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## **The Australian bee bulletin. Vol. 10, no. 11 February 28, 1902**

West Maitland, N.S.W.: E. Tipper, February 28, 1902

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# ✠ THE AUSTRALIAN ✠ Bee Bulletin.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.

Edited and Published by E. TIPPER, West Maitland; Apiary, Willow Tree, N.S.W.  
Circulated in all the Australian Colonies, New Zealand, & Cape of Good Hope.

VOL. 10. No 11. FEBRUARY 28, 1902.

PER COPY, 6D.

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Buffalo, N.Y., July 5, 1901.

The bees are working as I never saw them work before, and already there is over 100 pounds of honey in the hive, and all from clover. I am led to believe that long tongues and good working qualities go together.

OREL L. HERSHISER,

Supt. N.Y. State Apiarian Exhibit, Agricultural Building,  
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BEEVILLE, BEE CO., TEXAS, U. S. A.

“The queens that we have received from Mrs. Atchley are doing well, and I am well pleased with them.—E. TIPPER.

**NOTICE**

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


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EXHIBITION BUILDING  
SYDNEY.**



# The Australian Bee Bulletin

A JOURNAL DEVOTED TO BEEKEEPING.

Edited and Published by E. TIPPER, West Maitland; Apiary, Willow Tree, N.S.W.

MAITLAND, N.S.W.—FEBRUARY 28, 1902.

The following is a list of advertisers in our present issue:—

## Supply Dealers.

R. K. Allport, Chuter St., North Sydney.  
A. H. Hordern & Sons, Haymarket, Sydney.  
The W. T. Falconer Manufacturing Co.,  
Jamestown, N.Y., U.S.A.  
Chown Bros. and Mullholland, Ltd.,  
Thomas St., Ultimo, Sydney.  
R. Beuhne, Tooborac, Victoria.

## Queen Raisers.

W. Abram, Beecroft.  
H. L. Jones, Goodna, Queensland.  
A. A. Roberts, Muswellbrook, N.S.W.  
Jas. McFarlane, Lyndhurst, Victoria.  
Mrs. Jennie Atchley, Beeville Bee Co.,  
Texas, U.S.A.  
J. W. Miner, Ronda, N.C., U.S.A.  
R. H. Jervis, Moss Vale, N.S.W.

## Miscellaneous.

A. Hordern & Sons, Haymarket only,  
Sydney.  
Allen & Co, 242 Sussex street, Sydney  
The Farmers' Co-operative Company,  
Ltd., Sussex street, Sydney.

## Foundation.

R. Beuhne, Tooborac, Victoria.

Coal tar poured into an ant hill and set fire to is very unhealthy for ants.

Note Mr. R. Beuhne's advertisement elsewhere and give him your patronage.

Mr. T. H. Bradley writes us: Last issue of the A.B.B. splendid. Congratulate you on it.

In whose interests should Show schedules be made up? The honey producer or the supply dealer?

Members desirous of becoming officers of the N.S.W. Bee Farmers' Association

should get their neighbouring beekeepers to join so as to secure their votes and influence. Every 50 hives is a vote.

In France water with vinegar and honey is a cure for the foot and mouth disease in cattle.

A. C. Aiken, a large American apiculturist, says his average for ten years has been 40 pounds a colony.

Honey tooth-wash to remove tartar from the teeth: Muric acid, 1 part; water, 1 part; honey, 2 parts.

Our experience has been that swarms that have plenty of room in spring build up quicker and give best returns.

By whom are prices of honey regulated? The newspaper quotation, the buyer, the commission agent, or the producer?

R. C. Aiken, says in *American Bee Journal* there is no money in American beekeeping except in the hands of practical apiarists.

1,000 drones are said to consume 4 oz. honey daily, or the drones reared in 28 square inches of comb will, in five weeks, consume about 9lb. of honey.

Mistakes in the best regulated families (bee journals)! The *Pacific Bee Journal* speaks of 40,000 tons of honey from 825 colonies—over 48 tons from each colony!!

For hive tops plain zinc sheets are about the best. Many use corrugated iron. We fancy the spaces underneath the latter would be breeding places for spiders.

Our experience this past and previous years has been that large bee space and large brood chambers give the best honey returns—more so than small hives and few combs in which the queen can lay.

Persons attending Sydney meeting are requested to meet promptly at two o'clock,



to prevent, if possible, important business having to be carried over to another day, and thus cause expense to members by stopping in Sydney unnecessarily.

When removing hives of bees short distances handle the hives roughly so as to shake the bees well up, and put a good shade board in front of the entrance so as to cause them to mark the new location.

Bee Farmers, if you value your own interests, try and attend the annual meeting at the Farmers' Co-operative Co. Rooms, Sussex and Liverpool-streets, Sydney, Tuesday, April 2, at Two o'clock sharp. Cheap trains will be running.

Every N.S.W. Beekeeper should roll up and join the N.S.W. Bee Farmers' Association, the only practical one for the good of the industry that has ever started. Look at the business suggestions for the coming annual meeting elsewhere. Also read the rules.

The presence of a virgin queen in a hive may be determined by cells being polished out in the central part of the brood nest ready for the queen to lay in, perhaps several days before the queen is ready to lay, sometimes when she is hardly a day old.

F. L. Thompson in the *Progressive Beekeeper* relates how a number of hives being clustered together for heat in wintering, out of 117 strong hives at the opening of the honey flow there were only 75 effective at close—attributes it that the community of heat drew bees from some hives to others.

A good way of introducing. Remove hive and put fresh empty one in its place. Take frame by frame out of hive, and shake bees off at entrance of fresh hive, looking for queen and disposing of her. Place frames as shaken in new hive, brood ones first. When brood ones are in put fresh combs or starters from another hive to fill up. Drop new queen among the bees running in.

At our out apiaries this season we started extracting in a tent made for the purpose, but bees would get in, it was

also very hot. Finally we concluded to extract in the open, at a fair distance from the bees, and under the shade of a tree, having uncapper and extractor close to each other, and a sheet ready to throw over all when away to luncheon, or if the bees did get troublesome. We are quite satisfied "in the open" is much the best way.

Wax presses and their uses were discussed at the Buffalo Convention. Mr. F. A. Gemmill said his experience was where he used either boiling water or steam he had to use pressure in order to get all the wax out of the refuse. One plan soaks the combs a number of hours before boiling. A heavy weight will not be nearly as effectual as a press. Both in Germany and in America hot water is reckoned preferable to steam for melting wax.

Wax to be made marketable, requires to be rendered more than once. First time with pressure, the wax in bags so the slum gum will be confined. The second time a little sulphuric acid poured in while the boil is on, and time given for settling down will send all refuse to the bottom. The dirt in the wax given plenty of time to settle to bottom and then the wax dipped off at the top and placed in moulds with flaring sides just rinsed with water. Very little acid is necessary—a teaspoonful to a couple of gallons of wax and water is ample.

In another part of this issue will be found an advertisement for the sale of Mr. Sutton's farm and apiary in Western Australia. He says:—"For some considerable time, I have not enjoyed good health, and it has been hard work to keep things up-to-date in the apiary, unfortunately the flow came on just when I had to go to town to the doctor, just at the new year, and since then, I have not been able to do any thing. For some days I was hovering and almost gone, but thanks to care and good nursing in the hands of God I am now slowly improving. My assistants have taken quite two tons of honey during the month, and there is still



a steady flow. There are about 130 swarms of pure Italian bees in two-story 10-frame hives and all in tip-top order. It ought to be a real good investment.

A correspondent complains of the want of a book on the Forestry of Australia useful to beekeepers. We have done our best to study the honey resources of different localities and the trees that produce same, with most disappointing results. Trees in one part that gives a very inferior honey, in another part trees with same name give a very superior honey. A kind of tree that in one district blooms in the autumn in another blooms in spring. One tree blooms more or less every year. Another blooms every third or fourth year. One blooms two years in succession. Then three or four years no bloom at all. The nearest approach to a book on this matter is "Mr. Maiden's Flowering Plants and Ferns of New South Wales," published by the New South Wales Government, but it does not give the information the beekeeper wants, and which he can only get by continued residence in one place, and knowing the trees, etc. of that place. It is also too much confined to coastal trees, etc.

