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West Maitland, N.S.W.: E. Tipper, July 11, 1892

THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

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THE AUSTRALIAN

BEE BULLETIN,

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The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEE-KEEPING.

EDITED BY G. R. HARRISON.

WEST MAITLAND.—JULY 11.

THE MORALS (?) OF TRADE.

Adulteration and Adulterators.

THE upholder of what is called the "Manchester" school of thought has always taught on all possible occasions that the greatest freedom of competition was the best for trade, and moreover, upheld unlimited competition as not only useful but necessary, and even holy.

One of the chief apostles of that school, the Hon. John Bright, a man noted for his close observance of all that is conventionally considered christian, a particularly devout man, of a particularly devout sect, in fact, a Quaker of the Quakers, after teaching the world the peculiar holiness of free competition enunciated the principle that "*Adulteration is only a form of Competition*," and therefore (of course), beneficent, right and good.

The principle that adulteration is a form of competition we admit. But must we also accept it as moral?

We must first enquire what constitutes a thing moral or otherwise

The highest authorities on Social Science define morals as the relation of the actions of the individual to the welfare of the whole social organism. The dictionaries give various definitions, as "the doctrine or practice of the duties of life, &c., &c."

Let us define it, "that what is moral is to the best interests of humanity as a whole," and then examine the question by the light of this definition, which we think will be universally accepted.

What is adulteration? One dictionary gives: "To deteriorate by admixture of baser materials," but the commercial conscience does not often stop there, but frequently entirely substitutes baser materials.

Is adulteration moral? The beekeeper obtains direct from nature's store house, through nature's own agents, the purest and most wholesome sweet; he brings it to the world's market, and the market approves it as good, and pays the price; the manufacturer obtains from the same well-stocked source through the agency of machinery and chemistry, a product which, though bearing a great family likeness to that of the beekeeper's, is inferior; in that, in the laboratory of art, the processes are less perfect, and the result less pure and delicate.

He brings his product to the world's market, and it is accepted less readily at a less price.

So far the business of both parties is equally legitimate; but commercialism, or competition, steps in and whispers, "You do not get such a sale, at such a price for your Glucose, if you sell it as such; it looks like honey, its synthesis is somewhat similar to that of honey, and it can be made to taste and smell like honey to those who know but little, by mixing with it a proportion of honey, and then saying it is the purest product of the bee."

Accordingly, the manufacturer brings to market a package beautiful to the eye, that organ of sense to which artistic appeals are seldom in vain, and the market tries it and says: "If this is honey, I don't like it." And when the genuine article is presented, says, without trial: "I don't like it," or "I will only give half the price for it;" and the price of honey is forthwith reduced to the previous price of glucose, and, as acknowledged glucose, bears a price proportionately lower than acknowledged pure honey, the price of both is

lowered, the producer of the genuine article is injured partly by reduced price, but far more by unjust suspicion of adulteration, the manufacturer of glucose, as such, is injured by the reduction of an important factor in fixing his price, and the consumer is injured and seriously wronged by having that sold to him which he does not intend to buy, and by not getting that which he does intend.

But the foregoing is a mild case, for it only supposes that a wholesome, pure food is admixed with an only relatively less pure food, but the process never stops at that. We generally find that the producer of the adulterant, at the instance of the said competition, adulterates his already less wholesome food with something cheaper, and therefore (generally) less pure and wholesome, if it in turn has not already been adulterated.

Glucose produced in the chemist's laboratory under the very highest conditions, using the purest starch from the best maize, inverted into glucose by chemically pure acids, the inimical residues eliminated with the most scrupulous care, may possibly yield to analysis almost as pure or sweet (though lacking some of the properties of flavor and aroma) as pure honey. But when only commercially pure (oh, shameful qualification!) starch, from commercial maize is treated with commercial acids, what then? And, if then, maize is substituted by old rags, and many more than questionable materials, treated with acids, not only impure but adulterated, what is the final result? But this is not by any means an overdrawn picture of commercial methods.

Again we ask—

IS IT MORAL?

Spring is Coming.

You will want sections, foundation, spare hives, and supplies generally, now is the time, when spring comes it is too late.

Australian Honey in London.

A few weeks ago the Sydney daily papers contained cablegrams stating that the *London Standard* had a paragraph to the effect that a lot of inferior Australian honey was upon the market, and doing great damage to our good name. Beekeepers here at once saw that the true meaning of this item was: that Australian honey placed on the London market had began to make a name for its excellence, whereupon the glucose man had promptly commenced labeling his "packages of poison" as Australian honey.

As will be seen in the report elsewhere, the H.R. Association, at its last meeting decided to send samples of our honey to the Editor of the *London Standard*, and ask him to comment thereon. Who will send in samples of about 2lbs., in either glass or tin, that the Association may send?

Hunter River Beekeepers' Association.

