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

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A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

VOL. 3. No. 32.

JANUARY 24, 1895.

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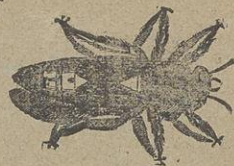
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TUESDAY, FEBRUARY 12TH.

11. —Size, shape and make of hives.

C. MANSFIELD, Hon. Sec.

Thomas B. Blow

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The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—JAN. 24, 1895.

THE month of February brings its work and responsibilities to the careful beekeeper. The prevention and disposing of after-swarms, the ripening of honey, the getting of markets and holding back, and re-queening of hives, are all matters of consideration. The last item we are making a special subject for next issue. The other matters have all been dealt with in subsequent issues, but we shall always be happy to reply to any inquiries that may be sent us.

During the present session of parliament, the N.S.W. Minister for Agriculture has promised to bring in a Foul Brood Act. Bee-keepers should urge on their respective M.P's., the necessity of helping on such. Another matter undertaken by the Committee of the National Bee-keepers' Association, was that of Adulteration. Only during the past week, a bee-keeper applying to a large store in Newcastle, was told they could get honey cheaper than the price he wanted, and the concluding remark was, "We can also make it ourselves." It only needs the Committee of the National Association to tackle this matter, and it could be settled very quickly. Six months has gone by since the last Convention. Will the Committee then appointed have a better record than the last Committee or otherwise?

We will have to make that "long idea" a special subject for March. We have reasons for thinking "there is something in it." We will ask those who can speak about it to sharpen their quills.

THE BLUE MARK NO MORE.

The N.S.W. postal authorities have notified us that the use of the blue mark is an infringement of their regulations, that such prevents accounts being posted, and therefore the revenue suffers. So in future those of our subscribers who are in arrears, we will kindly ask them not to wait for accounts to be posted to them, but save us that additional cost and trouble by forwarding their subscriptions when they know same to be due. While on this subject we may incidentally mention that there is a great deal of money owing to us both in subscriptions and advertisements, and would ask our friends now that the honey crops are coming in not to forget us. It is really all wanted

Several exchanges of apiaries have taken place in the Hunter River lately. Mr. Pender has purchased Mr. Humble's apiary at Warrah. A few weeks ago two rough-looking individuals in charge of a lorry, stopped at our door and asked us to go with them. Not being quite sure who they were, and having no time to spare, we politely declined, and then it was we discovered they were no other than our old friends, Messrs Mansfield and Patten, going to remove 40 hives which the former had purchased at Millers Forest, and in attire suitable for the job. We wanted the Rambler's kodak badly. — Mr. J. E. Smith of Teralba, has purchased that really model apiary of Mr. Welsh, of the same place. He has 60 hives of his own. Mr. Welsh's 60 added makes a grand collection. The whole lot are in splendid condition. Mr. Smith has already extracted about two tons of honey. He has taken a 40-acre selection a short distance from Teralba, where he intends to move the lot. We wish him every success.

The luerne in the neighbourhood of West Maitland has been let go into blossom very extensively this year, the result being that the bees have been booming, and any amount of honey coming in.

The N S W postal authorities are getting very particular. They will not exchange postage stamps or allow the blue mark to pass. Kindly send us postal notes.

On a recent visit to Mr H. W. J. Taylor's apiary at Black Hill, he shewed us a laying queen, which laid eggs that did not hatch. She was a really nice-looking, strong, well-developed queen, daughter of an imported queen. Other queens from the same batch of eggs hatched their eggs all right. Can any of our readers give similar experience?

We have received another excellent addition to our stock of photographs of apiaries, that of Mr. G. Schumack's of Binnaway. It is a really nice picture,—all the hives are two stories, well arranged in rows, at fair distances. He uses gable tops. The back ground includes the house, members of family, &c. The ground has the advantage of being pretty level. Thanks friend Schumack. We have put it in one of our frames, and will show it at next convention. By-the-way we have not heard a sound of that yet.

We have received a reprint of the *Australian Agriculturist*, giving a short, but very interesting biography of Master A. F. Burbank, of Castra Apiary, near Brisbane, a youth of seventeen. Of his apiary, it says:—There are forty-eight Langstroth hives altogether the majority double ones; the pure Italian bee predominating. The commencement, he said, was made with a kerosene case, and a swarm of bees obtained in the neighbouring bush; but queen was not brought with them, and the bees quickly died off. In November 1891, a better start was made, and a swarm procured from Mr. W. G. Burn, Vernon Park Apiary, Mt. Cotton, to whom much of Master Burbank's knowledge is gratefully credited. From this latter swarm, some 20 others obtained from the bush, and a number of Italian queens, his stock has descended. The 23 hives of last year yielded only some 5 cwt. of honey and 14lb of wax; but

this was due to the drought, scarcity of flowers, and also to the large number of beetles, ants, and other insects invading the blossoms. The flowering this season is also very late, but, no doubt, as the trees are showing well in bud, the return will be very good. Every accommodation to handle the bees properly is at hand at "Castra."

SPECIAL SUBJECT FOR JANUARY.

31. Should the queen be allowed the full use of the hive for brood rearing, or should she be confined to the brood chamber, and in what manner?

WILLIAM S. PLEFFER

I would rather give the queen full use of the hive than use queen excluder zinc, it hampers the workers in their passage to the supers. If there are frames in brood chamber containing more honey than brood, shift into super, replacing with empty combs. If a queen is found on a frame of brood in super remove to brood chamber. Whenever queen is found in super drive her out, and if there are empty combs in brood chamber she will not be much trouble to keep out.

GEORGE JAMES.

31. If I were to use the 8 frame, or any hive so small, I should certainly allow the queen to have the run of a 2 story hive, and I am not sure it is not as well to let her have all the room she wants, and then pile on the supers. But in a district like ours, where the first flow is in very early spring, a 10 frame body and excluder with half depth supers is what is required. For a locality where there is a later flow, say Nov. or Dec., I should allow the queen all the room she required, and when a good flow does come the bees will pile in the honey to her exclusion. If you don't believe it, try it.

BINNI.

Depends upon what crop you desire—Extracted or comb honey. If you work your hives for extracted honey I see no reason for restricting the queen to one storey, provided you are careful not to extract from combs containing unsealed larvae. If comb honey is desired it is absolutely necessary to keep the queen from laying in the sections. To do so you must confine her to the brood chamber. Believing, as do, in the superiority of the T super for raising sections over any other method, the way I cor fine a queen, or rather keep her out of the surplus chamber, is by the use of a slatted wood zinc excluder. Place this at the right time on the brood, and the T super over the excluder, and all will be "just lovely."

APIS TRIGONA.

31. I believe in the queen having full and unlimited scope to lay in, and if her laying capacity is beyond filling the bottom chamber let her have full sway in the upper deck, as the more bees in the hive the greater the yield of honey.

SCHUMACK BROS.

31. In my opinion the queen should only be allowed the brood nest, and not to be confined to it at all. We use frames 16 inches long and 9 inches deep for the brood nest, and six of them, with a good queen, will be found all that's required to keep a hive well stocked with bees; by using frames $1\frac{1}{2}$ inches wide in the top story, there will never be any trouble with brood in them, as the cell will be too deep for the queen to lay.

H. W. J. TAYLOR.

31. In a district where the honey-flow is heavy I think it best to let the queen have the full use of the hive. For this reason: the queen is curtailed enough by the bees filling the cells with honey, therefore I say let her have the full use of the hive and lay wherever she has the chance, for we must keep up the strength of our hives if we want honey. But I am inclined to think, where the honey-flow is light it would be best to confine her to the brood chamber, as by letting her have the full use of the hive they may breed too many bees, and be more inclined to swarm than gather honey.

B. R. DOYLE

The queen should only be allowed the use of the brood chamber, and prevented from going above by use of queen excluding zinc (unbound). If allowed the full use of hive she will, after laying in a few frames below ascend to top story, and honey which would otherwise be stored in the top will be placed in brood chamber. My experience is if the queen excluder is used the bees will store very little honey in brood chamber, except round the top of frame, just where wanted for brood rearing; and a lot of brood in top is a nuisance when extracting.

DONALD G. GRANT

In theory I should say *Yes*, particularly in a slow or intermitted honey flow. It could be done with a honey board or by means of extra wide spacing in the super, causing deep cells to be built. The cost of honey boards is the principle drawback to the general use of them in practice, and there is no doubt that they increase the tendency to swarm, but I believe that for the production of honey on a large scale and at a minimum cost for labour, it would pay to use them on all hives and work the bee-escape in conjunction with them for emptying the supers before extracting instead of handling and brushing off the bees from each frame. The increase in the swarming rate could be provided for by the use of either a non swarming device or a self hiver, preferably the latter.

C. MANSFIELD.

31. I must say at starting that I use wide-topped frames, with spaces cut out at the ends to allow for handling and to enable the bees to enter the upper chamber. By this arrangement the queen seldom enters the supers. But if I used the ordinary frames I should say even then let the queen have full use of the hive, especially when working for extracted honey. The only way of keeping the queen in the lower story is to use the ordinary metal excluders or honey boards, and to these I certainly object, in fact, I think, as an aid to successful bee-keeping their use is on the decline. If the queen happens to go upstairs and plank in a clutch of eggs, well, what then? Let them mature. The queen will go back to her ordinary compartment, and when the brood emerges in goes honey, and another super could be added between the other two. And, O my! what a pot of honey that hive will give, for in this climate, as a rule, we are not confined to a honey-flow of only a few weeks' duration, as in some countries. Of course, if the queen goes up aloft just at the approach of winter, then just there she will stay, and I say let her, and then the bees in passing through the lower chamber will keep the combs clear of moth, and save the bee-keeper that trouble. Things would have been very different if the hive in question had had a honey board on.

N.Z.