### Questions.

18. Give suggestions for practical work at the Annual Bee Farmers' Association meeting in April?

W. AGER.

19. Which are the best rules to follow in judging queens both for show and general purpose?

20. What should be the minimum price of queens?

J. THOMPSON.

18. Get all the members you can.

19. Keep her in a hive for 6 months, including a honey flow.

W. AGER.

18. I think one of the best steps to the benefit of the beekeeping industry would be gaining a correct knowledge of the honey bearing flora of this State. How can it be attained? Then again I would draw attention to the practical distribution of our surplus honey. Are the country towns of this State canvassed, if not, which is the best system of having them supplied?

A few of the dairying districts I've been in, honey is a thing to be read about, but seldom seen. Now the farmers with large families are the people to put away the 60lb tins. It is my opinion if our own demand could be properly managed there would be no need of exportation for awhile; but still, the export market could be fostered in the meantime. How would it be for the Association to have canvassers over the State, then any member wanting to get rid of his surplus honey instead of sending it scores of miles to glut the Sydney market, and perhaps the same honey would be sent half-ways back the same road it came, could drop a line to the secretary and have his honey placed just where required. I consider these the two principles wanting the beekeeper's attention: First the production, then the marketing. Another thing, from what I can make out of the price lists from the merchants who supply us with honey tins, the beekeeper who is fortunate enough to require a few gross, will get a price list something like this, 60lb tins: 228s per gross, discount 50 per cent., while the beekeeper who is struggling along in a small way will have a price list something after this fashion. 60lb tins: 228s per gross, discount 25 per cent. I think this could be overcome if the Association means business. How would it be for the Association to contract for prices of honey tins, all sizes, to be had as required; then any member wanting tins could send his order with the cash to the secretary, and he then could forward it on to the accepted firm, the tins being sent direct from the manufacturer to the purchaser. This plan could be worked with all other apiary appliances. Thus all beekeepers would get their goods cheaper and be treated fair.

### N.S.W. BEE-FARMERS' ASSOCIATION.

Owing to the bad season just passed through and its disheartening effects on the industry, it is not anticipated many members will be able to attend the meeting in Sydney in April. It is to be hoped however, as many as possible will attend. Those who cannot, should not omit to forward their nomination and proxy papers either to the Secretary or some member they know will attend. The meeting will take place on TUESDAY, April 1, at the Farmers' Co-operative Co. Rooms, Sussex-street, Sydney. The low price of honey in New South Wales should be a principal subject of discussion, and several very important matters will be brought forward.



# VICTORIA.

## VICTORIAN NOTES.

R. BEUHNE

**MARKING HIVES.**—I am "all ears" to hear friend Davey's plan of marking hives which is to appear in this issue. I have no idea what it is going to be so I am somewhat at a disadvantage in criticising it. Perhaps a system of feathers of different colours in different positions. I am anxious to know, however, whether friend D. could so tell the pedigree, etc., of queens by standing and glancing along the row, and does the indicator show when a queen has absconded, or a queen hatched or died, for I take it that the affair is automatic, as friend D. says he can tell "age of queen" etc., without moving an inch. So can I from my record book, but, of course, I have to make the entries previously, whereas his device is no doubt self-acting. There is, however, the consolation that I can carry my records about with me, go over them any time, while travelling in the train or taking a rest. I can see which strain of bees is best, and can trace a good quality or a fault right back to its origin and propagate it or exterminate it as the case may be. The very act of recording anything impresses it on one's memory, and I can tell the age and pedigree of queen of every colony (200 odd) as well as the peculiarities, temper, etc. of workers without reference to the book. The only entries I make apart of the register of queens, is an entry in spring and one in autumn for each colony, and of course, entering the number of new queen in case of change. This is all I want; bricks, sticks and other semaphores are only a reminder, like a knot in a handkerchief or a bit of string round your finger.

**SPRING DWINDLING.**—Autumn is at hand, and this is the time to take notice and notes of condition of colonies as to age of workers, time when breeding ceases, the

source and density of honey with which the colony goes into winter, and the conditions of temperature and moisture of atmosphere under which such stores were gathered. Spring dwindling has been much in evidence during the past few years, much more so than is generally known and supposed. Many who have lost heavily have kept very quiet about it, and it is only as time goes on that the extent of losses becomes more known. This season has been very abnormal in most parts of this state, and I am making the above suggestions for the purpose of having some data to work upon should losses again occur from what for want of a better name we call spring dwindling. From my own experience I am certainly still of opinion that the nature of the winter stores is one of the causes, although some colonies seem to be more or less immune from the effects of the same food that adversely affected others. It will therefore be well for us to keep this fact in mind when drawing conclusions. As I stated at the time I extracted all but a few combs at the time I came to the conclusion that the stores were responsible. Those few combs which I left I marked on the top bar, this was spring 1900. Some of that honey was in those combs till lately, and in the colonies all the time. There was a great scarcity of nectar here since the beginning of November, and old stores were drawn on by the bees for brood rearing. There were two colonies which although quite normal and with prolific queens never increased strength in the ratio they should have, and it was not till quite lately that I discovered that these were the identical colonies with some of the frames marked "old honey." I very much regret that I did not keep a tin or two of that 1899-1900 grey box to feed to one or two colonies for winter stores, and watch the result.

### VICTORIAN APIARISTS' ASSOCIATION.

In reference to samples of English honey I have received a letter from the Department of Agriculture stating that



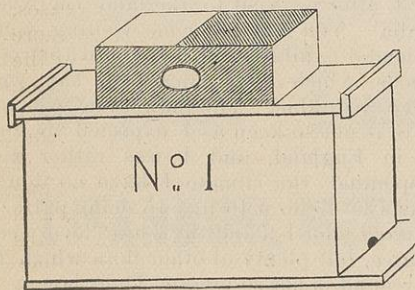
the samples of English honey forwarded from London by Mr. Sinclair, are available for inspection at the Department's Office, Melbourne, by members of the Victorian Apiarists' Association.

R. BEUHNE,  
Correspondent.

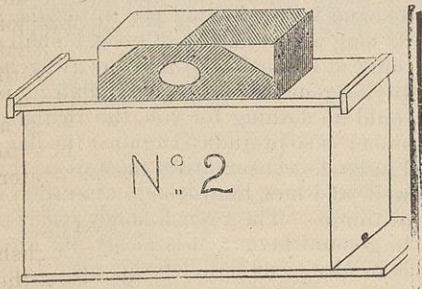
## THE RED WHITE and BLUE HIVE MARK.

W. L. DAVEY.

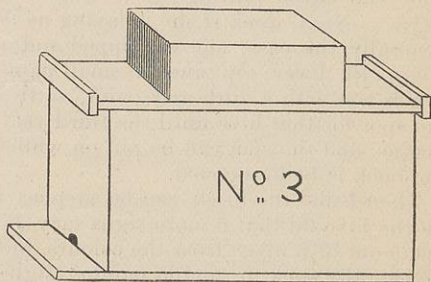
I have these three colours in my style of hive marking and I have named it the above, as I have never heard of the plan before. It suits me as nothing else could, and is simplicity itself, and I think it may suit others, so I am giving it for what its worth. The following is a rough sketch of three samples:—



Now, I have ten signs in the colours of the brick alone. Examine No. 1 and the reader will find four signs, "the surface of the brick is painted  $\frac{1}{2}$  blue and  $\frac{1}{2}$  white," the end which is showing is painted white, the side with the spot is blue. In



No. 2 you will notice a slight difference, a blue end is showing and two white corners, whilst in No. 3 two more signs are apparent, the surface is unpainted, thus showing the original red, whilst the side is painted white.



The cypher explanation will at once give the value of each side, but note that the spots vary in colour, being red, white and yellow, also note that the apiary must always be viewed from one end. Of course, the whole system depends on making one end of the apiary your basis for observation, always.