The usual monthly meeting of the above was held on Tuesday evening, Mr J. W. Pender, vice-president, in the chair. The minutes of previous meeting were read and confirmed. Among correspondence received was a communication from the Postmaster-General, stating that instructions had been sent to foreign parts that bees would not be permitted to go through the New South Wales Post Office, but that bees now on their way would be delivered. The matter was strongly commented on by several speakers, it being felt that if this policy was persevered in and importations of queen bees of better breeds prohibited, a great blow would be inflicted on the industry, as the stock of bees at present in the colony would soon be little better than the original black bees. New South Wales is the only one of the Australian colonies having such a law, having followed the example of Great Britain,

which does not belong to the International postal union. It was resolved the Secretary (Mr M. Scobie) at once take steps to obtain all possible information in the matter, and submit it to a meeting of committee, to which Mr Patten's name was added.

On the motion of Mr M. Scobie, Mr G. Hardy, of Lambton, was admitted at member of the Association.

In reference to a paragraph that had appeared in the *London Standard*, derogatory to Australian honey, it was resolved, on the motion of Mr Mansfield, that samples of Australian honey be forwarded by members of this association to the editor of that journal, with a request that he make comments on the same.

Mr E. Tipper stated that he had some three months since written to his brother in England asking for information relative to the value of honey there. He read the following correspondence received in reply:—

Ansford Villa,
Clevedon, May 4th, 1892.

My Dear Brother,—I went to Mr. Northam, the largest importer in Bristol, and told him about your honey. He said it was already in the London market, and that to try to get into a provincial market was to endeavour to escape the middle man, and would not succeed unless put at an abnormally low rate. Speaking generally, there is not a great demand at all for honey, and he fancied that the Australian honey was too pungent for the public taste. However, sample and price was, after all, the best course. I am so sorry not to have better report for this post, but will make further enquiries.

Thursday, 5th May—I went into Bristol the second time, and a Messrs. Gardener, wholesale firm of Nelson-street, were interested in your letter, and are writing to you this evening. They think eucalyptus honey might take very well.

Yours, &c.,
HENRY TIPPER.

Nelson-street, Bristol,
May 5th, 1892.

Dear Sir,—Your brother has called on us to-day with your letter *re* honey, and asked us to write you. We have had some Australian honey here, but as a rule it is too liquid for the trade here to be sold as a first-class article, but of course every lot is sold on its merits, and what the quality is will determine the price realised. What packages would you pack it in? Small jars or glass pots, with screw stoppers, is what is most in demand, with an attractive label.

If you should decide to send any, let us know the quantity, also the price you would expect it to realise. We would then give you terms on which we would undertake the sale. It is not a large trade, and the packages in which it has been offered has been detrimental to it. There is so much fruit and jam in competition.

Yours truly,
GARDINER, THOMAS & CO.,
PRO A. F. GIBBONS.

A clipping from a Prices Current is pasted at foot of letter, as follows:—

HONEY.

Best French (jars)	..	per cwt 80/6
White Stone Pots	...	per doz. 4/-
14 lb. (free) jars Fine	..	per cwt 48/-
1½ cwt. Kegs ..	..	.. 46/-

On the motion of Mr Munday, seconded by Mr Pullen, a hearty vote of thanks was awarded Mr Tipper for the valuable information he had procured.

Mr Tipper, in replying, stated that, should any of the members be inclined to send a trial consignment to Messrs. Gardner, Thomas, & Co., he would undertake to see it was properly attended to. He reminded them that Bristol itself was a very large centre, and also commanded the trade of a good part of the south of England as well as South Wales.

Mr J. B. Hannay, canvassing agent of the New South Wales Commission for the Chicago Exhibition in 1893, was present, and took part in a discussion as to the manner in which entries should be filled in—should each exhibitor use one single entry form for all his exhibits, or a separate paper for each exhibit. It was resolved, as the association had desired the exhibits should not only be entered to compete against the other exhibits but against each other, and as the time was now short, it was too late to make any alteration, the matter remain as it was.

Mr M. Scobie read a paper on the rendering of wax, which space prevents us inserting in this issue. Several members spoke on the subject, the further discussion of which was postponed to the next monthly meeting.

Mr Patten read a communication he had received from Professor Corneil, of Canada, asking for information re the Phenol cure for foul brood. He had written to Mr Ellery, the editor of the late Australian *Bee Journal*, and other gentlemen, who had all spoken strongly against it.

Conversation ensued, taken part in by Messrs. Munday, Mansfield, Vogel, M., Scobie, W. S. Pender, and Pullen the opinion being general that foul brood always originated in small and weak swarms, and that the starvation cure was the only and a most effectual one.

Mr Patten stated that Mr W. S. Pender and he had decided to make a series of experiments to ascertain whether foul brood microbe was a bacillis or infusoria.

Some Points from the Convention.

[Discussed by Miss Bradley.]

