the readiness with which the bees built cells on those flat foundations in the height of the season ; but when the work got slack outside they devoted themselves to some amusing antics in the way that fixed the unfinished ones in the ends and corners of the hive. Make starters first, and if you fail a few times melt the scraps over and try again till you can make a full sheet of foundation, except at the corners, which the bees will quickly fill when they get to that. You will soon observe that drawing the hot wax with a brush seems to lengthen its grains, and render it tough until it is melted again. This is a great point in favour of its use. If put in rightly it won't sag at all, and is quickly put into the frames, and is better adapted to being worked in the winter than the other kind, besides being cheaper. I call it "common-sense foundation."

CORRESPONDENCE.

F. M., Burringbar, Feb. 15th :—The weather is very wet up here ; no honey since Christmas.

J. F., Black-range, N.S.W., Feb. 24, —Beekeeping is in this district a losing game this year.

J. A. B., Dilga, Jan. 14th :—We had about six in. of rain here yesterday ; it was badly wanted.

We are informed that Mr. R. Latimore, of Wingham, has shipped eight tons of honey to South Africa in compliance with a special order.

Mr. H. Nancarrow, Wellington, March 1st, 1898 :—Bees working well, plenty of swarms and extra strong ones at that. I have worked my apiary up to 100 this season from 40 colonies. Trusting you are enjoying good health with best wishes.

E. A. B., Wellington Feb 9 :—I wish you to discontinue the *Bulletin* to me after I have become unfinancial. It will seem like parting with an old friend, but unfortunately I am unable to keep bees here. However, if I can at any time procure you a subscriber I shall do so, though that prospect is not bright here.

J. D., Gulligal :—So far this year has been very good. I came through the winter with fifteen hives and I have now fifty-nine all strong with a good flow of honey, but price very low. I receive your *Bee Bulletin* regular, which I find very interesting.

A. A. B., Te Aroha, N. Z. :—This summer here has been very dry and warm, but I think the bees have done fairly well. We have not extracted as yet as our other farm work has kept us too busy. Ours is all extracted honey as there does not seem to be any market for comb honey.

J. B. B., Cameron's Creek, Armidale, : My bees are doing fairly well. I have not taken 1lb of honey yet, box, red gum, peppermint and stringybark, have not burst into bloom yet. I never have yet extracted before the middle of February and from that up to the end of April have not had any clover honey for years. I notice my queens are very short lived this season. Can you give reason ?

We cannot account for the short lived queens. Are spiders &c. destroying them? or do you want to introduce fresh blood ?

G. S. H., Cootamundra :— Dear Mr. Editor, you have not heard from these parts for some time owing to the fact that we have nil of an encouraging nature to send you. Continuous dry weather since the opening of the season, ringbarking going on all around has been the order of the day. Not a tree in bloom within miles of here. With this sort of existence, I am thinking the enthusiasm will soon be wrung out of some of our hopeful beginners, especially if after this sort of perish a good supply of paralysis sets in, and to open out in the spring again with a contribution of Foul Brood. So far bees are fairly healthy, but I notice them commencing to scratch each other at the door, a sort of God bless the Duke of Argyle business going on. I have noticed in some of the new hives I bought this spring that although well painted, the covers have all shrunk so that now they are an inch narrower than the hives. This will not go well with heavy rains. I think our colonial hive manufacturers would do well to note this.

Mr. J. T. Smith, Mount Cotton, Queensland, writes us his boys have gone west, his girls don't take to the bees, he has therefore too much to do, and so thinks of selling out and of going to live in town. About those 289 cases of honey from San Francisco. The law there is pretting strict about selling adulterated honey *there*, but anything can be shipped to other countries. Can Editor of *A. B. B.* tell us if the honey in these cases was pure; that point is as important as the price. It would interest readers of *A. B. B.* if sample could be analysed properly. A correspondent asked some time ago what became of all the glucose imported into N.S.W. ? Tell him to inquire of the brewers. Runaway bees.—English laws have always held that hive bees were private property and that owners could follow them like any other live stock *anywhere* and claim them. Subject of course to owners liability for any damage done by the bees, or by the owner in attemping to recover them.