Sign	Meaning
White Spot—	Queen raised 1900.
Yellow Spot—	Queen raised 1901.
Red Spot—	Queen raised 1902.
Blue Side—	Hive in satisfactory condition, and age of queen.
White Side—	Short of Frames.
White End—	Queenless, or queen-rearing.
Blue End—	Virgin or unclipped queen.
Half Blue and Half White Surface—	Swarming or swarming fever.
Red Surface—	Diseased.
No. 2 Brick as facing—	Queen breeder, and spot denotes her age.

By requeening after queens have commenced their third year one of the spots becomes defunct, for instance, white dies out with me this year being changed to red, next season yellow dies out and becomes the white spot, then the red is replaced by the yellow again, and so on.

Now I can stand at any row of hives and without any trouble can go to any hive needing frames, queenless or having an unclipped queen, without a "book record" to look up. I can find my breeding queens at a glance round the apiary



and so on, and I find it is so convenient to handle the brick. I merely "if a queen is killed" show the white end, if I find the queen cell previously given has hatched then round goes the brick to the blue end after putting in a frame of larvæ. Next week if she is laying as is generally the case, she is clipped and a honey tin lever top and a small paint brush wet with a little red paint, settles the spot for that hive until the third year begins, and the spot can be put on whilst the book is being opened.

Then I find the brick can be so placed on the hive lid that 6 more signs may be made out of it apart from the colours, but I generally stick to the ten painted signs and use the positions only for anything needing special attention during the day's operations. For instance, I place the brick on the front of the lid projecting slightly over the bee entrance if the hive is strong enough to spare brood to help a weaker one. If I find a weak hive I put the brick at the back of the hive, thus after three or four hours' work I know where brood can be spared and where it is needed to level the hives up to a useful strength. After that is attended to, the brick goes back to the normal position. And I find pleasure during wind storms in knowing that an 8lb. weight is a good protection to prevent the lid from shifting.

### Victorian Apiarists' Association.

The enclosed correspondence has just been received by me, and I hasten to send this on for your next issue. This completes the information regarding the "Beekeeper's Right" on Crown Lands in Victoria, and we feel much elated at securing such a recognition of our industry and trust it will prove as beneficial to our friends and members as we anticipated.

In next issue I propose reprinting full and exact terms of the license. Beekeepers needing any information will receive same from me on sending an inquiry by mail, etc.

W. L. DAVEY, Sec.

Department of Lands and Survey,  
Melbourne, February 19th, 1902.

SIR,—Referring to your letter of the 5th instant, I have the honor, by direction, to inform you that the Hon. the Minister of Lands, has decided that the fee for a license under Section 147 of the Land Act, 1901, shall be two shillings and six pence (2/6), per annum.—I have the honor to be, Sir, your most obedient servant,

JNO. MACGIBB,  
pro Secretary for Lands.

W. L. Davey, Esq.,  
Plenty Road,  
South Preston.

### A New Zealander in England.

H. PARETT.

I write these few lines informing you that I have returned in safety to my intermediate home New Zealand, thank God, after my visit to England via Australia. You remember me visiting your splendid exhibition of honey and apiarian goods, which I am pleased to say was very creditable. The interest in Apiculture is not so keen as I expected to find it in England, and I was rather disappointed, the climate I have no doubt has a lot to do with it. In many parts of the old land I found the white clover very scarce, but plenty of other flora which to my mind is not so good. Their honey is much darker in colour than New Zealand honey, especially our Canterbury product. My honey that I took with me was well received in the London market and much esteemed, and I was fairly treated, a good market opened up should I desire to export. But at the present time I have no need to send away, as the local demand is so good, 4d per lb by the ton. So long as it remains so good I shall not think of exporting to that far away land. In reference to your Australian honey I could do nothing for you, the British consumer is so prejudiced against the flavour. England's conservatism most of us know well, and how hard it is to alter their idea of things. The French honey seems to be in general favour, it is nicely put up and is in nice clear liquid form, also Jamaica sends some very nice honey to that



market. America too in her giant business handicaps us somewhat in our far away land. I think the time is come when Britain should look to her own and give hers the preference. Not that I advocate selfishness, but that I believe true charity must first look to her own before it emigrates to other lands.

Our present season in New Zealand is fairly good, but my experience not so good as last year. But we must be thankful to the Giver of all Good for whatever He is pleased to send, and make the best of what is sent, for after my experience in travelling and what I have seen on the wayside, we have reason to be grateful to Him for permission to live in such a good land. May we all aspire to nobler themes and praise Him, Lord of all

---

N.S.W.

## Bee Farmers' Association.

### THE ANNUAL MEETING

of the above will be held on

*Tuesday & Wednesday,*

*April 1st & 2nd, 1902,*

AT THE

FARMERS' CO-OPERATIVE CO.'S ROOMS

Sussex Street, Sydney.

Members who cannot attend are requested to forward their nomination papers to the secretary and to send their proxy to some officer or member who can attend.

Several very important matters will be brought forward, including the following:

Reading of Annual Report.

Appointment of Scrutineers and Election of Officers for ensuing year.

MR. HESSELL HALL, M.A.

Prevention of Bush Fires by sparks from Railway Engines.

C. H. MILES.

That organisers be appointed in several districts with the object of forming Local Associations, with the signatures of Secretary and President. with the object of carrying out Rule 7.

T. H. BRADLEY.

Granulated Honey and its effect on market.

W. NIVEN.

The destruction of native timbers.

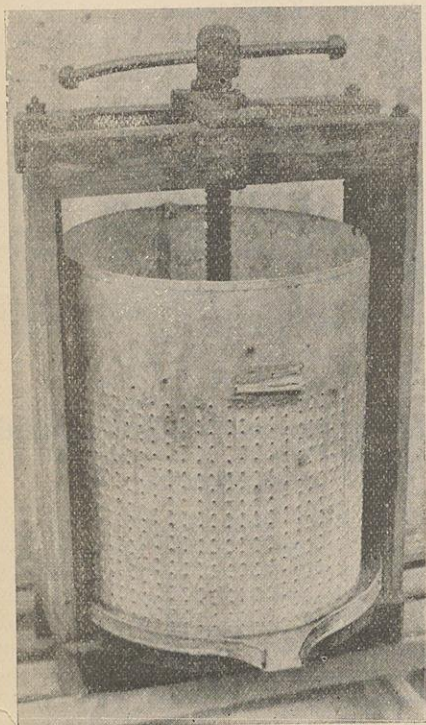
&c., &c., &c.

## Bee Farmers Try and Attend.

### CAPPINGS.

First drain them say for several days to let honey escape. Then put in solar extractor if that is your mode of rendering. We tried several of such, and discarded them. They may be better made now. At the end of a few days we put into the press so kindly presented us some two years ago by Mr. Pemberthy, squeezing slightly every day, and the honey gradually oozing down the sides, into the vessel for its reception hung underneath. Each additional set of cappings from successive extractings are added from time to time. With the continued pressure the cappings from some 700lbs. or 800lbs. of honey will be contained in the press. At the end of season, or when you have spare time, take the block of wax out. Break up and soak for a time in water, which water can be used for vinegar making. Place wax in hessian bags, well sewn up, Boil till thoroughly melted. Put boiler in wax press (not honey press.) This has slatted wooden frames. The platten of press fits interior of vessel, and the slatted frame are at bottom of vessel. A tap is at bottom of vessel. When well melted the tap is opened and water and wax is let out. When nearly all out the press is put on, and all liquid and wax is squeezed out of





the bags, nothing but slum gum left in the shape of a thin cake like tobacco to look at, which the fowls eagerly seize. After the cake of wax now produced is set, it is again melted in clean water a little sulphuric acid poured in while it is boiling, strained through flannel, and when well settled dipped with tea cup into moulds. Though not exactly the same as Mr. Beuhne's waxpress, our waxpress is on the same principles. We got the idea from him.