I am very glad to find your Convention was such a success, and only regret we were unable to assist at it ourselves; but though we were not there to see and hear, we can read all about it in the *Bee Bulletin*, and, perhaps, we bee-keepers cannot do better than discuss in its columns the questions raised at the Convention. Among others, for instance, Mr. Munday's frames, and Mr. Gales' spacing and brood combs. Is it necessary, or even advisable, in a hot climate like ours, to restrict the free ventilation of air through the hives, as his frames must do? Would it not be likely to encourage the germs of foul brood? I mean if once started in a hive, would it not make the disease harder to irradicate? Does it not offer great obstruction to the passage of the bees to the supers? I merely make these suggestions, as we have only used the standard L frame, which we adopted when we discarded the Berlepsch, several years ago, and my experience of foul brood being, I am thankful to say, almost nil. I am not in a position to speak positively. Although we have so long used and liked the ordinary L frame, I think fixed distances would be an advantage, and we intend experimenting next season with spaces three inches long on the opposite sides of the end bars. Like Mr. Gale, we have hitherto spaced with our fingers, but, unfortunately, Providence has not endowed us with fingers long enough to reach to the botttom of our frames. If you will space a lot of old combs in a hive, and carefully lift it overhead, you will find that the bottom bars require spacing as well as the top bars. Mr. Gale is reported to have spoken so very positively on the subject of the age of brood combs, I gather that he has had an extended experience in the practical working of a large apiary. It is, therefore, with the utmost diffidence, I venture with my comparatively short experience of ten years to differ from him; nor would I attempt to do so were I not so ably seconded by such eminent bee-keepers as Dr. C. C. Miller and the Roots. I must say I do not agree with him in thinking that brood combs should be renewed every three years. Some of our brood combs are fully seven years old; certainly our nucleus are, for they are the metal-cornered frames with which we began working the simplicity now seven years ago. So far from noticing any diminition in the size of our bees, we have this season noticed that our young bees were particularly large and robust. This, of course, we have attributed to the new strain of bees and the favourable season, but it shows that old combs do not really affect the size of the bees. In *Gleanings*, August, 1888, Dr. Miller says:—"I had laid this upon the shelf as a settled question, saying that I had used brood combs for twenty-five years, and could see no difference between bees raised in them and bees raised in new combs. Not long ago a writer in the *Ladies' Home Journal* advised, if I remember aright, 'that

brood combs should be renewed every two years.' Undoubtedly, this is very wild advice; but the *British Bee Journal*, which is not addicted to giving wild advice, says 'We may fairly suppose that three batches are hatched in each cell in a season, in five years, therefore we shall have fifteen layers of coocoon in these cells, provided they are not removed by the bees, which experience seems to say they are not. With our present advantages, we do not think it would be advisable to use brood combs for more than four or five years.' " To prove this, Dr. Miller examined a piece of old brood comb about an inch thick under a powerful microscope, and goes on to say—"I find it has a division made chiefly by the successive deposits left by the brood at the bottom of the cells, these deposits being about $\frac{1}{16}$ of an inch thick. If such addition were made to all parts of the cell walls, the cells would be each one narrower about $\frac{1}{8}$ of an inch, making the cell less than half its usual diameter, and it is easy to believe that bees raised in such cells would be a 'pigmy race.' In the comb, under examination, however, I find that the addition is only at the bottom of the cell —at least the addition to the sides is very trifling. If this be the case then, perhaps we may conclude that the only matter necessary to consider as combs grow older is to see that sufficient addition is made in the space between the combs to make up for their increased thickness." In a foot note Mr. Root, who is a careful observer and is cautious to risk his reputation as a skilled apiarist on mere guess work, says—"Even if the bees are a little smaller when first hatched, in a few days they regain their usual size, and I do not believe I ever saw a colony of bees where the size of the workers was diminished in the least by old combs. There are some queens that produce large-sized bees, and some that produce small-sized bees; but I do not believe that changing brood combs would make any difference either one way or the other. In the same way, raising worker bees in drone combs does not make them permanently larger. We have combs in our apiary that have been in use certainly fifteen years, but I do not believe that I would make the years they have been in use decide about melting them up, but I would melt them up whenever I found that new ones would be enough better to pay for the exchange." In December, 1885, A. I. R. says, "I believe it is a settled fact that bees will live and do well in combs for 30 or 40 years." Again in September, 1888, he says, in answer to a question about old and black combs, "Leave the old combs in the hive; don't remove or destroy them simply because they are old. Combs have been in use as long as 20 years." In August, 1891, Ernest Root says, in answer to a query from New Zealand, "Regarding brood combs, we have some that have been in use 10 years, and they are good yet; and I can see no reason why they should not be good for 10 years to come." It may be well for amateurs to change their combs every three years; to them, perhaps, the expense and loss of time would be a matter of minor consideration, but to apiarists on a large scale the idea of incurring such heavy expense on the one hand, or such excessive and unnecessary labour on the other, seems to be out of the question. With bad seasons and low prices, strict economy should be the order of the day; and I cannot see how that can be attained by incurring the expense of purchasing foundation for two or three thousand frames every three years, or going to the trouble of melting down that number of old combs, making foundation with the wax, clearing, scraping, re-wiring and replacing the foundation into the frames. This latter would indeed be an Herculean task, and I honestly think it would be better to throw the frames into the fire and buy new ones: it would save money, time, and temper, for no part of an apiary is so irksome as that of fussing over old