31. By all means allow the queen the full use of the hive for brood rearing. I have been advocating this for the past 14 years, and now I notice in *Gleanings* that A. I. Root is just *beginning* to fancy it *may* be the best plan. If you confine a good laying queen—and no others should be tolerated in an apiary—to the lower story of say a 10 frame Langstroth hive the result will be that you will force the bees to swarm at a time when you don't want them, and thus curtail your output of honey. I have had hundreds of young Italian queens that have occupied the greater part of the space in the ten combs of the lower hive and several combs above for brood rearing. One of the recognised points in successful bee culture is to secure prolific queens; this being so I would like to know, how we can reconcile this with the method of curtailing their breeding as is done by confining them to a limited space. When I am working for surplus honey I want the very largest colonies I can get during the honey season and I can only get such colonies by giving the queen unlimited scope in the hives. It is no trouble with Langstroth hives and much more profitable to put in an extra story or two when required—in fact I never could work satisfactorily with less than 2 or 3 upper stories (each containing 10 full size frames) on. The foregoing refers chiefly to raising extracted honey, but exactly the same thing applies when raising comb honey, except that there is little or no risk of the queen laying

in sections when full sheets of flat bottomed foundation is used in them. If need be in the latter case give an extra lot of brood comb over the ordinary brood nest.

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

31. I prefer to let the queen have the run of the hive; the only way to restrict her to any part is with excluder zinc, and this does not always succeed; while I am of opinion it interferes with the bees' work, and bothers them, meaning a consequent loss of honey. Where I have a prolific queen who goes into the second story I put on a third story and I have never known a queen to lay in three boxes.

JOHN SMITH, Q.

31. Have tried two or three ways—but find it best, as a rule, to let the head of the family have her own sweet will in her own kingdom or rather queen-dom. Now and then, however, we make a few little alterations in the conduct of State affairs; such as moving that the supplies (frames of honey) be sent to the "Upper House," and that the Bill sent from the Upper House (an empty frame) be inserted in centre of the Lower House for consideration, and that it be duly filled at her Majesty's earliest opportunity. If you confine the Queen all the affairs of state and of the colonies are apt to get into disorder and confusion.

GEO. COLBOURNE, Junr.

If we do not desire any natural swarming, I would let the queen have the run of the whole hive as this lessens the desire on the bees part to swarm. If we keep the queen confined to a brood nest of the capacity of the eight-frame Simplicity hive and she is as prolific as she should be, she will soon have every available cell filled with eggs and brood and the consequence is the hive is over crowded and a swarm is generally the result, believing the above to be true I always allow my queens full liberty to enter all parts of the hive in spring, and usually all through the year, as I find that when honey is coming in freely, the bees will pretty well crowd her out of the extracting supers. I might here mention that my hives contain from 11 to 13 Gallup frames in each story, I much prefer those containing 13 in the brood nest, as the queen may then be kept below, through the honey season, when honey is coming in freely, I use but 10 G. frames in the extracting supers.

QUESTION.

32. MR. JOHN ROBINSON, NEW LAMBTON.

On the 15th December, I had three young queens fertilised, two were balled, one was killed, I had to cage the other one, the third one was all right. Last year I had young queens killed the same way. What is the cause of this balling and killing them?

SCHUMACK BROS.

32. In my opinion your queens in returning to the hive after meeting the drones got in the wrong hive, as I have had the same occur here.

B. B. DOYLE

32—Only have so far one similar case, the bees balled the queen and would not accept her again on any account. However after keeping her balled for a day they accepted her and she is now laying and a fine queen.

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

32. I have the same thing occur occasionally, and I think it is due to some defect in the queen, as bees we know distinguish between queens, presumed by the smell, and perhaps the virgin has had to take such a long flight or has been absent such a time that she has lost the distinguishing characteristic, and they take her for a stranger, and treat her accordingly.

"N.Z."

32. Very often the cause of balling young queens, in fact nearly always, is the fault of the beekeeper himself in handling the bees too much and too soon after the former have been introduced especially when there is little or no honey coming in. Feed when introduced for a few days if no honey is being gathered and don't meddle with the colony for a week or more. Balling as a rule only takes place in small colonies under the conditions named above.

C. MANSFIELD.

32. I have had similar experiences to Mr. Robinson, I attribute the anomaly to following cause, viz., the smallness of the swarms containing the young queens. When a young queen begins to lay she goes at it with a will, and a small swarm just enables her to do this, but all at once comes a stop, and she becomes discontented, and even tries to leave the hive, which the bees trying to prevent the queen is balled. I would say cage the queen for a few days. When the young brood emerges, all will go right.

BINNI.

32. I have experienced this too, especially last year. I am of opinion the trouble arises from the fact that for some reason virgin queens were very loth to go out of the hive last year. In several instances with me they did not attempt their wedding flight until the 20th day, then they were balled by the bees, and ultimately driven out. On returning, having accomplished their object, the bees balled them again. Maybe the beekeeper was to blame opening the hive for investigation just at a time, my experience has taught me, when bees desire to be let alone.

GEORGE JAMES

32. To hazard an opinion, I should expect that it was a case of where the bees had got to robbing or else a scarcity of honey and the bees got on a rampage stinging everything that came in their way. When robbers are at work they are generally the cause of a lot of bother with young queens that have been out to be

fertilized, as the bees are on the defensive, they may have balled their queen for protection. Then again I have had a few cases where the bees have balled their queen soon as you took out a frame. Was there not a honey dearth at the time of the mishap?

"APIS TRIGONA" MINMI.

32. This question could have been more fully answered if a little more information had been given, and if the balling took place in full hives or in nuclei, and had they been handled much. I have myself had young queens in weak nuclei balled in the same manner, and consider that the cause in many cases is due to frequent handling or removal of the covers, when the bees being few in numbers are more easily irritated, and vent their wrath upon the unfortunate queen. More especially is this the case when a queen has been previously removed from the nucleus and a second one introduced.

The following replies to questions in previous issues came too late for previous insertion.

J. J. HARRY

I use the 8 and 10 frame Simplicity hive, but prefer the 10 frame. I mostly use shallow frames supers for extracting, but if I have a good swarm I use the full size frame on top. There is no use giving sizes of frames, as the Simplicity is too well known.

30.—To those hives that have not gable covers 1 inch redwood, cleated underneath. Then you have a current of air between the shade and the cover. Good stringy bark will answer just the same only it does not look so nice, and the bark stains the painted hives. It will require a weight to keep those shades on.

SCHUMACH BROS

In introducing a queen, the best way I find is to introduce her directly you remove the old one. I always introduce them under a piece of netting, the sides and ends of which are turned up, on a frame of hatching brood, slightly pressed in so as it cannot fall. I think that this is about the best and simplest way of introducing a queen, as the bees do not appear to know that they are queenless at all. After one day under the netting she can safely be released. I have introduced a great many in this fashion and have never had any killed yet. I think it is a bad plan to leave a colony of bees three or four days before introducing, as it means a great loss to the bees. I think queen-raising, by the grafting process, is equal to any way they can be reared; we have a dozen of these queens that we have reared ourselves this way, and, without a doubt, I consider that they are equal to any to be found in the colony.

A. W. DUMIGAN.

27.—I will try to give a description of the kind of honey house I intend to build. My experience teaches me you cannot have a honey

house too large, say 15x21x11, where you will have ample room to extract and storage of honey. The walls are high, which allow sufficient fresh air for the beekeeper when extracting which is greatly accepted in these days, as every door and window is closed to exclude bees. In dealing with the honey house I would divide it into two separate compartments, one half for extracting and the other for storage of honey. The extracting floor should be at least 4 ft 6 in above the storage floor. This entirely does away with heavy lifting. The honey tanks are on the lower compartment, and by means of a spout you can run the honey from the extractor into the tanks. You will find this very convenient. Above the storage floor a small loft could be built; it would come in useful for storing hives and other goods; also timber for making boxes could be stored under the extracting room. The ground chosen for a honey house of this description should be on the slope of a hill. I forgot to mention the boarding of the sides, The boards should be perpendicular, and the ends fitted into false grooves. A stay is nailed on the studding which keeps the boards from warping. A building of this kind would cost about £10.

SPECIAL SUBJECT NEXT MONTH.
AUTUMN RE-QUEENING.

QUESTIONS NEXT MONTH.

34. Does the common Australian box tree come into blossom every year or only once in three years? **S. RICHARDSON.**

33. Mr William S. Pfeffer, Armidale, writes—
I should like to know the opinions and experiences of beekeepers about bees finding nests in the bush. Do they send out single bees to spy out the land, or does the whole swarm search for a nest. I believe they employ both methods. I have seen, and so has a friend of mine, the whole swarm looking for a nest, going from tree to tree. I have also often seen a single bee making a close inspection of a tree from bottom to top, flying with its head about half-an-inch from the tree. Once whilst a friend of mine was camped in the bush he saw a swarm on a sapling for five days; the fifth day on coming into camp at sundown he was surprised to see a commotion among the bees. In a few seconds they were in the air, and flew straight into a tree about a hundred yards away. That looks as if they knew where they were going, and the place had previously been inspected by some of them.

UNITING SWARMS.

THOS. HALLORAN.

Dear Sir,—I note, by reference in the *A. B. Bulletin*, that some information was given in Oct. No. about uniting swarms. Could you kindly give a short synopsis of the article for the benefit of myself and other new subscribers, as it is of great importance to all to know how best to keep down swarming. Another point on which I would like the opinion of your expert subscribers is, How long should brood combs be used before being renewed? Seeing that every bee leaves a cocoon after it, the cells must become smaller and smaller, and the bee weaker and weaker, and in time must degenerate. I had the majority of my colonies for five or six years in the one set of combs, but I renewed them all this season, and I fancy I can already see the benefit, as I have got more honey up to now than I got all last season. Honey in this district is so thick that it is next to impossible to extract if one allows it to stand even a short time after it is sealed up. Late last year I had to immerse my comb bucket, with four or five frames in it, in hot water within an inch of the top, and by allowing it to remain for about ten minutes, and then taking one out and putting another in, I was able to work right away, and got through with the loss of one or two combs. Foul brood has been a great trouble to me, and in my opinion it is in some cases almost impossible to cure. Some forms of it are easily cured, but the form of it that was in this district about three years ago was extremely hard to keep under. The way I did was as soon as I saw the first sign of disease I made a big fire and put bees, hive, and all on to it and burnt up everything. I thus kept clear of it, and have no disease of any sort this year. This was very discouraging work, and with the newer light on this posing, I will endeavour to cure the next case I get.