**STATE FORESTRY.**—In connection with the Forestry department Mr. Bennett, the Minister who has the matter in hand, states that it is intended to appoint a board to advise the department in connection with all technical matters regarding royalties and so forth. The board will be similar in composition to that of

the Prospecting Board, and will consist of departmental officers. The Cabinet will deal with the matter on Friday night. At the same time, the question of the appointment of a superintendent of forestry will be dealt with. What appears to be desired is a man of executive ability. The regulations will shortly be published. Then there is the question of the appointment of a conservator of forests, which will be dealt with at a later date, when the lands have been classified. The appointment of experts and the classification of reserves with the view of permanent dedication of suitable areas will be almost immediately proceeded with. It will be the object of the Minister to make it impossible in future to revoke a forest reserve, and allow it to be used for settlement purposes when once the land has been dedicated as a forest. At present the Minister has power either to dedicate such land, or to revoke the dedication. It will be necessary to pass an Act of Parliament with the view of making the dedication permanent.—*S. M. Herald.*

### NOTICE.

**M**R. R. BEUHNE, Tooborac, is appointed Agent for Victoria for the AUSTRALIAN BEE BULLETIN, and is authorised to receive subscriptions and advertisements for same.

E. TIPPER.

### FOR SALE.

**O**NE of the Best APIARIES in Western Australia. C. P. Farm, with Stock and Implements, as a going concern. Apply

JOHN SUTTON,  
Wingate, Drakesbrook,  
Western Australia.

Honey Labels a specialty at "Bee Bulletin" office. Send for samples and price list.



## Unfinished Sections in the Fall—How to Obviate Them.

[BY G. M. DOOLITTLE.]

For years I was troubled by having from one-fourth to one-half of the combs in the sections not fully sealed, at the close of the honey harvest, which were saleable only at a reduced price, if at all; but of late years I have but few of such, even in a poor season. After experimenting several years in the matter I became convinced that the cause of the trouble was in giving the bees too many sections; and especially conducive to this was the plan of tiering up sections late in the season. How often have I, years ago, spoiled a promise of an abundant yield of comb honey by tiering up four or five days before the honey-harvest closed. To tier up sections profitably requires considerable tact, and especially do we want a thorough knowledge of the honey-resources of the field we occupy.

Another thing, I have often thought there has been too much injudicious talk in our bee-papers during the past in regard to allowing the bees, under any circumstances, not to cluster on the outside of the hive, the idea being generally conveyed that when bees thus cluster out, they need more room. Now, that depends upon when this clustering-out occurs, whether more room is needed or not, and hence I said "injudicious talk." If the clustering-out occurs at the commencement, or in the very heart of the honey-harvest, then more room should be given, while, if at the latter part of the harvest, or in a time of honey dearth, no more room is needed, for more room at such times results in the one case in many unfinished sections, and in the other an absolute waste of time used in enlarging the hive. To illustrate:

During some seasons we have but a few days of nectar secretion, and that often after the flowers which produce the honey-yield in our locality are past their prime. At such times we often do not have half the surplus room on the hives which we would use in good seasons, and

for this reason the bees begin to be crowded out before they have commenced in the sections at all. Hoping that the weather may be good during the rest of the time that the flowers are in bloom, we give double the room that they had before, only to have it soon turn bad weather again, thus giving us only part-filled sections in the fall, while, had we left them as they were, all would have been finished, and we and the bees have been happy.

My plan of operation to secure all capped sections or as nearly so as may be, when the season closes, is as follows: When the bees show by building bits of comb here and there about the hive, and by lengthening the cells along the top bars of the frames, that they are securing honey from the fields, I put on sections to the amount of the smallest capacity of one of my surplus arrangements—or say 20 to 25 pounds—and leave them thus until the bees are fairly well at work in them, when I add more room to the amount of one-half that put on at first, if possible; and, if not, then the smallest possible amount consistent with the surplus arrangement I use, generally putting this last under the one the bees are already nicely at work in, if this room is needed during the first half of the probable surplus yield. When more room seems likely to be needed, by finding that the room now on is fully occupied it is given by placing wide frames of sections containing full sheets of extra thin comb foundation at the sides of those sections the bees are already at work in; or, if our surplus arrangement will not admit of doing this, by placing these same sections over those already occupied.

By working according to this last-named plan, the bees always have plenty of room so that they are never crowded, yet it is given in such a way that they will always complete all of the sections underneath or between, which were fully occupied when this latter room is given.

By the time more room is needed, the sections first given are ready to come off, when, as they are taken off, more room



is given at the sides or top, as the case may be, and thus the bees are kept finishing sections the nearest over the brood-chamber and commencing in those furthest away. In this way the season will close with a minimum number of unfinished sections, instead of a maximum number, as is generally the case where the old way of tiering up is used.

I am well aware that we used to argue that by putting the empty sections between those already occupied and the brood-nest, the bees were incited to greater activity, and, as a result of this activity, a greater result in comb-honey would be secured. but after trying both plans side by side for several years, I can see no difference in the yield of honey in thoroughly good years, while in from fair to poor years the plan above outlined gives much the greater yield of marketable honey.—*American Bee Journal*.

### Extracts from Buffalo Convention Report.

#### *American Bee Journal.*

Professor Benton.—From in-and-in breeding we can fix a type, or character, which we could not by constantly bringing in different strains or crosses. In all our hybrid animals the types have been established. We have a beef animal; we have a milk animal; we have a sheep that gives us long wool, and fowls that produce eggs, others produce meat, and so on, and in every instance all of those particular purpose animals have been produced by careful, intelligent in-and-in breeding. From the very earliest start, therefore, I claim that in-and-in breeding is not harmful, but it is the lack of ability or experience to apply it that results badly. When we have a strain with a weakness and we do not bring in any other stock at all, we do not breed intelligently enough to fix the stronger points in the breed, and eventually that strain will run out.

Mr. Betsinger—I have a cover that doesn't warp or twist. It is a simple frame box with a tin cover telescoped on top of the hive, and is cleated so that the

cover doesn't come down to the board within half an inch. Now, the telescope cover is half-an-inch larger every way than the hive. That cover won't warp or twist, I don't care where you put it. And it is cool in the summer; I never had combs melt under it. For experiment I had made another case just like the cover with the cover fitted that left a dead-air space all around the inner hive, then combs melted. A telescope cover lets the air all around the interior of the hive, and although the sun shines directly on it, the combs will never melt under it.

#### SELECTING LARVAE FOR QUEEN-REARING.

"When a colony is made queenless will the bees, in their haste to rear a successor, select larvæ too old to secure the best results?"

Mr. Davidson—I think it is very seldom that the bees select that kind of larvæ. I have noticed it only a few times in my experience with bees, that they have selected larvæ too old. I have seen some hatched out about the ninth day and it didn't look as well as it would if reared from younger larvæ. I think that it is very seldom that the bees make that mistake.

Mr. Benton—I agree with Mr. Davidson. The conditions under which they do select rather too old larvæ seem to be when the colony is weakened by any means; for instance, it is a small colony, or what might be called only a nucleus, but a colony in good condition and gathering honey rapidly, will rarely make a mistake and get the larvæ too old.

Mr. West.—In regard to removing a queen from a colony of bees, I have an apiary of about 80 colonies that about June 1 and about the time the swarming begins, I remove the queens from these colonies of bees and on about the 10th day I again remove all the queens-cells that are started in that apiary. I save the choicest cells for rearing queens, and from those cells I rear young queens which are replaced again in those colonies about four days later. We do that to control swarming. We have other objects in view, and through several years



of selecting our best cells in that way, we rear about as many queens again as we need, and we make a selection again by using the best queens according to our judgment. I have never had better results in any apiary than I have had by getting my queens in this way.

The *Chicago Daily Tribune* recently had articles stating there was an immense quantity of adulterated honey being sold in that town. The immediate result was sales of honey were reduced some 25 per cent. Mr. York, editor of the *American Bee Journal* contradicted the statement, and called attention that there was a standing offer by the A. I. Root Co., of \$1000 for any one who could produce a pound of manufactured comb honey.