Everton, writes :—Thanks for your letter re honey sample. You say you don't think it would pay to adulterate with sugar. Well, about four years ago I was told by a man who was selling honey that he made it pay in this way: To 1lb. honey add ½lb. sugar and ½lb. weight of water. He first boiled sugar and water sufficiently so as not to return to granules. Then he gave the result :— Two 1b. tin honey, (?) 1/- ; contents, 1lb honey, say 5d, ½lb sugar(at 3d), 1½d, cost of tin 2d, total 8½d. Thus giving him a profit of 3½d on the 1lb of sugar and water (syrup) added. I was digusted to think that he was so mean as to sell honey, sugar and water as pure honey, but not being interested in these matters at that time did not trouble any further about it, but when I came across the sample I sent you, it was so similar that I thought I would try and find out if it was of the same composition. That manufacturer left this district; I hope he has not returned. Another honey flow just commencing, but I think it will only be a light one.

J.W.P.,Dubbo :—I receive my *Bulletin* very regular, and I always find much valuable information therein. I consider that no bee-keeper should be without it.

I may tell you that I am doing very well this season. I have had no increase for 3 years. I started this season with 54 strong colonies; at the end of the year I had 118 colonies and four tons of honey. I am now in the middle of the second swarming and have in all 141 colonies, all Italian and Ligurian bees in simplicity boxes. We have great trouble with queens this year. Very often if you open a box they will kill the queen when you put another in, and come a week after to see how she is doing you may find her gone. I had a young queen that I put into a strong colony of Italians, after they killed the old one. Eight days after I opened the box and found she had laid eggs all over and very regular; the next morning I found her lying dead in front of the hive. If you give them a virgin queen they will swarm out with her, but for all that I have by keeping plenty of young queens for emergencies not lost much time. I find in the middle of honey-flow is the best time to introduce queens with success.

A.B., Nurrabeil, V. Feb 18:—A line or two to say what has been, and what is the prospect of the present season for bees here. You remember I had a mind to shift to Moyston. At Christmas I did so with 70 hives on a very heavy red gum flow, and for a week or two the bees went in for brood, as there was none when I shifted them. And as they got well filled and began to store honey, one hot day, 116 in the shade, burnt up all the blossoms and even the buds that were to bloom, and the bees had to start next day on their stores. I have read of a sudden honey drought, but never saw one before. I had to get home again as quickly as possible or they would have to be fed. In transit on the train I lost a good few of them, not having had sufficient ventilation, and heavy brood got down and killed a few queens and bees. So much for the shift, costing about £15, and got one 60lb tin of honey. The dry weather has fairly done the bees out, while they get honey sufficient to do them, there is a severe pollen famine, and the bees cannot keep up their strength any time together. I have lost 3-5ths of mine in this way for want of pollen. Since I have been a bee-keeper I never witnessed such a time, and never had such trouble to keep the few I have left. Up to date no rain yet; if we had one inch the bees would do well. At present I have my 100 colonies in five places to pick up a living, some on ti-tree—not very plentiful. They are doing well in themselves but no return to the beekeeper. The prospects of the grey box tree that we usually get a heavy honey flow from every year up here is going to fail this year; the heat has caused the buds to drop off. The white gum that blooms every year in July has a beautiful appearance and looks as though it will bloom in March, if so I may yet get a few tins of honey, otherwise I am out of it this season, but cannot grumble, as I had a little over 14 tons last season. But notwithstanding this, expenses should be paid every season; it has done so every other year, but at present there is practically no prospects for honey, unless rain sets in at once. I shall soon settle down to look only for next season. There is no demand for honey locally, although you could hardly get a lb if you wanted it. I have proved the value of beekeeping and therefore would not give it up if I lost all. I had one hive last season gathered 692 lbs of honey; I had to work it with 3 story L. This is a large amount from one hive, but it threw no swarm, and in early March I took one frame of brood solid from it to build up another colony. If one colony can do this why not another? This particular hive had a queen I reared myself. Last August I sent for 7 queens from America, two Holy Land queens, two Cyprians, two Ligurian and one Carniolan, the whole of which arrived dead, so I lost this season. The season before last I imported six and saved one out them (a very fine breeder, 3 banded Italian). I think that importing is rather a losing game if it was not for the change of blood you get, which I think has a lot to do with successful beekeeping.

THE MUSWELLBROOK CONVENTION.