frames. To carry on our work with the least possible labour to ourselves, we are obliged to incur certain heavy expenses in the matter of labour-saving appliances, but we have the satisfaction of knowing that, like our combs, they are good for years to come. So I feel satisfied practical apiarists will, as a rule, keep their combs as long as they can, or at least until they have better reasons than have yet been advanced for discarding them. I send you a piece of brood comb cut from a card inserted in the brood chamber of one of our hives seven years ago.

Sunnyside Apiary,
Denham Court, Liverpool.

OUR QUESTION COLUMN.

Flat v. Gable Covers.

Question No. 2.—1. Are you in favour of flat or gable covers to hives? 2. Why do you consider one better than the other?

1. Yes, gable covers. 2. Gable covers give better ventilation and rain runs off quickest.—Adam Kirkpatrick, Blayney.

1. Am in favor of gable covers. 2. I consider it keeps the hive cooler and throws off the rain much better, and besides improves the appearance of a hive. —George Knight, Kiama.

1. Flat covers. 2. Because they are easier to make, are cheaper (there being less wood), are handier in putting away, and serve as a table in manipulating next hive.—A. Vögele, Paterson.

1. I prefer a flat cover with a dead air space (As in Simplicity.—Ed.) 2. Whilst being as cool and allowing a certain amount of ventilation, they are cheaper than the gable covers.—S. A. Bradley.

1. I am in favour of gable covers to hives. 2. I do not consider them better, but they answer my purpose better, namely, by indoor feeding, I can place the feeder under the cover, and further they carry off the water better than flat covers.—H. Naveau, Hamilton, Victoria.

1. Flat. 2. Hives with flat covers make a good table to lay tools on when operating with the next hive. Gable covers harbour spiders and other pests.—J. E. Taylor, Cowra and Coota Apiaries, Cowra.

1. I am in favour of flat covers. 2. On account of (*a*) simplicity and cheapness, (*b*) occupying less room in the workshop, (*c*) being more convenient when carting or moving, and being thicker timber more durable and less liable to warp, besides other reasons.—R. J. Cribb, Brisbane (Q.).

1. I use the Berlepsch only. I have not had any experience with any other. 2. If the hives are out in the open I consider the gable covers the best for the purpose of turning the water off.—P. S. Grunsell, Goulburn.

1. Flat covers every time. 2. They are more economical and easier made, less liable to be displaced by wind, warmer throughout the whole year, which has more to do with the prosperity of the bees than the excessive heat of summer, which is a drawback. Using broad top frames I am happily independent of mats, therefore I only desire a scant bee space twixt hive and cover.—John Tucker, Paterson.

1. I am in favor of flat covers. 2. Flat covers are not so clumsy, and keep the bees more snug in the winter. When you are working among the hives the flat covers are an advantage, because you can rest smoker, sections, wide frames, and such like on top, which cannot be done with gable covers. Good sound wood should be used for flat covers.—W. Shaw, Mudgee.

1. I am in favour of gable covered hives. 2. (1) They are much cooler in summer, (2) and stand the weather better. My experience of the flat cover-

ed hives are hot in summer and damp in winter.—J. MURRAY WALLACE, Manager Garangula Apiary, Murrumburrah.

1. Gable by all means. 2. When well and neatly made with a good rabbit all round and well painted they will withstand any weather, heat, wind, or rain, besides I like the space above for introducing queens without moving frames and alarming the bees, and also taking off and putting on with one hand if the other is full, and last but not least, beauty, as a row of hives with gable roofs look finished.—J. WILSON-GREEN, Logan River, Queensland.

1. After considerable experience with various kinds of covers, I am decidedly in favour of flat covers. 2. I prefer flat covers for the following reasons :—1. Shade boards can be put on them in summer. 2. They can be used to stand supers or honey chambers on while you are at work at the hive, one hive can be placed on another. 3. They can be used reversed—one side coloured white for summer and one red for winter. 4. They take up less room, are cheap, durable and easily made.—J. F. MUNDAY, Iona Apiary, Woodville.

1. Flat covers. 2. No necessity for quilts, saves time in manipulation, prevents combs being built above the frames as in quilts, having the top of the frames clean there is less liability of having burr combs when top stories are added, less harbour for spiders, moths, &c. They are the cheapest and easiest of construction for amateurs.—B. NEVEAU, Osborne Apiary, Barrangarry.