In a discussion at the late Buffalo Convention, Mr. York, said :—I think it makes a great deal of difference where you are. I would by all means work through the groceries in large cities. Probably you couldn't do that in small country places, where there is only one or two groceries—there you'd have to sell from house to house.

It seems pretty certain that when queens are sent through the mails they are sometimes much the worse after the journey, and sometimes as good as ever, and perhaps satisfactorily, without laying any blame upon sudden confinement. There is a very great difference between the weight of a queen when laying two or three thousand eggs in a day and when not laying at all. A light-weight queen, when sent through the mail, has little difficulty in maintaining her footing in the cage, no matter what jars or jolts. On the other hand, when very heavy with eggs, a light jar makes her lose her hold, and a heavy jar may make her strike against the wood of the cage in such a way as to be seriously injured. It is a matter of accident, the light weight being little subject to accident, and the greater the weight the greater the danger of accident. Yet a queen very heavy with eggs may go through in safety, the next one be injured so as to be almost, if not entirely, worthless.—*American Bee Journal*.

## A TESTED QUEEN.

The first and prime point is three yellow bands on the anterior part of the abdomen, that is, directly under the wings or near the thorax of the insect. Not necessarily light, because there are dark and light Italians, and I should say that the queen that gave workers showing those three yellow bands and the general large form of the Italian, with a brownish tint over the body that is due to the fuzz on the body, would come up to the standard of an Italian queen, and the more even that marking is the better it would be in that particular respect. An evenness in the points every worker like every other.—*A. Bee Journal*.

Through but few pages of earth's record can we trace back bees and breeding. Geologically we know bees of sundry species as early as the Eocene age of the Cenozoic (or Mammalian) time. The oldest known specimens are found preserved in the Eocene amber, or fossilized wax, on the shores of the Baltic Sea. That was about the time of the first appearance of flowering plants and trees, and before there was anyone to domesticate and breed them. There were none even to love the sweetness of their garnerings till the cave bear came, unless animals of some other then existing orders were fond of honey.—A. NORTON, in *American Bee Journal*.

The idea is often advanced that crossing would be a means of improving varieties. This does not seem in keeping with all the facts. If crossing carries the better points of parents into the offspring it carries the poorer ones as well. In crossing you cannot say what shall or shall not be perpetuated. From its very nature crossing does not carry characteristics bodily from either parent so much as it divides or averages those of both. If each had one good point carried to excess, the cross might make a better average; but its greater variability, resulting in more types to select from, would be offset by the greater difficulty of making the mongrels uniform and stable. Hence, there is more hope in selecting from the



best among established varieties, because each step is more easily kept. And, finally, it should be urged upon the masses of apiarists to patronize the regular queen-breeder. Especially does this apply to those who live in districts rich in honey and filled with beekeepers. You are far more at your neighbours mercy and under the power of wild bees than is the case in any other kind of stock-raising. The majority of your neighbours will not try to improve. No matter what you may try to do in the way of bettering your stock, you must lose it through the swarms of drones from inferior stock produced around you. You must, more or less often, have recourse to the permanent improvements made by breeders who have succeeded in getting places where their own drones mate with their queens. You thus help yourselves, and at the same time help the breeders to maintain the business which you would be sure to miss should it fail through lack of patronage.—A. NORTON, in *A. Bee Journal*.

### FEEDING.

As from many parts of the colony feeding is now taking place it may not be out of place to give a little of our own experiences. It was the season before last. There had been no honey flow at all that year, and feeding or total loss was the only alternative. Our plan was as follows:—In the middle of the day we examined the hives, some would not want stores. Those that did we left space for a frame in centre of brood chamber, then marked the hive by putting a stone on it. We had procured some cheap dark honey from Sydney. We well mixed same with warm water, and holding a comb over a milk dish (a wash hand basin would do) poured that syrup into the cells from a jug on both sides. When we had got as much in the comb as we could get, one party would quickly take off cover and blanket off hive, the other would quickly drop the filled frame in the vacant place. Done quickly and quietly the bees have no time to take alarm. The hive is closed as quickly and all is well. It does not

take long to do a good many hives this way. Getting short of honey we tried sugar instead, but for some unexplained cause the frames in which sugar syrup was given, turned out mildewy, and the bees died off. We don't feel inclined to try sugar again. And now to the feeding of pollen, say in early spring. We placed ordinary flour on a reversed cover with sides. It was very interesting to watch the bees as they tumbled in it; then poisoning themselves an inch or two over, working with their tongue and feet, evidently mixing honey from their stomachs with the flour, so as to form the pollen balls they carried away to their homes—one of which taken from them being quite sweet.

### BEES IN SOUTH AFRICA.

To begin, then, the bees are quite different. Of the kinds I have come across, one is a very small, dark bee, another somewhat larger; some have three bright bands round the abdomen, and these latter are easily subdued. I seldom require a veil when at work with them; the only time they are at all spiteful is in the middle of very hot days; they are great crawlers, especially by night, and are more apt to get up your sleeves than the English bee. If you first hive them in a straw skep, as at home, and then shake them down in front of the frame-hive to let them run in, they will often take wing and fly right off. All the honey I have tasted here is of peculiar flavour, quite different from British honey. The bee-flora also—with the exception of fruit-trees—is not the same. A lot of honey plants out here are such as I never saw before, and there is no book or record of their name here to be had. I have found out that after we have had rain, no matter what time of the year, you will get honey. In this way, then, the showers are the salvation of our honey crop. We have some difficulty in getting the swarms to stay in frame-hives, and require excluder-zinc to confine the queens to the hive until the bees settle down. Most of our houses here are made of



galvanised iron, lined with board; indeed, this is a noted place for these iron buildings, and the houses generally contain two or three swarms between the wood and iron. The bees seem to have a contempt for our new hive, never having been used to them, I suppose. The queens are very prolific. I have stocks with twelve to fourteen frames crammed with brood. I should say the cells here would run five or six to the inch, but have never measured them myself. In all the strong hives drones are found all the year round. The bees here are splendid workers, labouring from daylight to dark when fine. They stop working, however, in the middle of the day when very hot.—J. MARTIN, in *Beekeepers Record*.

### Deep vs. Shallow Brood Frames.

For a long time I have been on the fence—undecided which to choose. Each kind seemed to possess some advantages. I did not want to give up, so I kept using half stories, and full stories shallow and deep (11 inches) frames in equal numbers. I can get along very well in my home yard with the shallow hives; but when it comes to outyards, give me deep-frame hives, every time. In stocking up an outyard I was obliged to make out the desired number partly with half-story hives. I anticipated difficulties at the time, and I found them when it came to managing the hives. When two or more sectional hives are used as one, the combs or frames of the upper section will generally be more or less fastened to the lower one by bits of comb or otherwise, making it unpleasant to separate the two; then it requires much more handling of frames to get through a hive just when time is most valuable that it almost seems like wasting it. When using only one shallow chamber as a hive, the bees have a way of boiling over as soon as opened up, which is very annoying. I used to think that the shallow frame would be very nice for nuclei; but after trying it for years by the side of deep frames it

does not suit me nearly as well as the latter. I can find queens much quicker on a deep frame, because they are not so apt to hide in the space between the lower edge of the brood-comb and the bottom-bar of the frame. Particularly is this so with black bees, as they are inclined to run off the comb and take the queen with them. When taking a deep frame out of a hive the bees have not time enough to run off, while with a shallow one they would. I have decided to decrease my shallow-frame colonies gradually, and change back to deep frame.—F. GREINER, in *Gleanings in Bee Culture*.

### ADULTERATED WAX.

The following is recommended in the *A.B.C. of Bee Culture*, for detection of spurious wax:—The specific gravities of the ordinary commercial paraffines and ceresins are below that of beeswax. As an ordinary article of pure beeswax is lighter than water (water standing 965 and water at 1000), of course it will float when a piece of it is put into that liquid. Into a jar partly filled with water we will now pour in alcohol until a small piece of beeswax of known purity settles to the bottom, taking care not to pour in too much alcohol, for we want the wax to sink just to the bottom; that is, we desire the alcoholic liquid and the wax to be of the same specific gravity. Now, then, we will put in a piece of adulterated beeswax, containing, say, 50 per cent. of paraffin or ceresin. The chunk will float on the surface of the liquid. We will now take another piece of wax that contains only 10 per cent. of adulteration. It still floats but has a tendency to sink almost under the surface. If we take another piece, containing only 5 per cent. it may float or gradually settle to the bottom of the jar, perhaps standing upon a single point.