[We trust some of our experts will have a say on the age of combs. Re keeping down swarms we give what Mr Halloran asks for, viz. :—

The whole of the queen cells excepting one should be cut out of the parent hive five days

after the first swarm comes off. Should the cells be cut out earlier than the fourth or fifth day, the bees are likely to build other cells over the young larvae, and thus frustrate the object in view. As there is now only one queen to come to maturity she must remain at the head of the parent colony, and therefore cannot lead off an after-swarm. This will generally prevent further swarming, but whatever precautions may be taken, and however careful the apiarist may be to prevent them, swarms occasionally will come off. Hive the swarm in the usual manner and after cutting out all queen cells from the parent stock, place the hive containing the swarm as a super on the hive it came from. In the course of a few days the hive should be examined, and if there are any eggs and larvae in the super the combs containing them should be shifted to the lower body of the hive, taking care to provide plenty of room. If there should be a very large quantity of brood in the hive some of it might be given to other and weaker colonies. When the method is carefully carried out it seldom fails to have the desired effect. Uniting swarms is not preventing after swarms.]

[We will have more to say on this in our next issue.]

GOLDEN BEAUTIES.

R. PATTEN.

Dear Editor,—I was sorry to read Mr James' statement in your last issue re Golden Bees. Hitherto I have found his criticisms full of mature thought and free from rashness; but his last utterance is so contrary to my own experience that I feel compelled to rise and protest.

Lately endeavours have been made to draw a comparison between Ligurians and Goldens, always to the detriment of the latter. While such practice is evidently in very bad taste, in the absence of any given reasons, it is also unfortunate in fact.

During the years 1886—90 I critically experimented with Ligurians, imported and otherwise, and wish to add my testimony to their good qualities *when carefully bred*. Since 1892 I have interested myself in the Golden strain and find these bees, so far (*also when carefully bred*) equal to Ligurians in most respects and on some points their superior.

I would like to remark just here, that both these strains are "Thoroughbreds"—that is a made up bee—and consequently liable to deteriorate in careless

hands. They have more in common perhaps than most people are aware. The difference in their color is simply a matter of atavism—a preponderance of one side of their ancestry over the other. That the Cyprian is used in *both* cases can be seen by the appearance of the “meta thorax” which is distinctly yellow in the Cyp. So the more this shows yellow the more Cyprian blood abounds, and *vice versa*.

Now, Sir, I have never yet met with an opinion claiming “delicacy” as a characteristic of the Cyprian, the progenitor of the Golden, and I fail to see on what ground it can be applied to their offspring.

Surely Mr James cannot expect us to believe that “Goldens” are more subject to Foul Brood or even to so called “Paralysis” than the Ligurians or Carniolans, *because of their color!* Are not these diseases the effects of a bacillus? If so will Mr James kindly demonstrate that the bacillus that causes these complaints are so remarkably intelligent that they discriminate yellow from leather color or black?

In conclusion, do you think such bee masters as Alley, Atchley, Abram, Doolittle, Herne, Trego, &c., would be found among the most ardent admirers of “Goldens” if such a statement as Mr James makes was founded on fact?

Finally can you tell me *why* “Golden Drones” are to be found in the apiaries of the majority of queen breeders in the world over in the present day, if the race is so liable to diseases? Of course in the case of *carelessly* bred bees of *any* race I have nothing to say. Yours truly,

GOOD COMBS.

GEO. COLBOURNE, JNR.

I think all will agree with me when I say that “good combs are the beekeepers’ best capital. How and when to secure them is an all-absorbing topic with many. If we use full sheets of foundation it is an easy matter to secure good combs.

But there is always too many of us who cannot afford to buy foundation to fill all our frames with, therefore we must look around for a plan whereby we can get the bees to build good straight combs, and we want them all worker size cells. I have studied this matter over for years, and at last I hit upon a plan that “gets there every time.” We all know that a small colony or nucleus will always build worker comb, providing they have a laying queen, but they are too long building a comb to please me, so I cast about for a better plan. I now have my combs built in full colonies, and have them all worker comb.

I select, say, two or three strong colonies for the work, and give them an abundance of drone comb, placing it at each side of the hive, and then give them a few frames of worker comb, so that they will not dwindle away. I then hang in two frames with half-inch starters, always placing each empty frame between two containing worker comb, and straight even surfaces, and in a few days the bees will fill them to within a few inches of the bottom bar. I then take them out and hang them in an upper storey to be completed, and in ninety-nine times in a hundred the bees will build the comb right unto the bottom bar, whereas if they had been left in the lower storey until the bees had stopped building and rounded them off, as they usually do, about half-an-inch from the bottom bar, if they are then hung in an upper storey the bees will but seldom build them down to the bottom bar. If others will try this plan I am sure they will never regret it.

Many ask when shall we have our comb built. That all depends upon locality, etc. If you use full sheets of foundation it makes but very little difference, providing there is honey coming in, but if you want the bees to do all the building, I would certainly have the building done in the late summer and autumn as the honey gathered then is usually darker than that gathered in the spring and early summer. Therefore it

is as well to use some of it in getting a supply of nice comb for the next spring's honey.

QUEENSLAND HONEY WANTED IN ENGLAND.

BY JOHN SMITH, Q.

Our bees have not gathered much honey this season, and I am at my wit's end how to supply orders in hand from the old country. *My difficulty has always been how to get enough honey.* I have never had any difficulty to sell it. But then you know any sort of stuff will not suit my customers; it must be *first-class* in every way. I have had samples of honey from various districts sent me, but for *one reason or other* none of them came up to our standard, and some were very poor. Our English agent writes that orders are crowding in on him for our Eucalyptus honey; he hopes to receive three consignments by the time I get his letter. He will, I am afraid, have to live on hope. I think the poets say people do so sometimes.

SAROPODA BOMBIFORMIS.

We are indebted to T. H. Maiden, Esq., for the following:—

2nd January, 1895.

To E. Tipper, Esq.,

"Australian Bee Bulletin"

West Maitland.

Dear Sir,—In reply to your letter of 18th ultimo, requesting further information re the large yellow bee, I beg to inform you that it is a true honey bee, not *the* true honey bee, a distinction being made between the short-tongued bees (*Andrenidas*), many of which are parasite in their habits, and the long tongued bees (*Apidae*), all of which collect honey or bee bread for their larvae if they do not store it in quantities, and are therefore properly known as honey bees.

For further information about this bee, little or nothing has been found out about its life history. Smith's description will be found in the British Museum catalogue of Hymenoptera, 1854, page 318.—Yours truly,

T. H. MAIDEN.

[Can some of our readers enlighten us a little]

REV. L. L. LANGSTROTH.

C. MANSFIELD,

Sir,—Some at least of your readers will be aware that the Rev. L. L. Langstroth, or as he is now called in reference to his connection with apiculture, "Father Langstroth," is the inventor of the frame hive which has done more for beekeeping than any one thing besides, by making plain even to the novice in a short space of time all the mysteries of the bee-hive, and rendering possible the removal of its luscious store without the barbarous destruction that once was common.

Well, this venerable individual now resides with his widowed daughter at a place called Dayton, Ohio, U.S.A., and although perhaps not in a state of penury, yet, doubtless, some tangible help would not come amiss. In fact a subscription has been for some time open in America. And the thought has entered my mind that it would come as a grateful act from far off Australia, if we were to send the old man something worth his acceptance. For apiculture is already, although yet only in its infancy so to speak in these colonies, deeply indebted to his invention. I suggest, therefore, that you Mr. Editor kindly open a list at once in the A.B.B. and you may put me "down"—I mean in the sense of "low down" on the list below larger sums—for half-a-sovereign.

(We shall be very glad to receive and forward any contributions to so worthy a cause.)

Mr A. Wooden, Junee, writes—The weather up to the present has been a bit dry. The bees kept going all the same, and did very well from box and gum. They are getting done, but the kurrajong is following in well. I do not know if there are many of the beekeepers well acquainted with the kurrajong. I have never seen its name mentioned in the *Bulletin* before, but I can assure you it is a beautiful tree for honey, quality as well as quantity; it is thick and has the best flavour gathered from any tree here.

OUR HOLIDAY.

E. T.

Like other folks we too took a holiday on Boxing day. And if we didn't enjoy it possibly it served us right, for to tell the truth we meant to do a day's work. Yes, we meant to do a day's extracting, but, alas, when we came to look, the previous wet weather had stopped the flow. There was hardly any sealed honey; so, beyond looking through and seeing all was well, that was all we did, and made up our minds to go for a little visiting in the afternoon. Along with friend Anderson, "Blossom" in the shafts, after early dinner away we started. Among first things noted were the apple trees, of which there were many around in full bloom. I had read somewhere that the Australian apple tree does not give any honey, so on this point we were particular to make enquiries, to find that the bees were working on them all day; and surely they would not work all day on a tree if there was no honey in its blossoms. A pleasant drive of about a mile and a half along a fairly good road, well timbered country on either side, brought us to one of Newcastle's "lungs," the Tomago picnic grounds, some half mile of partially cleared ground, alongside the broad river, whose silvery sheen was enlivened by the many colored flags of several large steamers lying alongside the bank which had conveyed excursionists to the spot. About the grounds and adjoining bush were hundreds of holiday folk, not only who had come by steamer, but also by wheel vehicle and on horseback, numbers of the latter being tethered in every convenient place where shade was afforded by ti-tree or otherwise. Several bands were playing. In all directions little parties of people were preparing their spreads in sheltered places, some of them lighting fires to boil water. Dancing and various games were also being indulged in—altogether it was a lively and pretty scene. We drove through it all and out on the other side, to continue our way further into the depths of the bush. Several farms were passed, also the remains of a huge bush