1. All depends on the style and quality of hives and quilts. 2. The flat on thin hives conserves heat. The gable on thick hives sheds water and sunshine, gives ventilation. The flat on thick hives is sealed down by the bees, after the quilt has been cut, to give air in warm weather. The style of covers is not important; that covers be of good wood, sound and free from cracks, is most important.—J. RIDDELL, St. Ives.

1. Yes, I am in favour of flat covers. 2. Why I consider the flat covers are the best is simply only on the ground that the flat cover is easier made than the gable cover and not so top heavy. I have worked both side by side, and I do not consider it any difference to the bees of what sort of cover they have over them. In windy weather I have known the gable to come off, and not so with the flat.—ALICK PARKER, Redbank Farm, Narandera.

1. Flat every time. Flat covers indicate flat fittings, which, when all is said regarding the need of rabbits, have the strongest arguments to rely upon. 2. Warmer, no need of mat, less liable to move with wind, &c., more weather-tight, more easily handled, may be used as floor boards if required, handy to place bodies or super upon when manipulating, or to sit upon, may be shaded if necessary with second board, are cheaper, crush less bees.—LEONARD T. CHAMBERS, Franklin-st., Melbourne.

I have used the gable covers largely and like them, with a mat under and the hives standing in the sun I think they are cooler, and there is never any propolis around the edges to glue the cover down, and cause the bees to be jarred when removing it. If the hives are in the shade and out of reach of rain I would prefer flat covers with a mat stretched right across top of hives; this allows always of easy removal of cover, and the mat can be removed by being pulled back over frames as far as required, and no annoyance to bees, very little if any smoke required and no stinging. The condition under which the hives are placed guides me in my choice. Flat covers are cheaper, stronger, not so likely to be blown off, can be weighted down with a stone, lighter and handier to remove, allow of hives being piled away in a small space, and are easier to make watertight if made of one board.—W. S. PENDER, W. Maitland.

On hives with frames hanging at right angles to the entrance so that they can

be tilted forward, thus draining not only the cover but the bottom board, a flat cover sheds the rain as well as a gable, and flat covers have so many advantages for the bee-keeper, and serve the bees equally well. The Heddon bottom board is a necessary concomitant of the flat cover.—THE EDITOR.

A Successful Show.

The Agricultural Show, which took place at Ipswich (Queensland), was a great success, as we learn from the *Queensland Times* and from the *Ipswich Advocate*. The greatest draw was Mr. H. L. Jones' exhibit of bees, honey, and apiarian supplies, books on apiculture, and bee-periodicals. We congratulate friend Jones on his success.

The Pepper Tree Killing Bees.

[BY W. SHAW.]

In the May number of the *Agricultural Gazette* an article appears from a correspondent at Deep Creek, in which he instances a swarm of bees that had settled on a Pepper Tree having all died, after remaining there for the night, and believes that the peculiar nature of the tree was responsible for this. I beg to differ with him. I have seen swarms taken from Pepper Trees, but they did not die, but they were not allowed to remain there for the night. In an article on "Bee Pasturage," and which was read at a meeting of the Hunter River Bee-keepers on December 15 last, contributed by me, some one mentioned at the meeting that he believed the tree killed beetles, and if it did this, what about the bees? It is just the reverse. At Christmas time the trees suffer considerably from the ravages of a large brown beetle, which goes under the name of the Christmas beetle. If the tree is of a poisonous nature, why is it that these beetles do not die, when they *eat the leaves*, not like the bees, hanging on the tree? They are a perfect pest. The best way to get rid of them is to give the tree a good shaking in the middle of the day, when the beetles will fall to the ground, and if there are any fowls about they will soon make short work of them. Let no bee-keeper be afraid to cultivate this tree. It is a most useful one for the bees (I allude to the male tree). I have much pleasure, Mr. Editor, in sending you a sample of the honey obtained from it, so that you can pass your opinion on it.

Denison-street, Mudgee.

[We have received a tin of honey containing 1½ lbs., of a very thick and deliciously flavoured honey from Mr. Shaw, it is very bright and of a splendid colour.—ED.]

Explanatory Notes.

[BY PETER RIDDELL.]