Honey Labels a specialty at "Bee Bulletin" office. Send for samples and price list.



## CAN YOU RAISE BETTER QUEENS.

And have you a good and satisfactory way of introducing them? A little kink I got this year for raising queens early in the season and late in the fall, when bees will do really good work in any other way, was this: Remove the old queen, then close the hive and gently blow smoke in at the entrance, pounding slightly on the hive till the bees are alarmed so they will fill themselves with honey. Now open and shake half or more of the bees into the nuclei box, I have explained before. This box is so arranged that the bees have access to what is known as "queen candy," such as is used in sending out queens in the mails. The box of bees is carried to the honey house and left till the next day, at which time the colony is given a prepared lot of queen-cups, and the bees put back. They will "go for" cell building "to beat the band." Twenty-four to thirty-six hours later put in a frame of honey on either side of the frame of cells and take all the combs having brood in them from the hive, shaking and brushing all the bees off. This adds a new impetus to the matter, and brings forth queens of the very highest type of perfection, especially if the colony is fed in addition, so that much heat is kept up all the while till the queens are ready to emerge. But I'll not think more for you along this line.—G. M. DOOLITTLE, in *Progressive Beekeeper*.

## CAPPINGS.

From American and other Bee Journals.

Some of the American Bee Journals, run by firms who sell hives, etc., have been booming up "bee paradises," or wonderful places for any amount of bee fodder, to be followed in next issue by revisions of same at suggestions of residents of such places. F. L. Thompson, in *Progressive Beekeeper*, is rather satirical on such articles. He says:—Beekeepers' paradises are being exploited

just now. But I notice nothing is being said about markets, prices, transportation, water rights, etc. I would rather have an average of fifty pounds, and be close to a good market, and a prior right ditch, than twice as much produced under difficulties of transportation and freight charges, and under a new ditch, when several older ditches have already tapped the same source.—Not much paradise about that; and if we were obliged to work up a home market, I, at least, would feel more like using a term which is just the opposite of paradise. "Paradise"—how nicely that sounds—yes, yes—from the advertiser's point of view. Reader, let me tell you of a paradise that beats anything yet mentioned. It is in the Argentine Republic—great expanses of alfalfa (great stock-raising region, you know) and very few bees, and the bees that are there average right along—well I forget exactly how much, but it is considerably over a hundred pounds. You will get about two cents a pound for it. Go there and be happy.

When prices go down production is lessened; when they go up it is increased. Then there is always a reaction. If prices go down and production is lessened the scarcity that results always brings up the price again. If prices go up as the result of scarcity, production is increased until they are again brought back. Thus all things seek a level. When the price of anything goes away above what it usually is we may, as a rule, look for it to drop back again, and probably go below par. I had an uncle who was a farmer, and when any farm product was unusually high he dropped the production the next year. He said that everybody would go into its production and the price would go down. Then, again, if potatoes for instance, were very low, he would, the next year put in a large acreage. Nine times out of ten he would hit it. While I am not much given to trying to strike the market in this way, I do believe that low prices ought not to discourage a man and drive him out of some branch of business for which he and his surround-



ings are eminently fitted. If a man's locality, hives, fixtures, bees, experience, taste and market are all fitted for the production of extracted honey, let him stick to it, even if prices do go down. By the time he has changed everything over for comb honey, and learned how to produce it, the price of extracted may have again advanced. Do that for which you are best fitted, all things considered, and prices, in a long term of years, will be remunerative."—*Canadian Bee Journal* 1.

**BROOD-FRAME END-SPACERS.**—Opinions of beekeepers are not so diametrically opposite as to many things as they are about the change made in frames which shortens the top-bars and depends upon staples driven into the end-bars to hold the frames in place lengthwise. Some claim that the change is a real boon. The beespace at the ends of the top-bars prevents deposition of glue at that point, making it much easier to handle the frames. Others say the staples are constantly driven further in, and as soon as driven in far enough there is the worst kind of trouble. The difference in the thickness of top-bars or end-bars may account for the difference of opinion. With a top-bar less than half an inch in thickness, and a  $\frac{1}{4}$ -inch end-bar, the staple will not be firmly held, and will soon be out of place. With a thick end-bar, or with a top-bar so thick that the staple will be driven through the end-bar into the top-bar, there ought to be little or no trouble. —*American Bee Journal*

The blue martin is among our bees again—his periodical autumn visit. He is, however, very sensitive to powder and shot. There would seemingly be scores about, all busy catching and tearing bees to pieces. In twos or threes on the limbs of the trees, then darting down for fresh victims. Out with the gun. See, there are several in a cluster. Bang! down comes perhaps two or three. Now for another cluster. Oh, no! you have frightened them. A solitary one, braver than the others you may shoot, but the bulk of them are away where it will be too much trouble to follow up. A contemporary says:—"This bird seizes a

worker, which he much prefers to a drone, by the abdomen, giving the bee a few sharp raps against the perch. He then passes the body of the bee its entire length transversely between his upper and lower mandibles, by a peculiar motion of the latter. This is continued until the juices are thoroughly extracted, when he opens his mouth and drops the useless carcass to the ground. No wonder, then, that we fail to find workers in the stomach. But how about the drones? Well, when a drone is seized he is swallowed at once; and when several have been taken into the first stomach the bird sits on the perch for half an hour, sometimes longer, when, by a few motions of the neck, the casting is brought up. This is about the size and shape of an ordinary pea, and consists of the hard indigestible portions of insects.

I believe that in preparing to swarm bees do not build queen-cells around ordinary worker-cells containing young larvæ but form regular queen-cell cups, that have previously been built for this purpose, and which are always to be found in every well-regulated hive. The egg is deposited in the queen-cells by the queen whenever such cells are properly prepared by the bees to receive them. I have seen the old queen pass freely among queen-cells and could not see any disposition on her part to destroy them, nor could I see that there were any guards there to keep her from doing so if she wished. Post constructed cells, or cells built after the issuing of the first swarm are always built around larvæ in worker-cells, because there is no queen to deposit the egg in a queen-cell. I know it is claimed by some that the bees remove the egg from the worker-cell into the queen-cell, but as such a thing has not come under my observation during my twenty-five years as a beekeeper, I must conclude that it is a rare occurrence.

—W. HEAD, in *American Beekeeper*.

**POLLEN GRAINS.**—Although so small the minute pollen-grains are of various sizes and shapes, and have their surfaces beautifully ornamented in a variety of ways. In fact, these minute objects are just as



characteristic and easily recognisable under the microscope as are the different kinds of seeds. The pollens of several well-known plants were shown, as illustrative of the different shapes and markings of pollen-grains. The pollen of pine trees, which is very light, is produced in enormous quantities, and when carried on the wind and deposited at a distance, has sometimes been taken for showers of powdered sulphur. An instance of this was brought to his notice during the past summer at Armstrong, in British Columbia. A remarkable occurrence illustrating the extreme lightness of the pollen-grains of pine trees was one of these so-called sulphur showers on the deck of a ship nearly 200 miles from land. The doctor of the ship, who happened to be a botanist, detected the true nature of the yellow deposit by putting some of the material under his microscope.—Exchange.

The Leipziger Bienen Zeitung makes note of an interesting experiment made by Forel-Morges, Germany, testing the intelligence of the honey bee. Forel had a quantity of dahlias blooming in his garden which were frequented by his bees. Among these flowers he placed some artificial ones, made of different coloured papers, also putting a little honey into each one. The bees entirely ignored these artificial flowers. Not until Forel caused one of the bees to come in direct contact with the honey contained in one of the red flowers did the bees take notice of it. She continued to work on the artificial flowers, but she brought no other bees with her (the bee had been marked with red paint). Quite a number of other bees were shown the hidden treasures, and after a little time all bees turned their attention to the artificial flowers, wholly neglecting the others. Forel now removed all the artificial blossoms, when the bees resumed their labour, working as before, on the others; but as soon as he returned them, they at once again searched the paper flowers for honey and left the natural bloom, working on the former as long as honey could be found.—*American Beekeeper*.