fire. The road was heavy with sand, so much so that at times Blossom had a difficulty in pulling us through. The surrounding bush was pretty dense, the bottle brush or honeysuckle (*Banksia Serratifolia*) being very much in evidence. About an hour's drive brought us to our destination, the farm of Mr G. T. Coles. When last we saw Mr Coles it was on the occasion of his return from England as one of the Australian cavalry who had upheld the honor of Australia at the opening of the Imperial Institute. Sergeant Coles and Trooper Gollon were banquetted by the officers and men of the Hunter River Cavalry, and a right jovial evening was spent. But now, as we passed the entrance gate there he was in an adjoining paddock, quietly ploughing away with a pair of horses. "Squadron, halt!" quickly brought him to "Attention," A hearty hand-shaking, a welcome to the house, an introduction to Mrs and Miss Coles—Mr Coles brought more than the military renown his comrades got in the old country, for it has been whispered to us he met his life partner there. Every happiness be to them. Now for a good bee yarn while enjoying a slight and on that hot day truly welcome refresher. Mrs Coles has not yet the bee fever, and her sensible though easily-answered question was—"Will bee-keeping pay?" An adjournment was made to the "bees." Mr C. has some 33 colonies and uses the full Langstroth frame. Having at the first, some two years ago, got good Italian queens, and also added some this year as well, his bees are pretty well italianised, and the stocks were also fairly strong. He showed us some comb very nicely capped, and told us he has sent a fair quantity of section honey to market. To judge by his intelligent way of working I have no doubt we will yet see him among the list of large beekeepers. The apiary is situated on slight rising ground, surrounded by bush on all sides. One of his principal sources was the mangrove on the banks of the river not far off. After spending some hour or so, we bade Mr Coles and his wife and sister

good bye, and retraced our steps, again passing the charred timbers of the bush fire; Friend Anderson showed us several fallen trees that had been cut down to get bees' nests from. What a waste of energy chopping and sawing through three or four feet of solid hardwood, after cuts as well, and waiting for the crash of the falling monster, for the sake of a few bees. The deep sand on the road was very hard on the horse, who had to slacken his speed considerably at times. A cry of "A snake" at one of the farms as we passed it, drew the lively attention of some seven or eight of both sexes. Whether his snakeship got off scot free or was "scotched" we did not wait to see. The different parties at the picnic grounds were now dispersing, horses and vehicles driving home in all directions, and the steamers gangways crowded with the returning passengers. We however noted the smouldering fires about in the bush, thought of the huge bush fire remains we had just passed, human thoughtlessness, and if a man wants to invest in bees it is not wise to go where picknickers from large centres of population can come and destroy his bee forage. Thinking thus, avoiding in the narrow road way the hurrying vehicles, it was only when "Blossom" suddenly turned sharp round—he knew the road and had nothing else to think about—we found we were at our destined slip rails. The children saw us and ran breathless with the news that the two *maters* had captured "such a big swarm" that had come in from the bush and settled on a post.

FOREIGN MARKETS.

Muswellbrook, 2nd Jan, 1895.

Dear Editor,—A few days ago I received a letter from the Editor of the "*Revue Internationale d'Apiculture*," in reply to one I wrote him some months ago. Among other matters I spoke of the possibilities of establishing a market for Australian honey on the continent. I give you a free translation of that part of his letter bearing on the subject.

"Your Australian honey has the reputation of having a peculiar taste, due to the Eucalyptus and which is not pleasing to the European palate or those not used to it. I do not think that your products would stand much chance of success in Switzerland. There is a great deal of honey produced in this country and consumers do not fancy foreign honey."

It is quite evident that the gentleman in question has never tasted *pure* Australian honey. He says further on, "I should be very glad to have a sample of your honey. One of my subscribers, living in Australia forwarded me some, but it never reached me." I am going to send him a sample and hope to have better luck. I think there is more chance of a market being ultimately established on the continent than in England, and if the consumers' palate can only be taught to appreciate the "eucalyptus flavour" of our honey there ought to be no difficulty in placing it on that market at a price to pay well. The price of locally produced extracted honey is from 1fr. 50cents to 1 fr. 80cents per kilo (weighing about 2½ lbs) or 7d to 8½d per lb in quantities. Honey a few years ago, was a luxury not always procurable at 1fr to 1fr 50 cents per lb, and seldom more than a medium grade of strained honey. Of course since then the production has increased, and the quality improved, but the price has not sensibly declined, proving a steady demand. I think it a great mistake trying to get the home commission agents to take the matter up. They have all shown their hands pretty openly and are determined not to handle Australian honey unless at prices that will allow them a 100 o/o return on their outlay, for it is ridiculous to suppose that the honey actually reaches the retailers at anything like the prices quoted. Moreover this opposition to and crying down of, Australian products is but a cheap way of showing to the British producer and public how carefully their interests are guarded by their friends the commission agents. The only way a home market for honey will ever be formed is by private individuals finding private customers in English or continental towns,

people in the retail trade, who will introduce the honey to the consumer and cause it to become known and appreciated. Then the commission houses will be glad enough to get the chance of handling our products. France is out of the question, as the French are not consumers of honey as *honey*, but use it in the shape of honey beers, hydromel, "eau de vie" of honey, confectionary, etc, for the production of which the local supplies suffice.

At the same time it would be well for those interested in finding a foreign honey market to remember that London, though a fair sized place, is not all the world, and that there are others and probably better openings to be found in smaller centres where competition of supply is less keen.—Yours truly,

D. G. GRANT.

FLOODED GUM

Mr Wm Harvey of Komysey, has sent us a sample of flooded gum wood. We have shown it to several persons used to working timber. One party told us the same wood was used under the name of colonial mahogany. It is a hard durable wood, very like but much heavier than cedar. It is capital for furniture, and would make good hives. The *Agricultural Gazette* of November gives the following interesting account of it:—

Flooded Gum.—An excellent timber for ship-building, wetherboards, and general carpentry, but much inferior to Blue Gum. Mr Charles Moore wrote of Clarence River Flooded Gum in 1862: "This timber is extensively used for building purposes, such as scantling, battens, flooring boards, and for posts and rails, ships' planks, &c." I have no doubt that this tree is the same as the Flooded Gum of Queensland, to be alluded to presently. With respect to the value of Queensland timber for fencing, a Byron Bay correspondent informs me that there is a difference of opinion locally as to its value for rails. He informs me that on a selection in Queensland and posts of it were quite sound after twenty-three years.

In the catalogue of the "timbers of Queensland," prepared by Mr Walter Mill for the London Exhibition of 1862, he refers to a tree which he calls *Eucalyptus grandis*. No description of the species was ever made, so that the name has no standing in science, but I have no doubt the tree is *Eucalyptus saligna*. He des-

cribes it as "Flooded Gum—diameter, 4 to 5 feet height 90 to 140 feet. A majestic tree, inhabiting the rich alluvial flats upon the banks of the rivers, and in such has a pillar-like trunk, clear of branches for three-fourths of its entire height. The timber is in high repute for strength [subsequent knowledge has not confirmed this.—J. H. M.], lightness, (floats in water when dry), and durability, and it can be had in great quantities. Mr. Pettigrew, writing about this timber in 1897, says, "It is the lightest of all gums hereabout, floating in water soon after being cut. It is easily cut by the saw, but shrinks very much in drying. It is used for weather-boards, and sometimes for making part of drays and carts. Also used for masts, spars, and planks of vessels."

HUMBLE BEES AND THE FERTILISATION OF RED CLOVER.

In a recent number of the *S M Herald* a letter appeared from a correspondent in New Zealand offering some suggestions in regard to the introduction of humble bees into New South Wales. In reply to this letter Mr. A. Sidney Olliff, the entomologist of the New South Wales Agricultural Department, wrote:—Your correspondent, Mr. W. W. Smith, of Ashburton, New Zealand, is evidently not fully informed of the efforts made by our Department of Agriculture during the past three years to introduce and acclimatise humble bees in New South Wales. He appears to think that only one variety of humble bee from Dunedin has been introduced into this colony, but the fact is that a very considerable number of bees of the yellow-banded, the brown-banded, and the black species have been imported from various localities in New Zealand. It therefore follows that the reasons put forward by your correspondent to account for the supposed failure to introduce these useful insects must fall to the ground. It is true that the yellow-banded and least useful species, *Bombus terrestris*, has been received in the greatest plenty; and it may be added that it is also true that the black species has been received in much larger numbers than the brown-banded species, and this for the very good reason that these species are the more

generally abundant in New Zealand. It is to be regretted that we have at present no authentic information as to the permanent establishment of the bees in this colony, but it is quite possible that they may have gained a footing in some quiet place hitherto overlooked. It is early yet to talk of failure. Notices of the appearance of these bees, in the localities where they have been known to have been liberated, have not been wanting in the press, but investigations have proved that these accounts refer to native carpenter bees (*Xylocopa* and *Lestes*) which somewhat resemble the humble bees. The reported appearance of the insect at Parramatta was an instance of this kind.

Mr. A Sidney Olliff says he has been charged with the departmental experiments, and was one of those who collected humble bees for the original shipments to New Zealand made by Mr Nottidge, of Ashford, in Kent. These were partly obtained at the instance of Lord Walsingham at his Merton Estate in Norfolk and at Hamstead Heath, which, in spite of its close proximity to London, is a locality much favoured by humble bees as well as by other bees greatly prized by naturalists on account of their extreme rarity. Mr Smith's suggestion that the Department of Agriculture should specially send for large supplies of humble bees is well worth consideration, and it is to be hoped, if the plan is adopted, that a skilled collector, able to discriminate between the species of bees, will be chosen for the purpose

"First Mr Sevalle and I satisfied ourselves as to the absence of a queen of any kind. A frame of drone comb (quite empty) was given them and the colony filled it with brood. As noticed by other observers, the eggs were laid most irregularly and sometimes as many as 10 in a cell; in several cases I found two larvæ growing in the same cell, and in one case one full grown and another partly developed, in a sealed cell. Beside this frame of drone comb, a lesser quantity of worker comb was filled with eggs which came to maturity. From all this brood a great number of drones issued. I dissected 94 workers and I should say that at least one fifth of the workers in the nucleus were laying workers, having in their ovaries eggs in a perfect state, while many others showed eggs in various stages of completion. This fact upsets the popular theory that the eggs are laid by one worker, who being larger and more fully developed than others, is fed up in a special manner and on special food till she takes upon herself the duties of a queen." In addition to the above the editor of the "*Review*" writes "The question of the accidental fecundity of worker bees has been settled long ago, but the following, which appeared in the *American Bee Journal* No 28, 1882, and was reprinted in the "*Review*" at that time may be of value."—"Yesterday, when examining a nucleus containing laying workers, they all took flight and soon after settled on a neighbouring bush. I took the comb I still had in my hands and held it near the cluster. I had hardly done so when they all crawled on to it and in a few seconds the workers began to lay. I counted as many as fifteen laying at the same time, then others would do the same. I caught ten or a dozen, four of which emitted eggs when squeezed. I really believe that all the bees in that nucleus could lay, for I counted at least 50 in the act of doing so, and a great many more pretending to lay. I might mention that the hive contained about half a pint of bees.—PAUL L. VIALLO, Bayou Goula, Louisiana, U. S. A."