While allowing a reasonable discount for the bias to favourites, and for the extra attention given to new stocks, I firmly believe the findings of each authority in the question column of last issue, and especially those who are candidly uncertain, to be fairly and truthfully told. Permit me to present the beginner with a few explanatory notes. The black bees we find in our bush are no longer British black bees, pure and simple. They have had to "rough it" in the bush, being subject to the law perceived by Darwin relative to the survival of the fittest. Many have been hybridised, and have become acclimatised, vigorous, perpetuated hybrids in the garb of blacks. The hybrid selected by nature or art and bred back becomes a special strain, such as the golden carniolan. Some such colonies have been taken from the bush, excelling in every particular the best of any pure bred race. Seven generations of any race of bees in the same locality, gives a

revolution, either retrogressive or progressive. The beginner shall do well to accept Miss Bradley's answer as correct, for that has the whole science of Insect Biology corroborating it. Bees taken from a cold to a warmer country, will surpass naturalised colonies in winter breeding. And since Italy is more like Australia than Britain, Italian insects are more at home here than are British insects. No verdict from any senate of experimentors on any race of bees can be accepted as peculiar, unless all relating to nativity and breeding is first correctly stated. Indigenous bees hibernate, they are found among the seven sleepers; others follow suit in proportion to their usage and degree of naturalization. Apiculture upsets the whole. The spontaneous flight of queens in the bright October is controlled by art—some are introduced of an age to lay as they may all the winter, others to cease laying in the burning January in the midst of the sweetest of honey flows, to be speedily superseded at that season by invincible instinct, although perhaps unnoticed by the worthy manager. The month of appearance and the subsequent age of the queen, affected by the amount of energy expended, and by other circumstances, has more to do with laying and not laying, than have any qualities of race. To prove this let the sceptical experiment, rearing queens every month of the year, giving the queens of each month an assigned mark from a caustic needle perforation of the wing.

From the answers it further arises to the beginner: what is an hybrid queen bee? Granting that he knows what a bee is, and that the hybrid results from the mixture of two species, he has still to unravel and define the meaning of hybrid *queen* bee. A pure bred bee mated with that of another race is not strictly speaking an hybrid, but is hybridised. The progeny of such will be hybrids. A queen from such hybrids similarly mated will give second hybrids. For the sake of quality and of clearness, let us confer the qualities of the workers to their queens, and we have, first hybrids, second hybrids, &c. The words "untested" and "fertilized" may happily be applied to queens, but to say that a queen is "mismated" is neither courteous nor instructive. To show that we use too many words for the same thing, place "fertilized" for "mated," and we have the very questionable "misfertilized" queen. If we use "hybridised," we shall not have to label the poor insect, as being mismated, a matter beyond her special choice, while perhaps she may be in the very state we desire, that is, hybridised. Finally the beginner may perceive truth and perfect harmony in the findings of one friend contradictory to those of another. The players of "Apple tree vs. Apple tree" score the same goal in different fields. Ever since the expulsion from the paradise of Eden, it has been known to man that apple trees do not all bear fruit, nor bear fruit equally. And the men of to-day know further, that soil, climate, and erratic changes of weather, bear directly on the fruiting result. If the buds of the trees in question are prematurely forced to bloom, they will contain little nectar, but if slowly matured to bloom in season they will contain much.

The Bee Farm, St. Ives.

Rearing Queens and Italianizing.

[By Josiah E. Taylor.]

For the last few years I have been experimenting to find out the easiest and surest way to rear queens and get them accepted by colonies containing a laying queen, which I wished to supersede without loss of laying queen for any time to said colony; my experiments and results thereof it is now my intention to make known through your columns, with your permission.

I read about the Lamp Nursery in "Root's A.B.C. of Bee Culture," and

very soon gave a local tinsmith the dimensions to make me one, but as he was so long about it and I was anxious, the thought struck me—why not utilize the heat from a lower storey, and thus dispense with the lamp and its accompanying dangers? I made a frame of bare ⅜ stuff, to fit between frames in lower and top storey, and tacked thereon fine wire netting, same as the wire dish covers are made of, and whenever I had some nice queen cells about to hatch I would hang an ordinary frame with honey in this top storey—all the better if it contained some hatching brood,—and if I wanted to hatch more than one cell, I simply inserted division boards in top storey and hung a frame between each; this succeeded well in warm weather, but the trouble was that I lost several in introducing them.

Before proceeding further, I wish to state that up till a few weeks ago (after my attendance at the Maitland Convention) when I procured one in Sydney, I had not seen Doolittle's book on Queen Rearing, neither had I any idea of his plans for same, although I had tried all Sydney to procure; and about three years ago I mentioned to Mr. F. Jeanerett, with whom I had some correspondence at the time, that I was experimenting along this line, and I remember he told me that I was on the same track as Doolittle; which I find to be the case. But I think, before I conclude, I will be able to show that my track is better cleared.

My idea in mentioning my experiments and partial failures is to prevent others from losing time in going over the same ground.

My next trials were with Queen Nurseries, the one I like best I made from a description in *Gleanings*, with glass slides, holes to hang the cells in, and blocks of wood with holes bored to contain candy for the young queen to eat when she hatched out; these answered fairly or well to hatch queen cells, but I did not like the disturbance it caused in the hive in looking at it so often; and, being in the brood nest, it seemed to upset bees and queens. At any rate I was not satisfied, as I still had the same difficulty to contend with, viz., to introduce these young queens to hives containing laying queens without loss of time or risk.