Dr. Josef Langer, as reported in Bienen Vater, has made a careful examination of the bee poison. The composition is different from what has been supposed. The water-white, clear fluid contained only slight traces of formic acid; the poisonous part is a substance by itself. Bacteria are absent in the fluid, and it is assured that on this account it cannot produce inflammation and blood poisoning in the strict sense of the word. Difficulties often arise from the use of unclean antidotes, scratching with the finger-nails, etc. There appears to be a difference in the quantity of poison in different bees. The poison sac of a young bee contains about 0.00015 gram; of field bees, 0.00025-35 gram. It has been ascertained that the sting of a bee affected with dysentery is much more painful than that of a healthy bee. It was also found that the secretion of the poison was greater when bees worked on buckwheat than at other times.—*American Beekeeper*.

At a recent Beekeepers' Exhibition in Breslau, Austria, there were 95 exhibitors, showing live bees in full colonies, nucleus hives and queen cages. Over 100 colonies of bees were exhibited. A convent from Breslau brought several inhabited old and clumsy log-gums secured by heavy iron hoops and padlocks. Another exhibitor had placed eighteen colonies of bees on exhibition. Gunther-Gispersleben was present with an old, badly worn hive, which served him when he began bee-keeping 50 years ago. Thirty colonies had perished in transit.

¶ **WHEN TO EXTRACT HONEY.**—A German writer says: "I extract from combs that are mostly sealed. In order to find in the lower part of the comb, where the cells are yet unsealed, honey sufficiently ripe, I use the morning hours for extracting. Early in the morning there is found in the combs no thin nectar to shake out easily and excite robbing. All the nectar gathered the previous day is somewhat thickened. If several rainy days occur, then the morning of the first flight-day after the rainy spell will find the unsealed honey as thick as that which is sealed."



## ✻ CORRESPONDENCE. ✻

T. H. B., Appin, Feb. 17, writes:—The life is being wilted out of me with this drought. The whole country round has been burnt, and we have no grass for our cattle.

J.S.C., Corowa, Feb. 17: It has been the worst season ever experienced here, but I have neglected my bees a lot, as I've not been home. Perhaps that accounts a lot for it.

Narrabri, February 2nd.—My bees are doing very badly this year, not paying expenses. I think I shall give them up as I have not the time required to devote to them.

W. H., Telegraph Point, Wilson River.—We are having a very poor year for honey here, no honey at all yet. Just enough to keep the bees in nice condition. I hope you are having better luck.

C. H. M., Riverston, February 10.—We have had one of the worst bee seasons on record, hundred of hives dying out, some small beekeepers losing all they had. I lost heavy this year, not one ounce of honey yet. Hoping you have a better season your way.

J. H., Palmerston N., N.Z.—I am pleased to notice that the A.B.B. is gradually improving in get up, etc. Last honey season was the poorest I have ever known in my eleven years experience, but I expect to have something better say about this season in my next report.

G. S., Tokorkahi, N.Z., January 18.—This season is very backward for bees in this part, honey coming in very slow. I got a few hives this year with Danzenbaker Patent Reversible Bottom Boards. I find the entrance is very large and open the full width of box. I would like your opinion on them as they cannot be contracted.

[Being reversible could you not turn them and then give a smaller entrance?]

J. B., Wodonga, January 30.—I intended to write you some time since when Mr. Loyalstone or Mr. Burke invited beekeepers to give their experience on the bee failure in October and November. I had the same experience, and so did nearly all the beekeepers in our district. It was a very trying time just when there was a nice flow of white box on. It is past my knowledge what is the cause. It is only a very middling season.

W. S., Windsor, February 4th.—I receive "A.B.B." regular each month, and I don't know how I'd get along without it, so will keep it in my mind when things takes a turn. No honey, no honey, no swarms, and many bees lost in this district this year, starvation, bush fires, etc. Bees are just living from hand to mouth now from forest apple. Every prospect of having to feed them later on.

B. D., Rosedale, Gippsland, Victoria.—We have had a light season so far, the bees have done next to nothing since November, they are gathering a little now. We have got about 3 ton 2 cwt. from 100 colonies up to the present. Last season we got 6 ton 2 cwt. from 75 colonies; it was a very good season. Hoping you are doing well and wishing a prosperous New Year.

Mr. W. Hessel Hall, writes:—Things are in a bad way in this district, as the bush fires have taken what the hail left. This district, which produced upwards of 60 tons of honey last year will hardly produce a ton this year. The whole mountain range behind me has been burnt for many miles. The peppermint blossomed fairly well this year, but the fire went through the ridges where it grows before it bloomed so that we got very little out of it. One neighbour further down the river who got 500 tins last year has none this year; another who had 8½ tons is buying sugar to keep his bees alive. My own hives are still in fairly good order, though I expect many of them will be short of stores in the winter unless we soon get rain to bring the late maize along. The early maize



was blasted when in tassel, and has produced neither honey nor grain. I think the bad season is pretty general throughout the colonies. And for this and other reasons I think the beekeepers should stand out for better prices than are being obtained in the Sydney market. The conditions this year are quite different from last year. The glut of last year has been relieved by the export to England and by the large sales to other colonies since the removal of the inter-colonial duty on honey. There is likely to be a large shortage in this year's crop. We have a new outlet in the markets of the other colonies. The duty of 1½d per lb on glucose will diminish supplies by discouraging adulteration while it should open an outlet for dark honeys among the tanners in place of glucose. Under these circumstances I think the beekeepers should be able to stand out for good prices for the little honey they have got.

H. N., Wellington, N.S.W., January 29th.—This is one of the driest years we have experienced since '82 to '84. The rainfall since October has only been 35 points, water is very scarce, grass ditto fruit trees dying, grapes almost a failure, even the Chinaman can't grow vegetables no matter how they water them, so you can tell we are having a rough time. Crops of wheat, barley and onions were good and we obtained good prices, the best for some years. Nearly all the bee men have left the district, or have lost the whole of their bees. The last of my 53 colonies went on Christmas day. I won't bother with any more until a return of good seasons, if we have any more. It has been gradually getting worse for the last five years, until to-day there is hardly a swarm left. There is nothing for bees to live on, and the ants are in countless millions.

Mr. W. Niven writes :—It is my intention to be present at meeting of N.S.W. Bee Farmers' Association. I have not sent in any nomination of officers, I prefer to let it stand over till present at

meeting. In appointing officers those that are permanently established in the beekeeping industry should have preference, if they are capable men and willing to act. Practical work for meeting—The most important question is "The destruction of native timbers." Another important question, "The great loss of bees of late years." The selling price of honey should also receive attention. I would like to hear a general discussion of all members present on the working of the apiary, each making known his difficulties, also his success. As others will suggest work I will not take too much of your space.

Mr. D. N. McLeod, writes :—There is a matter I would much like brought before the notice of the N.S.W. Bee Farmers' Association. That is, it should endeavour to place practical beekeepers, who are members of that body, in the most advantageous positions to carry beekeeping to a successful issue. Now, it is plain, at the rate ringbarking is going ahead, that at no distant date the beekeepers' pasture will be narrowed down to F. R. S. and water reserves and timber reserves. And if these are not carefully guarded by those interested in beekeeping, will be ringbarked by the lessee. But granting that the Association is successful in guarding these reserves, would it not be a wise measure to settle practical beekeepers within easy access to them. It is not enough that a man can locate his apiary on a couple of acres of this reserve, because, as is well-known to beekeepers, a man cannot make a decent living exclusively on beekeeping, but worked in conjunction with some other occupation that it will work in with, it will in good seasons be a great help. Therefore I would suggest that where land is being made available for settlement, adjacent to these reserves, a block be set apart in the most suitable position, to be balloted for by practical beekeepers only. Then the reserves around which the land is already disposed of and the area of reserve will admit of



granting a block out of it for this purpose. On good wheat-growing areas a small holding would be sufficient, but where suitable for grazing only a larger area would be needed.