LAYING WORKERS.

Jan. 7th 1895.

Dear Editor,—The following roughly translated extract from the "*Revue Internationale d'Apiculture*" of September last, lately to hand, may be of interest to those of your readers who have had to deal with laying workers. The article is written by Dr Marchal, who, after telling how the subject has been the cause of numberless controversies, goes on to say that having received a nucleus containing laying workers, he, with a Mr Sevalle, investigated the case as follows:—

In connection with the above I may mention that the method recommended by the Editor of the *Revue* when dealing with a colony so affected are : A. to destroy them altogether if weak and puny. B. shake the bees off in front of a weak colony (not queenless) after smoking both lots. C. distribute the bees and combs among a number of other hives. Another continental writer recommends giving the affected colony a frame or two of *hatching* brood. Then at the end of 8 or 10 days, when all this brood as hatched, give them a frame of eggs and larvae. All the young bees which have hatched before then, finding themselves queenless, will follow their natural inclination and build queen cells. This method is recommended by Langstroth. It is peculiarly suitable for those apiarists (the majority in the northern parts of Europe) who, having their bees in house apiaries, would find it a hard matter to remove all the bees to a distance to shake them off their combs, and would have trouble in treating them by any other means.

D. GRANT.

MUSWELLBROOK BEEKEEPERS' ASSOCIATION.

By A.A.R. in the Muswellbrook Register.

The usual monthly meeting of the above Association was held in the School of Arts on Saturday, 5th January. There was a good attendance.

The minutes of the previous meeting were read and confirmed, and several accounts passed for payment.

It was moved by Mr. Grant, and seconded by Mr. Weidmann. "That the members of this association agree not to sell honey for less than 4d per lb. in bulk."

Mr. Grant thought it was time the Association fixed a regular price on honey, and thus avoid underselling one another, and he thought that 4d. per lb. was a fair price, and within the reach of all.

Mr. Weidmann said he could hardly agree with Mr. Grant. He thought

the difference between the bulk and the bottled honey was not enough, and that 3d would be a fair price for bulk.

Mr. Budden said as there was a difference in the quality of honey, there should be two prices. It was not fair to ask as much for inferior as for choice honey.

Mr. Ellerton thought that the matter should have due consideration. As local bee-keepers had to compete with outsiders, if we have a fixed price, they may glut our market, and we would be at a great disadvantage. But still he would like to see a fixed price.

Mr. Roberts was in favor of a fixed price, though he thought 60 lbs was too large a limit, as there might be private customers who would take 30 lbs, but would not take 60 lbs.

Mr. Grant disagreed with Mr. Budden's arguments, re quality, as all our honey was of good quality, and it would not pay to put bad honey on the market, and we need not be afraid of over production, as we would be able to sell all the honey we can produce for the next two years.

Mr. Clarke moved as an amendment and Mr. Paul seconded, that the matter stand over till next night of meeting, and that Messrs Grant, Ellerton, and Roberts form a sub-committee to report on the matter.

Mr. Clarke said he was not interested in the matter as a seller, as he would not sell a pound of honey, but he would like the matter settled to the best advantage of the members.

Mr. Paul said the matter was a very important one, and by placing it in the hands of the sub-committee, it would get due consideration, though he, like Mr. Clarke, did not intend selling honey, he only kept bees as a hobby.

The amendment was carried.

Mr. Weidmann said he would like to ask the Treasurer through the Chairman, had all members paid their subscriptions, as the specified time, three months, was up.

Mr. Ellerton said 17 had paid up, and

nine had not, but he thought they only wanted reminding.

The next business was Mr. Robert's paper, which was read by that gentleman, as follows:—

The Queen and her Functions.

The subject which I have to bring before you to-night, I find to be a very difficult one to handle, and one that requires a greater amount of experience than I have had, for me to say definitely whether the queen should have the full use of the hive for egg laying or not, and it would entail a lot of time and experience for one to go experimenting, to find out for himself.

However, I will give you my views on the subject, which I am sorry to say will be very brief. The question is: "Should the queen have the full use of the hive for egg laying?" To this I say no. 1st, Because I think that eight frames are sufficient (that is Langstroth frames) for a brood nest. If the queen utilises six of those frames for brood rearing, and I think this will be putting the average queen at a very low rate (and I would not keep a queen that would not average seven frames to the hive), if you take the queen that will only average six frames of brood, the bees will raise every 21 days, roughly figuring, about 39,000 bees, or if you take the queen that will average seven frames of brood, the bees will raise every 21 days 46,000 bees, and I think with this number, of young bees every 21 days, your colony will be sufficiently strong enough to gather the nectar.

2nd. I think by allowing the queen the full run of the hive, you will find that the top storey will be used for the brood rearing, as well as the brood chamber, and I find that when you allow the queen the full use of the hive, she will always leave the two outside frames, and often the two next to them will have more honey than brood. She leaves the brood chamber in this state, and goes up stairs, and commences to lay right over the centre of the brood nest, in three or four combs, and only partly fills them with brood in a circular shape. The only reason I can give for this is, that the heat from the brood nest travels upwards, and the queen follows it to the best advantage to brood rearing, and thus the bees build their brood nest after their own liking and not ours.

3rd. I want my honey chamber to be free from brood. Who would like to see brood in the sections? And I think it just as important that we should keep it out of the combs we intend to extract from, but if you allow the queen the full run of the hive you have a mixture of brood, pollen, and honey. The only remedy that I can see is the use of a honey board, and by its use you keep the queen in her proper place—the brood chamber, and by keeping her there you can get the brood

chamber almost one mass of brood. The way to do this, or rather the way I recommend, is to take the outside frames which the least brood in them and uncapp the honey and place them in the centre brood nest one at a time, and the bees will take the honey upstairs and make room for the queen to lay, and by repeating this operation you will get the brood chamber almost one mass of brood, and this uncapping of honey excites the bees and queen to brood rearing, as it seems to have the same effect as feeding in the spring. I think one of the most damaging things to a honey crop is to have the brood nest about one third filled with honey. Strive to have every queen do her level best at brood rearing before the harvest, and by the above management you are as near perfection according to my views, as you can well get. I cannot dwell longer on this subject, as it is likely to raise a lot of discussion, and as I am of the opinion the queen should be confined to the brood chamber, I think I had better close or I may be inclined to ramble myself.

Before I sit down I might say I forgot to mention that the queen that lays the 46,000 eggs in 21 days, has to lay slightly over 2190 eggs daily, so you see she is not idle much of her time.

Mr Grant was in accord with Mr Roberts' views, though he would like to ask Mr Roberts if he had made any allowance for honey in the brood frames in his calculations, and he said Mr Pender had recommended wide spacing, and to get the combs drawn out deep, and thus do away with the honey board. He thought the paper very complete.

Mr Ellerton thought the paper a good one; he thought 8 frames were large enough for a brood nest, and he did not like brood mixed with the frames he wanted for the extractor. He saw the frames of Mr Pender's referred to by Mr Grant, and he thought they are simply perfect.

Mr Clarke thought the paper an admirable one. He had no experience with queens going up stairs. His queens never leave the brood nest, so he had no use for honey boards.

Mr Weidmann moved a vote of thanks to Mr Roberts for his paper, and complimented him on his effort.

Mr Paul seconded the motion, and he also complimented the writer. The resolution was carried.

Mr Roberts replied, and Mr Ellerton

moved that Mr Clarke be asked to write a paper on swarming to be read at next meeting.

Seconded by Mr Budden and carried.

This concluded the business and the meeting rose.

CAPPINGS

From Gleanings, American Bee Journal, Review, and Canadian Bee Journal.

Professor Taylor says the heavier foundation furnished to bees the better, they more readily fill it with honey.

Honey imported in the British Isles in 1891 to the value of 172,000 dollars; 1892 318,000 dollars; 1893, 145,000 dollars.

The Hatch-Root controversy seems to be shifting in this direction: Will bees do as well in two stories as with the same amount of room in one story?

In shipping bees, C. Dadant says, in "*Revue*," he would give no water, no pollen, no brood, only *sealed* honey. All this to avoid having the bees' intestines distended.

The A. I. Root Co. can turn sections out easily at the rate of 75,000 a day, and, if necessary, increase the output to over 100,000, and all the sections of the new and polished sort.

To avoid cracks in cakes of wax, dont let the outside cool rapidly. Cover a cloth and board over the dish while cooling, or let it stand in a stove oven while the fire dies out over night.

In Cuba, a native Cuban, his average work extracting was 250 lbs per hour. He did all the uncapping, extracting and cleaning burr-combs off the top of the frames, using a six-frame non-reversible extractor.

In Germany, in the year 1893, the number of colonies of bees was 1,911,797, so that there were 3.5 hives per square kilometer, and for every 100 inhabitants 4.2 hives. Of these 19.3 per cent were movable comb hives. According to the last census in 1892, there were 2,034,479 colonies, that is 3.8 hives per square kilometer or for every 100 inhabitants 4.1 hives, 31 per cent of which were movable comb hives.

Eggs, 2,000 daily, is only an average for a good queen. Before the development of her ovaries she weighs .2 gram; 2,000 eggs weigh .42 gram, so she lays twice her own weight of eggs daily. But the workers digest her food for her.

Mr. M. A. Gill does not consider any colony in prime condition for the basswood flow with less than 24 L frames. Going farther, he says that the same colony will gather as much surplus in five to six days when given two sets of comb, as will take it eight days on one set.

Mr. F. A. Salisbury, of Syracuse, N.Y. in feeding up for winter, simply pours into his extractor sugar and water of equal proportions, sets the thing running for a few minutes, and, as he says, draws off clear syrup. How a percolator feeder can give a better article he can not imagine.

Artificial honey is reported in Bavaria of such composition that "chemical analysis has not detected anything differing from the honey of the bees." But the *B. B. J.* wisely comments, "The composition of leather and meat are always identical, but one would hardly relish the one as well as the other."