What should I do now? Up to this time I had not had any experience with queen-excluding zinc; but as soon as I procured some I felt confident that was going to ensure me success. I placed a queen-excluding honey-board between the frames of bottom box and upper box; then again placing another queen-excluding sheet of zinc and another storey above that, great was my joy to find that I could rear queens from the eggs or hatch out queen cells without failure. So far very good. I could rear queens in this third storey, and by boring a hole at the back (I now know, á la Doolittle) I could get these queens fertilized, one or more by using division boards.

(To be continued.)

Full sheets of Drumfin foundation.

Gone Astray.

We have had great trouble with the delivery of the *B. B.*, over twenty subscribers have been put to the expense of writing us to replace copies, which have not come to hand, and some have had to do so for two issues running, while to one we posted a second copy, and advised him of the fact, he had to write again for a third, as it too had gone astray. This is a serious tax upon our subscribers' pockets and patience. We take all care, and as it is most important to us that all our subscribers get their copies, we are very careful, and we feel bad about it.

Mr. Donald Campbell, of Stawell, Victoria, is a progressive man, he has a 4-comb Stanley Extractor, and reckons to drive it by steam next year, he will be the man to take up the idea of extracting from whole supers at once, which is the next step.

Blacks v. Hybrids & Pure Italians.

(*To the Editor.*)

SIR,—I have received a clipping from the *Kangaroo Valley Pioneer* of May 10, in which, under the above heading, a Mr. John Yuill, of Wallambeen, takes me to task over a certain article which appeared in that journal, taken from the *Bee Bulletin*, entitled the "Italian Hybrid," and which article, I may add, has appeared in several other country journals in Australia. The writer states that I am evidently a know-nothing, or merely a conformist to fashion. With regard to the latter statement, I may add that there was no fashion about it, it was my actual experience, and the plain honest truth. With regard to being a know-nothing, there may be some points about bee-keeping that I do not understand, but there are, again, a few points that I do very well understand. One of these is that I do *never allow* my bees to die of starvation during the winter months; that I do not rob them to such an extent that they will be in want, and that I also take all sorts of care that every hive has a sufficient amount of honey for its preservation. Mr. Yuill makes the assertion that he is not an apiarist on a very large scale. I think so too. I think he is a poor specimen of one altogether, or he would not admit that he actually allowed twenty-two colonies out of thirty-two to die of sheer starvation during the winter. I would feel ashamed to blazon forth such a statement. Last winter I had twenty-three colonies, and they were all alive in the spring; none of them *were allowed to die from want.* Mr. Yuill states that under proper conditions there is no bee that can surpass the common black. Will he kindly explain what those "proper conditions" are. He further states that Italians and Hybrids want feeding to prevent them from perishing in the winter from want. Whoever heard of such nonsense as this. Is it not the aim of every bee-keeper in the Autumn to see that his bees *have enough stores* to tide them over the winter? He further says that such a statement won't be readily accepted by many new-chum apiarists. No, friend Yuill, it won't be, or by old ones either. Mr. W. Abram, of Beecroft, entered on his bee-keeping career on the 3rd June, 1876, and has been at it ever since. He has tried all races of bees, in different countries and under various conditions, and he now admits that the Italian is the most beautiful, profitable, and gentle race in existence. Mr. C. Dickens, lately of Adelaide, South Australia, states that the Italians are, by an overwhelming weight of authority, admitted to be the best. Mr. J. Hopkins, of Auckland, New Zealand, an eminent authority, who has made bee culture the study of a lifetime, states: "There is not the slightest doubt but that the Italians are far superior to the blacks." The same race has been the favourite since its introduction into America early in the sixties, and those who have tried other races have given them best, and gone back to the Italians again. Mr. Yuill further states that the Blacks have had the experience of the Australian flora. As the workers do not live more than from seven to eight weeks in the summer, I take it that every bee has to gain his own experience. If a vote were taken to-morrow on Italian Hybrids and Blacks, friend Yuill would find himself beaten by 10 to 1. I will still sing the praises of the Hybrids as honey-gathers, nor am I friendless in the matter. In the very first issue of the *Bee Bulletin* there are two that endorse what I have said. Mr. J. E. Taylor, of Cowra, says:—"I find that Italians do better than Blacks, but the first cross does better than either." That, of course, is Hybrids. Mr. Doyle, of Werris Creek, writes:—"I have mostly Blacks, but I find the Hybrids are by far the best honey-gatherers." And even you, Mr. Editor, in correcting an error on my question, stated that, although the vote went in favour of the pure Italian, the

weight of evidence seemed to be on the other side—that is, in favour of the Hybrids. Apologising for trespassing to such an extent on your valuable space, I am, yours, &c.,

W. SHAW.

Denison-street, Mudgee,
May 21, 1892.

Our Melbourne Letter.