This came off on Wednesday and Thursday, March 2 and 3, the occasion chosen being that of the annual local Show. Of the latter we may say it was by no means so successful in the apicultural department as last year. That show, as we said at the time, was about the best, apiculturally, that was ever held in the colony. This time there were not the number of entrances. Still it was a very nice display. Mr. A. A. Roberts had two very nice trophies, and secured a goodly number of prizes. Mr. Paul and Mr. Ellerton were both prize winners. Mr. D. Grant, as secretary, was most indefatigable, and spared no pains to make every thing as presentable as possible. Mr. C. U. T. Burke, of Loyalstone, secured first prize for excellent samples of wax made according to his published pamphlet advertised in our columns. Mr. A. Gale was sole judge. He always gives satisfaction in that capacity, being very careful and painstaking. He uses the system of points adopted at the High School Convention in Sydney in 1893, but considers this needs much amendment. The Messrs Pender Bros had a good display of apicultural implements, &c.

The Convention was held at the School of Arts, the chair on first sitting being occupied by — Bowman Esq., who after some introductory remarks called on Mr. E. Tipper to read his paper on adulteration, as follows:—

Here in your little country town of Muswellbrook, dominated by one main store, the evil of adulteration is not brought home to your doors, or immediately under your eyes as in the large centres of population. But you suffer from it all the same. *You do not get the price you ought to for it.* Sydney contains nearly one third of the population of the colony, who are not primary producers and therefore should be your principal market, where the bulk of your products should be sent, and whence the money returns should come. But what is taking place there? As you pass grocers shop after grocers shop you will see bottles in the windows labelled honey, but if you examine the back of these bottles you will see a very small label stating the fact of adulteration—so small as hardly to be noticeable. They say sugar. But whatever it is it is doubtless something very much cheaper than you could afford to sell your honey. One article very much used to adulterate honey with is glucose, manufactured from iron by the use of sulphuric acid. It is tasteless. A little honey mixed with it imparts a slight honey taste, but this mixture leaves a nasty taste in the mouth. If mixed with spirits of wine leaves a precipitate at the bottom of the glass or vessel it is contained in. This glucose can be landed in Sydney at £14 a ton. The colony is impoverished to the extent of the money sent away for it, and the beekeeper impoverished by the amount of less true honey sold and the reduced price he obtains for his honey by its competition. The purchaser gets an inferior article that with perhaps the sulphuric acid in its composition is injurious to health, the so-called honey he gets is not so nice as his ideas of honey had led him to believe it should be, and so the masses of the people are weaned away from it. Honey is also deteriorated by being mixed with sugar and water, at a profit to the mixer of some halfpenny a pound. Mr. Seleer a chemist of Philadelphia says that 5 per cent of commercial sugar can be detected by analysis. But adulteration is not confined to honey. At the present time commercial competition is so great that there is no article of food that is not liable to the attacks of the adulterator.

Here is a paragraph copied from the February "New Zealand Farmer";—

Real Jam.—Mr. W. J. Palmer, the Government Pomologist, says in his report:—I would also bring to your notice the way in which apples affected by the larvae of codlin moth are being utilized in the making of apple and cider pulp. One maker of pulp in Auckland told me he had made this season (1896-97) over 20 tons of pulp, most of which he exports for conversion into current, raspberry, plum and other jams." I met a man who knew of four tons of pumpkins going into a jam factooy, and they did not come out as pumpkin jam. Does our free port of Sydney get any of it, and does that interfere with the sale of our honey?

In South and Western Australia frequent complaints have been made of the inefficacy of Paris Green to get rid of insects that prey on trees and vines, which led the latter government to cause an analysis to be made of four samples, one of which was found to contain only 15.26 per cent, of arsenic instead of 53.

The temperance people in N.S.W. attacked adulteration in the matter of intoxicating liquors and some heavy penalties have been inflicted on publicans. The dairymen have succeeded in getting milk thoroughly protected. The law as carried out in Sydney is now very strict in these matters. In December last several grocers were fined heavily for selling adulterated pepper and mustard. But adulterated honey was not interfered with. Why? The committee of the

N B.K.A. had waited on the Agricultural Department by whom they were told the matter was left to the Board of Health, who also had referred it to the Mayor of Sydney. Nothing being done on our behalf the Committee a fortnight ago, waited on the Board of Health.

They were courteously received by the President, who informed them that although the Board had been constituted some twelve months they had not been provided with proper appliances to carry out analysis, and had only the one government analyist, instead of a duly qualified food analyist. Why did not the men who passed the Pure Food Act see also there were the proper appliances to carry it out?

He informed us, however, if we gave him the names of the persons who were supposed to be selling the adulterated honey he would take the necessary steps to prosecute them. This is the stage we have arrived at and the acting secretary, and delegate, Mr. J. D. Ward, will tell you what steps have been since taken.