In Germany, beginners applying to the secretary of the Schleswig-Holstein Association can have a suitable person sent to instruct and assist in putting bees in winter quarters or in taking them out. Charges 12½ cents for an apiary, or 2½ cents per colony if there are more than five colonies in the apiary.

TO KEEP ANTS AWAY.—Rub a light film-coat balsam Peru around near the bottom of table or kitchen safe legs—just a narrow band will do—and renew the balsam every two or three weeks. This will keep ants away from tables, kitchen safes, etc., and what they hold or contain, provided there is no other antway but up the legs. One drop balsam Peru spread around the upper part of a syrup bottle will keep the ants away for months. Boil one ounce balsam Peru in one gallon of rain water for half an hour, and sponge this water, while hot, over wooden floors and walls, and it will keep away ants for a long while.

A Mr. W. B. Morby, of Lakeport, uses a long idea hive, quite deep and narrow, the frame being 14 inches deep. A couple of years ago one colony, in one of these hives, yielded 900 lbs of honey, without the aid of its increase.

MANAGING A LAYING WORKER.—Herbert Gibson, Lucan, Ont, writes.—First raise the brood-chamber and put a hive with some brood and honey in it; put wire cloth between the two hives. Place a wire cone in the top story so the bees can go out, and not get back, but they will go into the bottom story. When most of the bees are out of the top you can cover over the wire cloth, and place a queen in the bottom story. In a little while there will be only a few bees in the top story with the laying worker, which can be destroyed.

Mrs Jennie Atchly in reply to a correspondent writes: "One good sister wishes to know when I rest. If she means to sit still and recline, and do nothing, and take ease, I will say I do not rest except when I am asleep—from 10 p.m. to 5 a.m. Being idle is no rest for me. I take rest when I get in the buggy and ride to town for the mail 2 miles away, or when I feed my chickens, pigs, etc. This is all rest to me. Our rule is this: After the day's work is done, and we have done all we could well do for that day, we kneel round our family altar and thank God for his many blessings, and then lie down and sleep soundly. We never lie awake at night, worrying a tired brain over something we cannot help, which is sure to make us feel stupid the next morning. Please excuse me for taking up your time with these stray remarks, but while my mind caught these things, I felt sure that someone would read this that would worry and fret at night about some trifling matter they could not help—just like I used to do—and it is wrong. We should do all the good we can do of a day, and at night pillow our heads upon the God that made us, and let the cares of the world go by. This is genuine rest and the best tonic for the mind and body; and, I believe, would be the means of prolonging our days to a certain extent."

Mr. J. S. Ford, concludes that bees affected with paralysis in cold climates, do not suffer or die as much as in warm climates, but when removed to the latter the disease assumes a form that carries destruction of swarms with it, a disease worse than foul brood, because that develops only in the larvae, while the paralysis spreads by contact, and is carried on the body of the insect. Dr. Howard, the author of the work on Foul Brood, a scientist and microscopist, is going to give his attention to this disease. Let us hope his labours will result in some good remedy being discovered.

The 39th annual convention of the German, Austrian, and Hungarian beekeepers was held at Vienna, Austria, Sept. 3—5, 1894. More than 350 delegates were assembled from Germany, Austria and Hungary, and among them Dr. Dzierzon, of Lokowitz, Germany, in spite of his 83 years. During the Convention, Dr. Dzierzon defended the Italian bee; and Mr. Vogel Letschin, Germany, recommended a cross breed of two varieties. He is of the opinion that there only two varieties of the genus *Mellifica*—the Egyptian and the black German bee. Any other variety, as the Italian, Cyprian, Carniolian, etc., is derived from these two varieties. He had in his apiary a bee that could not be distinguished from an Italian bee. He bred it by crossing the Egyptian with the German bee. He had also bred a strain of bees like the Cyprian and the very black bee.

A Mr. John S. Callbreath, writes:—As the use and kind of foundation is up for discussion, I will give my view of it. My theory is, that the chief value of foundation does not lie in the fact that it saves the bees the expenditure necessary to produce the amount of wax in foundation, but in the fact that it furnishes all hands with standing room, to work into comb the wax scales already present in abundance. If as many bees could work in building the septum, where no foundation is given, as can work in building the side walls where foundation

is given, the advantage of using full sheets of foundation would, in an average honey-flow, be very largely reduced. But as, at the very start, only a few bees can work at the septum, compared with the number that can go to work at once on the sidewalls, where full sheets of foundation are used, the advantage of such full sheets ought to be apparent.

Sassafras oil is not objected to by bees, but ants and the bee moth are said to have a decided objection to it. Cinnamon oil or ground cinnamon has the same peculiarities.

A VISIT TO WARRAH AND MUSCLEBROOK.

New Bee Disease.

BY W. S. PENDER.

For the past two years I have been promising myself a visit to the apiary of Mr. G. R. Humble, at Warrah, near Willow Tree, and on two occasions, when passing Willow Tree by train, I had made arrangements to stay, but circumstances arose on each occasion that prevented, though on one occasion I was so near that I had about an hour's talk with friend Humble at the Railway station. I was particularly anxious to visit the Humble apiary, because friend H. had been experimenting in short cuts and appliances, the development of which he has promised to describe for the benefit of the readers of the *A.B.B.* The method he developed is an entire success, which I had the pleasure of witnessing between Xmas and the New Year, and during the past week also. As Mr. H. is going to describe it himself, I will wait until I see his articles, and may add something if I find any desirable point omitted. The hives in the Humble apiary are not grouped in a block of land, but arranged around his residence in most convenient positions. Two are on the boarded roof of a shed, and two on the front verandah. The hives were kept in excellent order, no frame being out of place, and every part fitting to perfection. For accuracy of work in the

hives, and general neatness in all parts of the apiary, I have not seen another kept in better condition. By his system of management he secures fair crops of honey at the very minimum of labor. The brood nest, in an 8-frame hive body, with Root-Hoffman frames, is never disturbed. The supers consist of half stories, from which a frame is never removed until the super is carried to the extractor, and if he could but put the super in the extractor as it stands, and extract without removal of frames, he would have reached perfection in the art of taking honey. His method of handling hives instead of frames reduces the cost of honey production to a mere fraction. I will leave further description to himself. After spending a pleasant morning among the bees, we visited the Pinnacle, which gave a splendid view of part of the Warrah estate (belonging to the A. A. Compy.) The view was grand, the pinnacle is the highest point of a ridge which divides two vast plains, the grass on which was over four feet high. At this spot kangaroos were numerous, some 5 feet high. We returned in ample time for tea. The bee forage consists of yellow jacket, white box, and apple tree. A few of the former were in bloom and there was an abundance of bursting bud on the apple trees. In the evening we discussed hives manipulation and short cuts, which talk was as on the previous night kept up until about midnight. The following morning I took train to Musclebrook, where I arrived at about 12 o'clock and went in search of beekeepers. At the Post Office I enquired for Mr. C. C. Paul, but found he was enjoying a holiday. I next enquired at Messrs Campbell & Co. for Mr. Ellerton, with whom I had lunch and spent a few hours pleasantly. His apiary is situated on a block of land at the rear of his residence which by the way is on a hill. The apiary is sheltered by a close paling fence around. About 14 hives, all of the eighth frame, are arranged close to the fence. In front of each is a cemented alighting board about two feet long, and the full width of each

hive. This keeps down all weeds and grass from the entrances, and each hive being raised on a slight mound is kept quite dry. Mr. Ellerton is using half story and full depth supers. On examination the bees proved to be Italians and Italian-black-Hybrids. Very little honey was being stored, the season about Muscledbrook being a failure on account of the very dry weather. I next visited the honey house, a well built neat wooden structure with iron roof. Everything was in neat order and in its place. Mr. Ellerton afterwards, in company with some friends, drove me to the apiary of Mr. A. A. Roberts, where I had a hurried look round. Mr. Roberts' apiary is in the lower part of the town and not exposed to winds. He also is using the eight-frame hive with full depth and shallow supers, preferring the latter. Here were about 23 colonies of Italians and hybrid bees and 9 nuclei. One hive Mr. R. opened showed a frame with 14 very fine queen cells on, of which he may feel proud; there was not an imperfect cell in the lot. These were obtained by saving the rudimentary cells built by various colonies of bees on their combs, fastening them to the lower edge of a comb and grafting with larvae from the breeding queen, the frame is then given to a queenless colony. A room very neatly fitted up at the rear serves the purpose of a honey room and everything was in perfect order. One of my principal reasons for calling at Muscledbrook was to become acquainted with a new bee disease which broke out in the apiaries around here, and my attention was drawn to it by Mr. Grant, in whose apiary I wished to see it. So after a drive to the outskirts of the town, we met Mr. Grant among his bees. He had evidently been using the lawn mower between his hives, for it lay at his feet as we approached. This seems to be an excellent tool for a beekeeper who places his hives on the grass, but it has one disadvantage, if the grass should get long it is hard work, but while kept short, it does its work to perfection. The hives, numbering 60, are arranged in rows about 4ft apart, and

6ft between the rows. The bees are Italian, black, and their crosses. My first question was, can you show me some of that new bee disease? Whereupon he stated he was almost rid of it, but found a few cells that morning, to which hive I was taken. On examination the disease proves to be a disease of the brood, having some of the symptoms of foul brood, but many widely differing characteristics. The following comparison may prove useful:—

NEW BEE DISEASE.—Color—larvæ, brown; larvæ retain their shape until dried up to a black scale; larvæ show no signs of ropiness, attacks unemerged fully developed bees in the cells. These bees dry up but retain perfect shape. Cappings dark, slightly sunken, and often perforated; no stench.

FOUL BROOD.—Larvæ, brown; larvæ loses all form but dries up to a black scale; larvæ becomes a ropy mass, easily tested by inserting the head of a pin and drawing it out; does not attack fully developed bees. Cappings, often dark, slightly sunken, and often perforated. Stench of rotten glue.

The new disease differs from chilled brood in that the attacked larvæ are of a brown color (not black), a thick gelatinous mass (not watery), and emit no stench (stench of decaying insects), *the notes in brackets describe chilled brood.*

After examining two colonies with the disease, I found I had just a nice time to catch the train, so hastened away. At the Railway station I showed Messrs. Ellerton and Roberts two supers of half depth frames, filled with honey, that I was taking home from the Humble apiary, that pleased them very much. The arrival of the train, and a farewell separated us. I noticed a kindly feeling between the beekeepers here, accompanied by much enthusiasm, and more than once the question passed. Will you be there on Saturday night? This being their monthly bee meeting was evidently looked forward to.