[From L. T. Chambers.]

No. 3 *A.B.B.* to hand, containing plenty of good matter. Until I read it I was under the impression that only "the best managed railways in the world," here in Victoria, were guilty of smashing up comb honey and poking holes in tins of extracted honey. But I note that you appear to be troubled in the same direction in New South Wales. Possibly the carriers are not altogether to blame in the matter of breaking comb. To avoid this I found it best to consign only during warm weather. If necessary to move it during the cold months send only by passenger trains. It is shunting of trucks which does the damage. This cannot well be avoided. I have found it to be an advantage to load, if possible, in break vans, under the direct charge of the guard. All comb honey should be packed so that the contents may be seen behind glass, and be in small-sized packages of one or two dozen. If these boxes are then crated in lots of six or eight they will handle safely. Many producers of comb use full foundation for boxes, that it may have attachment all round. This will insure safe carriage, but greatly impairs the value of the sample, by the supply of too much wax to the honey area. If honey is coming freely the bees will build upon the foundation instead of reducing it. When we can secure foundation twelve or fourteen feet to the pound, possibly we could more safely use full sheets. I hope that you will arrange the matter of Mailing Queens to your satisfaction. During the sitting of the Postal Conference at Hobart the writer sent along a memo through the P.M.G. of Victoria, reviewing the matter, but nothing came of it.

Victorian Bee Convention. Some one says this *ought* to have been notified. Quite right friends, so it shall be if you will only give us time and put a qualification on the ought. The Convention was called together for the purpose of establishing a Victorian Association, and for the purpose as such of considering certain articles of mutual interest. This has now been done and we have a properly constituted Association of Victorian bee-keepers, who attended from all parts of the colony. One member spoke of bread and butter bee-keepers' but the term was objected to, and bread and honey bee-keepers' substituted. Our Convention represented between 2000 and 4000 hives, and we expect our membership to cover up to 10,000.

Copies of the *A.B.B.* were distributed during the conference, and the matter of a bee journal freely discussed, but upon a vote being taken it was decided to attach our interests to the organ of the dairyman's association, *The Melbourne Farm and Home*, which is published bi-monthly. We had a good, practical time, and all attending expressed themselves interested and pleased at the results.

Matters otherwise quiet. We are waiting for warmer weather.

Answers to Correspondents.

Mr. R. M. Jervis, Moss Vale, many thanks for names of bee-keepers.

We simply stated, in a foot-note to friend Riddel's article, that the Forests branch of the Department of Mines had published a valuable work on "The timber tress of N.S.W." but not that we had it, we will try to procure you one and keep some in stock.

Mr. J. Waddell, Adaminaby, we have sent "B.B." from April, your sub. will carry you to end September.

Mr. R. J. Cribb, Brisbane, with us the spotted gum is in full bloom, the brush Ironbark is just going off, and the white-thorn is at its best, but this is *their* season.

Mr. Burrage, Manly, your paper is valuable matter—but we cannot squeeze it in this issue.

We are asked by E. J. Rein to correct an error in entitling him the Principal of the Hawkesbury Agricultural College, he reports that the bees are gathering honey-dew from the *Aphides* on such timber as are affected by them around Richmond, and inquires what is the test by which honey-dew can be recognised. Will anyone tell?

H. E. B., Armidale, says, in answer to G., that the best location for an apiary is to be found on the tablelands of New England, on the stringy-bark ridges, and that the crop is not gathered from the flowers to any great extent but from the leaves, the honey splendid, the flow long-continued and fairly regular; there are no regular bee-keepers there, only a few men who keep a few hives.

We have to present our thanks for communications to friends W. Crawford, Wingello; W. Niven, Eugowra; C. Mansfield, Largs; J. McClure, Fivedock; James A Pye, Rockley; J. T. Hutchinson, Lismore; and several other friends, but our limited space prevents us making use of their contributions this issue.

How to Handle Bees with Smoke.

WRITTEN FOR THE *American Bee Journal.*

After 20 year's experience in handling bees, let me say to the beginner not to attempt it without a smoker in good trim. Go in front of the hive, and blow in the entrance three or four strong puffs of smoke, then rap with the knuckles, or a small stick, half a dozen times, then two or three more puffs of smoke in the entrance; after which remove the cover of the super or hive, and raise the corner of the quilt and puff smoke in from the top, gradually drawing back the quilt or cloth, and cover the the sections or frames with smoke. Remember that the reason some of the bees are cross, and will sting is, that they have had no smoke. Be sure that every bee in the hive has been smoked, and you can handle them as you please. J. BROUGHT.

A Veteran's Greeting.

We have received a hearty and fraternal handshake, per post-card, from that veteran Bee Journalist, Mr. Thomas G. Newman. It is good to feel we have an elder brother in one who has climbed to a platform so elevated as is the editorial chair at the "American Bee Journal."

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