It will not be out of place in conclusion to call attention to the strong measures adapted against adulteration of food in other countries. In New York State "it is a misdemeanour, not only to adulterate, but to sell foods in the State, even though adulterated in another State; and it makes no difference whether the vendor knows of the adulteration of the product or not. The state does not have to prove it, and he is liable just the same." *Gleanings* also says :— "Our food inspectors are active and alert, and are making the sale of adulterated food stuffs a dangerous business."

In California the fine does not exceed 100 dollars, nor less than 25, or imprisonment from 30 to 100 days.

A writer in *Gleanings* speaking of glucose says :—It is valueless for food and is manufactured for swindling purposes only.

Mr. T. Bolton of Victoria called attention in a late number of *A.B.B.* that though the stocks of honey in the country were low, implying there ought to be a rise in price in Melbourne, yet through adulteration the price has gone down.

To show the dishonest nature of the purposes to which glucose is put, it is never advertised in the newspapers, or its price quoted, and who the purchasers are is a mystery, but it arrives in the colony all the same.

Three grocers were recently fined in Canada for selling adulterated honey, although the defendants pleaded ignorance of adulteration, and that glucose was not injurious, but beneficial to health.

In France, anybody who doubts the genuineness of an article of food that he has purchased from a Parisian tradesman may take it to the municipal laboratory for analysis. It will cost him nothing to have it analysed, and the fact determined whether it is adulterated or unadulterated; and if the latter the law deals with the offender without further action on the part of the purchaser. The storekeeper is liable to be heavily fined or imprisoned, and has to display conspicuously on his shop window or on his door for a year a large placard bearing the words— "Convicted of Adulteration."

I believe we may safely say there is not a civilised country in the world where adulteration of food has been carried on with such impunity as in New South Walss.

Let it be our duty to watch and see that the laws which have been passed are fully and effectually carried out, and remember that many good laws are held in abeyance on account of the apathy of those interested. Let it not be the case with honey producers.

Mr. J. D. Ward said he attended as a delegate from the National Beekeepers' Association, and he conveyed the hearty greetings of that Association to the Muswellbrook Association. The committee of the N. B. K. A. had given active consideration to the question of adulteration and had spent much time over it. Unfortunately the Act of Parliament dealing with the subject was so fearfully and wonderfully made that at first sight it appeared impossible to make successful use of it against adulterators. The Department of Agriculture had half promised to set the law in motion, but subsequently referred the committee to the Board of Health. The President of that Board had now undertaken to prosecute a few cases, but intimated that the beekeepers should themselves unite and carry on the work. Mr. Ward proceeded to describe some of the labels on bottles of adulterated honey. One firm placed a small label on the back of the bottle to the effect that the honey was *Clarified with pure sugar only*; another stated that the bottle contained *Honey and Dextrose*, (the public would of course know at once what dextrose meant). The Department of Agriculture had informed a deputation recently that we were not sufficiently united. All honest beekeepers are united in sentiment, and an effort is being made to secure unity of purpose and energy. It is hoped that soon all country associations will affiliate with the central body. Five associations had expressed readiness to join, while the Inverell association had actually affiliated

and it was hoped the Muswellbrook Association would affiliate with the N.B.K.A. It is self evident that more can be done by a central body right at the door of the seat of Government, than by isolated Associations working under difficulties. Beekeepers should close up their ranks, and speak with one voice, and it would be a voice that should be heard. The statistics of the honey crop for 1896 were probably wrong. For months the stock held in Sussex street was over 20 tons, while the arrivals over-balanced the sales. The excess of production this year over former years coupled with the glucose and sugar and water of the bottlers, was causing the price to drop and drop. Presently the producer will have little return for his labour. The position was so alarming as to demand the very serious consideration of every honey producer in New South Wales.

Mr. Albert Gale said for years the National Beekeepers' Association had been pegging away in Sydney to counteract the evil caused by adulteration. We were told that till a new Act was passed we were thoroughly powerless. We had got nearer and nearer in our endeavours every time, but the last effort we made drove the nail pretty well home, and now only wanted someone to go the other side and clinch it. The question was not whether adulteration was injurious to health or not. It was whether the people were buying what they asked for. If we buy honey we must have it independent of any adulterants whatever. If they went to many of the middlemen of Sussex-street and took them beautiful samples of honey they were told it was dark honey they wanted, because they could adulterate that easier, and so make more profit out of it. We did not recognise anything as honey but what the bees brought in from the flowers, and it was only by pegging and united action that we could carry out what we wished. We had paid 40 or 50 visits to the Government Departments on the subject, and finally at the last one we had got our post in.