Get your Honey Labels or any Printing you require at the *Bee Bulletin* Office.

FROM ENGLAND.

We feel we have a word to say in this issue. We may say every colony and island in the Southern Seas has its contributing subscriber to the *A.B.B.* Our American cousins have given us their word of cheer and appreciation over and over again, but from Conservative England no sound was heard, except they did not want our honey, and would taboo it in every way they could. But this month we have an advertisement from Mr. Thomas B. Blow, of Welwyn, England, who we are informed is one of the largest supply dealers there. Let us hope that as Englishmen would like to do business with us in supplying us apiary necessities, they will also cease to depreciate our honey, and speed on the day, which will and must come, when Australian honey will be considered equal if not superior to any other.

SPECIAL WORK FEBRUARY, N. Z.

Swarming may now be said to be practically over, although in isolated cases a few colonies may cast off swarms even to a later date than this. Should this occur they should be returned to the parent colony after carefully cutting out all queen cells as described in previous numbers of this journal.

TAKING SURPLUS HONEY.

In taking surplus honey during the next three or four weeks great caution should be exercised to see that enough stores are left to serve the bees during the winter. It is better to leave too much than too little; for in the former case it is easy to take away any not required when fixing the bees up for winter, and it is also better and cheaper to have sufficient honey in the hives rather than to be obliged to feed with syrup.

REMOVING SECTIONS AT END OF SEASON.

Producers of comb honey are likely to have, unless precautions are taken to prevent it, a number of unfinished sections at the end of the season. Although these can be preserved and held over

for the next season, still it is not good management to be obliged to do so. Of course it is not possible to avoid having some unfinished sections after the honey flow is over, especially where comb honey is raised on a large scale, but with judicious management there need not be many. As soon as the honey flow begins to slacken, the surplus boxes should be examined, and every finished section removed. The remainder of the unfinished sections should be collected together, and a few of the very strongest of the colonies selected on which to place them. In the course of a week or ten days a similar overhaul should take place, and the finished sections removed, collecting together the unfinished ones as before. In the meantime no new sections should be given to any of the colonies, but should additional room be required after the removal of the sections some frames of comb or of foundation should be placed in the upper boxes. Such frames of foundation, should they be worked out and stored with honey, will come in very handy for winter food, or they may be held over for spring. By such a system as that described, nearly every section may be made available for market at the end of the season, and the bother and loss of holding half finished sections over the winter be avoided. Where an extractor is available, should there be any partly filled sections, with the aid of a broken comb basket, they may be relieved of their honey before being placed away for winter. Care should be taken when placing away such sections that it be done at once, as soon as removed from the hives and before the bee moth can get a footing in the combs. A good method of packing securely is to leave them in the frames and the boxes taken from the hive, piling them up one above the other and pasting some narrow strips of paper round the junction of the boxes. The bottom box will need to be made secure by covering the bottom with a thick sheet of brown paper, pasted well up over the sides. The top should be secure in a like manner unless a cover be

put on and made secure round the joint.

ROBBING.

The width of the entrances of the hives should be considerably reduced as the honey season draws to a close, especially in those hives containing weak colonies. When no honey is coming in bees will rob each other if the least temptation be placed in their way, consequently when manipulating the hives great care should be exercised to see that no loose scraps of comb or honey is left about to tempt robbers. When robbing once begins it is most difficult to stop, and disorganises the whole apiary. Should robber bees attack a colony under manipulation, the best plan is to use a bee tent made of net sufficiently large to cover the apiarist and the hive under operation. These can be obtained from most dealers in bee furniture, and the cost is but small.

UNITING.

Towards the end of the month will be a good time to prepare for uniting weak colonies, such as late swarms, or those that are found to be queenless, for even when increase is the object it will be found most profitable to winter one strong colony rather than two or three weak ones, for the former will come out of winter quarters in good condition, and give a large increase in spring. Whereas the latter, if they do not succumb, will be in a weak state in spring and take a good part of it to recover. In uniting bees just remove the hives every evening a few feet until they are close together. Then, just before dusk take off the covers and mats from both hives and shift the frames with the bees adhering on one side of the hive, place a spare comb next them, and put the frames from the other hive, with the adhering queenless bees, next the vacant comb and close the hive after replacing the mats. The empty hive should then be removed altogether. If this is done quickly and gently not a bee will move and next day they will be working like old acquaintances. Another way of uniting bees is first to give each colony a good smoking and then to shake them on to a sack in front of the hive they are

to permanently occupy, the hive of course being slightly raised with a couple of pieces of wood. Dusting them with flour has a quieting effect on them, as I have often proved.

QUEEN REARING.

Queen rearing may still be carried on before drones are killed off. If a colony is made queenless before this takes place the drones in that particular colony will not be killed and will therefore be available for impregnating the young queens. In this way pure mating may be secured, so say some apiarists, but I have proved that late autumn bred queens are as a rule no good.

BUCKWHEAT.

This sown last November should now be in bloom. This is a crop, I fear is too much neglected in N Z. The flour from ground buckwheat is excellent, and it yields a large quantity of honey, which although dark of color is excellent for winter feed.

Mr. H. V. McGee, Wee Waa, writes: This part is not a good beefarming district, although the hive I have keeps the house in honey. Honey sells well about this part and further out towards Walgett, Moree, and places further out, where bees and honey are almost unknown, the people being quite ignorant of bee-culture.

Mr. Robert Wolfe, Mornington, W.A., writes—I got one queen alive out of six I sent for—three from Doolittle and three from Mrs. Atchley, the one alive was from Doolittle. It came via Mariposa, it was a long journey, it would be shorter to here via England.

[Fancy so many arriving dead at Sydney, and one going several thousand miles more arriving alive.]

Mr. F. Whitehead, Tenterfield, writes: I am very much pleased with the A.B.B. and hope that subscribers will increase. So far this year there has been a moderate supply of honey, though I have only got one swarm. I have taken one $\frac{1}{2}$ cwt of honey out of 6 hives. I lost three colonies, as the winter was long and severe, and the spring backward.

At Hagley Church, in Tasmania, a swarm of bees recently took possession of the organ. When the latter was played the bees went for the choir, who had to clear out.

Mr. W. Paix, Bowen Park, writes:—I herewith send you postal notes for your account, 9/6. I am very much pleased indeed with your bee labels, and I have recommended them to all my neighbours requiring same. I will send you any news that I may have re bees.

A STRANGE BEE, NEITHER DRONE, WORKER OR QUEEN.—Mr. H. W. J. Taylor writes:—This strange looking bee came under my notice some two or three months ago. The abdomen or body being a true ligurian. It appeared to have no sting, but had a drone's head. I should never have thought that a drone's head on the body of a worker would have given it such a strange appearance.

Jas W Dumigan wrote Dec 18:—We have had beautiful weather until the 16th inst, since then it has been raining, with cold winds which has quite put a stop to the honey flow for some time. I notice the apple trees (*Eucalyptus*) will be flowering in a few days. The honey gathered from this flower cannot be surpassed in flavour and colour. This is one of our main honey producing trees, and long may God spare it, for man wont as hundreds of acres has been destroyed by ringbarking.

We are indebted to the Secretary, Mr W. M. McIntyre, for a copy of the schedule of the Gosford Show, which comes off on Feb. 15 and 16. The following are the prizes relating to honey: Honey in comb 6 1-lb sections, 10s, 5s; Honey in comb, one large frame, 5s, 2s 6d; bar frame hive in working order, 10s, 5s; honey in comb, one small frame, 5s, 2s 6d; clear honey, $\frac{1}{2}$ dozen pots, 5s, 2s 6d; Beeswax, yellow, 6lbs, 5s, 2s 6d; Beeswax, white, 6lbs, 5s, 2s 6d; Beeswax, any kind, special prize, Mr L. Barlow, 5s; best collection bee-keepers appliances, to be made in colony, special, H. Cadell, 10s 6d.

Mr T. Holland writes—I have had great difficulty with foul brood—lost all but three swarms. Cured foul brood and have increased to twelve, which are in real good condition. I received a good queen last summer, and lost her this spring, and 14 hives with foul brood. Could you kindly give me information in reference to young brood well advanced, wrong way in the cells—tail outwards, and the tail gets diseased first. Does foul brood always affect them like that?

[The complaint you allude to cannot be foul brood, as the brood does not live to come to the stage you speak of. Will some of our readers give an explanation?]

Mr Pacey, Marrar, writes:—I am alive yet and am sending you a P O O for 16/9. Of this is 5/- for myself for the ensuing 12 months subscription for *Bee Bulletin*. I want you to send me three pamphlets on honey cookery. I have two new subscribers for the *Bee Bulletin* for 1895, 10/-, total altogether 16/9. I hope you will have a good many new subscribers for 1895. I wish you and yours a prosperous new year, though it is rather late. There was a splendid honey flow here up till Christmas. It has slackened off a little, as we have had some very hot and dry weather, but at the time of writing we have a splendid change with rain.

Mr R. Green, Victoria, writes:—I received the first number of your *Bee Bulletin* and I am very pleased with it. Seeing you kindly volunteer to answer questions, etc, I should be much obliged if you would answer the following:—1st. I have Foul Brood in my hives. What do you consider the *best plan* to adopt? 2nd. If a swarm issues from a diseased colony will shutting it up for two days on comb starters only put them right? 3rd. Do you consider any of the drug cures worth trying?

Answer to question 1.—The McEvoy cure, given in the November number.

Q. 2. Hive them on starters and give them liberty.

Q. 3. Would consider drugs as valuable as preventatives only. It can be cured by them, but takes too much time and attention.

Mr. W. Niven, Eugowra, writes:—The season has been dry in this district, a very small quantity of honey has been taken up to the present time.