Mr. D. Grant said the matter of affiliation and co-operation with the N. B. K. A., the Muswellbrook Association would have affiliated long ago only their advances had not been recognised, or the invitation to join brought forward in such a way as they could see an opportunity to join. They could not do anything in the matter till they had a meeting of their Association. So far as he was personally concerned he considered it was only right they should affiliate. He would bring it up at next meeting.

Mr. Ellerton next read a paper by Mr. W. S. Pender on "Queen Rearing"; Mr. Pender being unable to attend through illness.

Discussion followed in which Mr. Munday stated that from his experience Italians would not raise nearly so many queens as either blacks or Hybrids.

Mr. Ward said a paper like that required thinking over, and asked that Mr. Pender ask Mr. Tipper to allow it to be printed in the *A. Bee Bulletin.*

Mr. Gale thought it a practicable sensible paper. The best queen rearers we could get hold of would be the Carniolans. They were such great swarmers they would take a special delight in queen raising.

Mr. Roberts could not but endorse mostly the remarks of Mr. Pender in his paper on queen rearing. Mr. Pender and himself had very much the same ideas. The best for queen rearing, under all circumstances, would be a toss up between the Carniolan and the Black bee. The secret of success was getting your bees into the right nick, when all the nurse bees have nothing else to do, and it was a very poor colony of bees that could not look after 15 or 20 queen cells and bring them out as they should. The Atchley method read very nice in theory, but it was a very tedious job, he preferred the Doolittle method. Nine times out of ten, when you get the bees into the proper nick, you get a very good batch of queen cells. Any beekeeper who went into queen rearing in a large or small way could not do better than give that paper his study.

Mr. Munday then read a paper on Paralysis, attributing the disease to the gathering of bad pollen or honey.

Discussion took place in which Mr. Cox and Gale took part, and Mr. Munday in reply to the latter said it was possible the queen might get the disease if fed with the discharge from affected bees. It was several years ago he was alluding to. He thought it was from pumpkins, he could see no bloom at the time. There were plenty of stores in at the time.

Mr. Gale could not see the reason they should go for injurious food when there were plenty of stores in the hive. He did not think the variety had anything to do with it. The pure Italians and the pure blacks both had it, one in the autumn and the other in the spring.

In reply to Mr. Roberts, Mr. Munday said he had never seen a queen die from paralysis. He had hives die out and only the queen left.

Mr. Ward had had two experiences, and believes it was caused by bad food. Had seen bees sucking juices out of decayed fruit. Instanced a Ligurian queen which in the spring was all right and prolific. He bred 14 queens from her, who all had paralysis. Pinched their heads off and the hives became alright.

Mr. Tipper said there were two diseases called paralysis, one from unwholesome food, the other from hereditary weakness, possibly caused by inbreeding. He thought the yellow bees were more liable to the latter.

Mr. Munday asked if any beekeeper had ever tried any medicinal remedies to cure the complaint.

Mr. Gale and Mr. Roberts had tried both salt and sulphur with no results.

Mr. Grant then read his paper on wax after which discussion arose about the introduction of *apis indicus*, who were great producers of wax, in which Messrs Gale, Vogele, and Munday took part, but it was thought its migratory habits would be a great detriment to its being domesticated in Australia.

Mr. Munday spoke of the rendering of wax by the Boardman Solar Extractor which with a little addition he had made nothing was wasted; it saved 5 per cent after all the honey possible had run from the cappings into the capping can. He had saved over two 60lb tins from 40 tins extracted, and the honey was only slightly darker.

It being now 10 o'clock it was proposed by Mr. Tipper, seconded by Mr. Grant, the Convention be postponed till 10 o'clock the following morning.

On the motion of the same gentlemen a hearty vote of thanks was passed to Mr. Bowman for presiding.

We hold over to our next the rest of the proceedings, also the publication of the various papers.

W. M., Amaroo, Mar. 7th., writes:—Re price of honey.—Your Feb. number says "How many of our readers belong to the N.B.A. of New South Wales? If you do not, do not complain you can't get a price for your honey." The advice given therein is good, but loses much of its value taken in connection with the fact that a member of N. B. A. who sat by my side at last Convention, recently advertised in *Daily Telegraph* as follows: "Send postal note for 12/6 to ——— and receive a 60lb tin of Extracted Honey." Now it is bad enough to have to contend with the gin-case man, and the other non-members, but when we find the house divided against itself then the matter is serious. Question 139 in Jan. number was pertinent, but was shirked by most, only three replying. When one reads of those who can get 4d to 5d on rail, and who could have sold tons more, one is tempted to ask, Why not buy up all they want at 2d and 2½d and reap the benefit? or better still keep no bees, but buy from those who do and retail it. London quotations on 17th Dec. 1897, as reported in *Sydney Morning Herald* said: "There is very little Australian honey in the market, and it is meeting a slow sale at 20/- to 25/- per cwt. New Zealand tops the

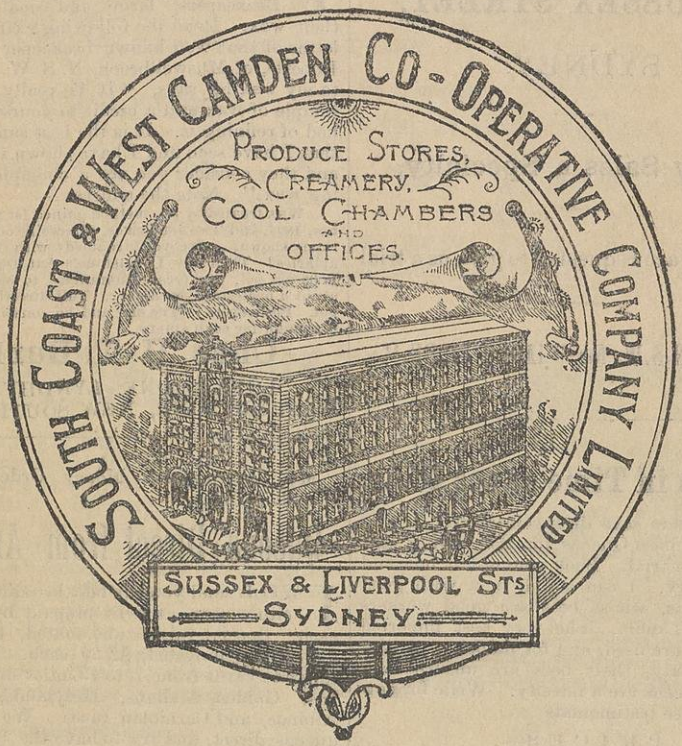
price for imported honey, and is worth 35/- ; Californian, 25/- to 35/- ; and Jamaica, 22/6 to 30/-. From these quotations it will be seen that the Australian honey is the lowest priced in the market." Under same date I had a letter from a friend in London who made enquiries at several shops, and found 1lb sections at 1/- each, and extracted honey at 1/2 per lb. That would be 130/8 per cwt. Who pockets the difference? Honey can be taken by steamer from Sydney to London for 40/-, and 5 per cent primage per ton of 20 cwt. Sailing vessel costs 35/- per ton. Is there not a field here for our Association to work in? Am expecting more information from London and will pass on to you. Bees have done splendidly this season, hope yours have done well.

W. M., Shepparton, Vic., March 8th: The *Bee Bulletin* is most enjoyable reading and I trust your correspondents are having a profitable season, which is more than I am having. However, we might have better next year, and in the meantime my bees, I am glad to say, are all in good order. I enjoy reading the different opinions re foul brood, as I had a great fight with it three years in succession. I had a neighbour just 100 yards from me who kept gin-case hives. They were in a very bad state with foul brood; he would not do away with them, or transfer into proper hives, and I could not keep my bees clean. Since they all died out I have had no further trouble. I have 25 hives and there has been no disease of any kind for the last two years. I adopted a preventive measure which I have not seen mentioned by any of your correspondents. I bored a hole with 1¼ in. augur through the bottom board, covered this in the inside of hive with wire gauze. Then introduced from below a small tin two inches deep filled with carbolic acid and Stockholm tar. During the honey season I removed these tins and supplied others filled with Napthaline. Whether this had anything to do with the cure of the disease, or whether it merely prevented the development of the germs, I leave others to determine. Perhaps "Sparrow" or "Loyalstone" or some other of your contributors could give an opinion. Re honey export. I sent a quantity of honey to Edinburgh and Glasgow last year and the universal verdict was that it was better than either Scotch or English. Everybody was delighted with it; they couldn't find any Eucalyptus flavour in it at all. The honey I sent was dark, red gum and box honey you know.

NOTICE

SHOULD any beekeeper have a doubt of the genuineness of any honey sold in his neighbourhood, send a sample to the Chairman Board of Health, Sydney, who will cause it to be analysed, and take proceedings if necessary.

Honey Sales a Specialty



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