Mr E. J. Rien, Hawkesbury, writes— I trust your bees are doing well. We are beginning to think beekeeping is going to be an easy business this year—very little honey coming in, and plenty of dry weather. It is a long time since I got stung as I have this week, and I have to keep a veil on, a thing I have not done before this season. I had a dog stung badly the other day, and cannot understand how it happened, as I did not hear her howling, and she was on the chain. I am much afraid she will die. The apple tree is just coming into bloom, but there is a plague of beetles round my place, so I am afraid they will spoil me. Beekeeping is not always half-a-ton from one hive. We have had two bad seasons already. If we get another it will be pretty warm.

Mr. James H Colmer, New England, writes:—Please find enclosed 6s, subscription due for *A. B. B.*, and 7d for the *H. & B. Guide to Cookery*. Honey has been slowly coming in all the summer from several sources, trees which were in bud in March last have not burst yet. I received a present from my brother in America in the shape of a queen bee (Italian) ordered from A. I. Root. She arrived in splendid condition on Jan. 8th, and was introduced safely into a hive where the bees were preparing to swarm (in fact queen cells were sealed), first taking five frames of brood, with queen and bees adhering and brushing bees off several frames into the new hive, old hive being two-storey. Is it usual for bees to accept a new queen under such circumstances? The bees are hybrids, and new queen introduced as recommended by C. Mansfield, but on a comb of honey instead of a comb of brood.

[You gave a queen before the bees in the old hive had discovered themselves to be queenless, and the old queen being away there was no opposition from her. It is a very good way of introducing.]

Mr. T. Halloran writes:—Did you ever hear of a queen laying two eggs in one cell, and doing it frequently? Did you ever hear of bees killing a queen after she was laying for seven days? I have experienced both of the above pests lately. The queen was one I got from a gentleman advertising in your columns. I had considerable trouble in getting a swarm to accept her. I tried three swarms before I got one to accept her, and when she began laying she frequently laid two eggs in one cell. After a week I found her dead and the bees in a great state of excitement and very savage.

[Queens in weak colonies frequently lay two or more eggs in a cell. Bees will often kill a queen when introduced seven days and less if the hive is handled much.]

The martins which Mr. Munday, complained of in a few issues back as destroying his bees, are not confined to New South Wales. A Mr. P. S. Lang, in the *Australasian*, reports them as very bad in the forest of Heytesbury, Victoria. Mr. L. T. Chambers writes on the matter:—The bee martin is included in the list of protected native birds. It would, therefore, be necessary as a first step to have the name removed from that list. Upon proper representation made to the Department of Agriculture no doubt this could easily be effected. The destructiveness of these birds is well known to beekeepers. They first work havoc in a queen-rearing apiary, even when their numbers are limited, by destroying the young queens when flying out to mate, but no reports have ever come to hand such as this, as usually the birds are not in sufficient numbers to be so totally destructive. Being a migratory bird their depredations only last for a period. Feeding as it does upon insect life, it would be difficult to take steps to get rid of them, except it be by the destruction of nests of young birds, for this martin is notably careless of the choice of locality in building, and usually builds low and in exposed positions.

Mr. Jas. F. O'Connell, Moruya, writes Dec. 12:—The bees are doing fairly well notwithstanding the recent bush fires. This week I have had my first experience with foul brood. I treated it on Mr. Evoy's plan, but do not yet know if it will be a cure. I don't think I will forget the smell of it again. Swarms were very scarce this season. I was expecting to increase with travelling swarms, but the bush fires must have destroyed a lot. None of my colonies swarmed at all. I have not had one swarm in three years. Did you ever know bees to ball their queen when the hive was opened? One of mine did the other day, she was a young queen just beginning to lay. I took her from them until dark and then let her run in on top of the frames as quietly as I could. I think we will have a good flow of honey this season.

[It is a thing that will happen now and then the why and wherefore the bees best know themselves.]

Mr. J. A. Thomson, Moorina, Tasmania, writes:—I want to ask a question from you. How long will combs last in a brood chamber. My bees do very well for two years, and then they give a good swarm and the remainder just seem to eat all the honey left and die out. Also does foul brood smell sour. I notice in some of these hives a sour honey smell, do you think it would be chilled brood? Also what do the bees gather from the young shoots of the silver wattle tree? The trees are alive with bees now and in the early spring. I have 45 colonies of the common bees which do very well some years, but I could do much better if I had time to look after them, and not having any better employment it is not worth while going in for Italians.

[Combs will last 20 years or more. As to the bees dying out you ought to look at them now and then to be sure there is always a queen or eggs. Would the sour honey smell be from the kind of honey the bees are gathering? The smell of foul brood is like rotten glue. Would there be aphids on the young shoots of the silver wattle tree? There will be plenty of ants about them if so. In such case the honey would not be nice, in fact it would be the juice of the aphids. You err in saying it is not worth while going in for Italians. We would like to hear further from you.]

Mr Pollock, of Wingham, writing to Mr Munday says:—Just a line for you. I am not going to pour honey down your back, but you have wasted your time in the bee line. A man that can invent any one thing that is the best, can invent others. Just fancy all the paper and ink, and seasons that those Yankees waste over having things their own way, and last week I got some of the thick top frames to stop burr combs, &c. But if they keep on increasing I will have a box full of wood next year. I don't hesitate in saying the Munday frame is the best the world has yet seen. It is all very well for a man to say, Look at this invention, that is what every bee-keeper wants, but show me an invention that will stand a honey flow, and then I consider it is good. Why last year my bees could nearly read and write, they would not tie a comb to another, but this year they just do as they like. I have one of your two story boxes filled in 6 weeks.

Mr Flood, Pakenham, Victoria, writes:—Re Carbolic Acid for Foul Brood I have doubts on account of the germs being in capped cells of honey sometimes. I have been treating on the McEvoy principle and am now rearing queens to requeen throughout some 30 colonies which I have got in the last four months out of the bush, all of which more or less were affected with the disease, only one not showing it, which was the best swarm. Some of them were truly terrible, such an extent as last year's foul brood capped and dried being cleaned out for the queen to be in a few days food for enemy. I am almost certain in a place like this where bees have nearly all been affected with F. B. that the queens are also affected, and as I said before I am going to requeen throughout and treat on the McEvoy method. I may perhaps test your plan, if so I will let you know. I have felled 26 bee trees within 2 miles of my bees, so I have riddled the bush pretty well of black bees. Honey flow since August has been very steady, but is improving now, clean strong colonies working in sections.

[We wrote you to use carbolic acid as a preventive, not a cure.]

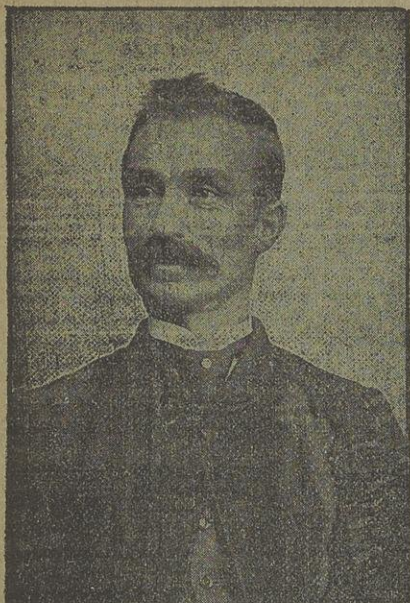
Mr Burke, Loyalstone, writes—As my subscription is due in advance this month, I enclose postal note for 5/-. Your journal compares very favourably with the foreign bee journals, and Australian beekeepers could not do without it. The person who begrudges the 5/- per annum subscription must be very mean. I advise you, Mr Editor, to scratch all bad pays out of your books, and commence with a clean sheet. Times are too bad to have bad pays. We are having a fair honey season here. Before Christmas it was very dry weather, but rain since then has freshened everything up. Clover is out in bloom, as well as yellow box, white gum, red gum, and apple tree. At the present time the bees are having a bountiful harvest. I keep my hives under a shed, as I am not a believer in having the hives out in the open when the thermometer is 100 in the shade, as it is to-day. I know of one ring-barked paddock (trees that will split, not rung) of 100 acres, and there are 26 bees' nests in this paddock, 20 of them being in green trees, which proves conclusively that the bees like plenty of shade. I started Italianizing this year, and have at present 12 hives of pure Italians, not counting black hives with Italian queens. They are doing first rate. Re introducing Italian queens into black hives, bee masters tell you to let the bees release queen, which they will do in 24 to 48 hours. I consider it too risky. For instance, I divided a strong black swarm, giving Italian queen to queenless half, caged in a Benton cage. I opened the hive in 48 hours. Queen not out, cut out numerous queen cells, let queen out to try them, the bees balled her, so returned her to cage. Opened hive again 48 hours after—queen not out, cut out more queen cells, tried queen, but bees balled her, so returned her to cage, and 48 hours after that had another look, cut out a couple of queen cells, tried queen, and the bees accepted her. What would have been the result if I had simply put the cage in, and not disturbed the bees

for four or five days as beekeepers tell you to do? I reckon the result would have been a dead queen killed by the blacks.

Mr Henry St. John writes—I read your A.B.B. with great interest, and as you kindly invite questions, I should be much obliged if you could give me any information 'on the following' questions. 1. Last November I introduced a golden Italian queen into one of my hives, and on looking over the hive last week, to my great surprise I found two golden Italian queens on the same comb, not more than an inch apart; the one I had introduced I could tell, as I had cut her wings. They seemed to be on the best terms. I removed the young queen at once to a queenless hive, and on looking into the hive four days after I saw there were a great many eggs, so suppose she must have begun laying as soon as introduced. Is it not most unusual to find two queens together? 2. I divided a hive of black bees as directed in A.B.B. and in the old hive from which the queen had been taken I placed two combs, each comb having five or six fine queen cells sealed, and on looking into the hive two or three weeks after I find it still queenless, and no trace of queen cells; I then gave them a comb of young eggs, but they show no sign of building queen cells, and, of course, my hive, which was very strong and just going to swarm when I divided, is becoming very weak, at least the old hive, the hive in which the queen was put doing well. Can you give me any reason for the bees not having a queen after having so many queen cells given them.

[The two queens probably were mother and daughter, and the latter perhaps was not a young queen. Such occurrence is by no means uncommon. The other question.—If queen cells were given within 6 days of dividing probably the bees destroyed them. If you had put larvæ a day old instead of eggs they would have raised queens. Bees do not as a rule accept eggs. We would get an untested queen from some breeder and put in the hive.]

Want of space compels us to leave over much interesting correspondence.



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