## CAPPINGS.

*From American and other Bee Journals.*

In one province in Cuba six foreigners (Americans), and 165 natives have 3,888 colonies in native or unimproved hives, and 1,123 improved or imported hives.

Aromatic spirits of ammonia half a teaspoonful, whisky, coal tar, and bathing with a strong solution of soda, are recommended as remedies for bee stings.

In Carniola, U.S., there are miles upon miles of buckwheat grown. To get a good flow from such the beekeepers encourage swarming and then get all swarms up in condition for the flow.

Imprisonment of nuclei for 24 hours would not only give time for young bees to hatch out, but would go a great way toward making the bees stay that were already hatched out.

The mandibles of the honey-bee are provided for the working of wax, and this only when softened at a high temperature. Those of the wasp for gnawing wood for the manufacture of the paper with which their nests are surrounded.—*Exchange*.

CURE FOR CORNS.—After a warm foot-bath, apply to the corn a plaster of beeswax, or, still better, of propolis, spread upon paper or cloth, and leave undisturbed for three or four days. If the corn is not then easily removed, repeat the process.—*Centralblatt*.

A good deal of previous observation, and closer observation this fall, lead me to believe that the *rule* is that queens continue laying for a time after workers cease rearing brood in the fall. At least it is a very common thing to find eggs and sealed brood present, but no unsealed brood.—DR. MILLER, IN *Gleanings*.

"Housekeeper."—Water with carbolic acid in it is an excellent ant exterminator; so, too, is a strong infusion of tobacco, quassia chips, or aloes. An easy way to begin clearing them is to pour hot water with green vitriol in it down their haunts. But you must keep at them, and never give them any rest.

A good deal of previous observation, and closer observation this fall, lead me to believe that the *rule* is that queens continue laying for a time after workers cease rearing brood in the fall. At least it is a very common thing to find eggs and sealed brood present, but no unsealed brood.—A Stray Straw in *Gleanings in Bee Culture*.

"The bee is not a domestic animal, or even domesticated; and we have done little to change her condition of life except to give her a better home; but by most careful selection I think we will be able to continue to increase gradually the average honey-yield until we obtain great uniformity, and, possibly, an average very near our present maximum yield."—F. B. SIMPSON, in *American Beekeepers' Review*.

When we have a case of robbing there is an easy way to stop it if we commence in time. First find out what colonies are doing the robbing, or if there is more than one take the strongest one and set it in place of the one that is being robbed, and put the robbed one in place of the strong—then swap places with the others interested in the robbing, and all will soon quiet down and defend their hives.—A. G. Anderson in *Southland Queen*.

I believe we are on the threshold of an enormous development in honey and wax production. South America, for example, might produce these to the value of £70,000,000 annually, using our present appliances. In Cuba, honey is produced at a cost not exceeding two cents. per pound, which is sold for six cents, usually to the merchants of France, Germany and Holland.—Writer in *Canadian Bee Journal*. (Whoop lah!)



"How long from the laying of the egg to the emerging of the queen?" was a question asked at the Buffalo, U.S., Convention. Mr. Benton—it is a question of continuity of heat in the hive. The time varies one way or the other for a number of hours. It may be less than 16 days or a little more than 16 days, but in a well-developed colony where the heat is continuous, I think the average time is about 16 days. We find the worker bees sometimes come out in 19 days and very commonly in continuous heat in the latitude of Washington they emerge on the 20th day from the time the egg is laid, showing it is due to steady heat which develops more rapidly.

Contrary to the advice of some of the sages of bee-culture, a great many people in Colorado are working bees on shares, and getting a start in the business without any great cost to themselves aside from their labour. And this chiefly follows from the fact that there are a number of retired apiarists in the State. Yes, men who have actually accumulated a competency from the production of honey. Another class, owners of bees, but unskilled in their management, lease their bees to practical apiarists, and make a handsome percentage on their investment.—*American Bee Journal*.

In hand-picking drones I look first for perfect development, and those under size and imperfect in any way are killed. Next I look to activity on the combs, believing those sluggish in action and motion while on the combs will be the same while on the wing, and beget offspring of like import. Next I look at their markings, and any varying to an unusual degree to either side of an average are disposed of. It would seem hardly necessary for me to say in conclusion, though some beginners may not know it, that drones are what are known as "commoners," which means that any colony which will keep their own drones will allow the drones from other hives in the apiary to enter and be welcome. And thus it often happens that when drones

from other colonies are being driven out, they will enter the colony having the drones from our select, drone-reared queen; and in hand-picking, these should be selected out and killed. This can generally best be done from their colour or markings.—G. M. DOOLITTLE, in *A. Bee Journal*.

When buying bees Mr. Stearns, a Colorado beekeeper, has occasion to move many colonies. His moving plan is very simple. He drives into the apiary after dark, and just loads the hives right on without fastening the covers or stopping the entrances. Of course the bees cluster to quite an extent on the outside of the hives. "But what is the harm?" says Mr. S.; "they will get back again when the waggon stops." He had moved bees over sixty miles; was two days on the road, and every colony arrived at destination all right. During the day the waggon and its load were left alone, and the bees went to work without much confusion.—RAMBLER, in *Gleanings*.

Carbolineum for hive paint is a German introduction. *Gleanings* says:—Instead of forming a coating on the surface like other paints, carbolineum strikes clear through the wood, so that when one side of a  $\frac{3}{4}$ -inch board is painted with it a splinter from the opposite side will taste of the material 24 hours later. It costs only half as much as good lead paint, and it is said that railroad ties saturated with it last three times as long as when not so treated.

One year when we fed syrup as thick as honey we had a loss the following spring that was the heaviest we had ever known. Some of the syrup turned back to sugar, and that sugar was shoved out of the entrance of those colonies that survived. Whether the food was responsible for it or not I am not able to say; but of this fact I am sure: That a *thin* syrup, about like raw nectar, which the bees can invert, is far to be preferred to thick, which they cannot change in their most wonderful of all laboratories to a food that has been digested, or partially



so, at least. Honey having been pre-digested by the bees, is far more easily assimilated than the ordinary cane sugars of commerce. Beekeepers, I believe, cannot make too much of a handle of this point. Slowly and surely, the great physicians are waking up to this fact, and are urging the consumption of honey rather than the sugars of commerce.—*Gleanings*.

**WASPS AND BEES COMPARED.**—Like the queen-bee, the queen-wasp is impregnated once for life. Unlike the queen-bee, the queens of the wasp (*Vespa vulgaris*) can be, and are, fertilised in confinement. In a state of nature they are fecundated within or in close proximity to the nest. The male wasp can live to fertilize several queens. At the mating season there are more queens than male wasps. While the larvæ of the bee takes in its food by absorption, the larvæ of the wasp is fed by the mouth, perhaps through the entire period, certainly after the first three days.—*British Bee Journal*.

A small quantity of wax is harder to manage than a larger quantity. If the quantity is small, you can help matters by having water in the vessel with the wax, for a gallon of water with a gallon of wax will stay hot longer than the gallon of wax alone. Let the wax stand on the stove and let the fire die out in the evening, and in the morning you may find it clarified. Keeping the wax covered will keep it hot longer. If the quantity is small enough, a good place to put it is in the oven of a cook-stove just before the fire dies out in the evening. Put the stove handle in the oven and shut the oven door. Hunting the stove-handle in the morning will help to keep you from forgetting to take out the wax.—**DR. MILLER**, in *American Bee Journal*.

A Belgium bee-keeper, trying to gather a swarm, was badly stung. He took sick, fell down and died in a short time. Investigation by a doctor brought out the facts that he was very sensitive to bee stings and worse than that, he had a

serious heart disease. The question was asked, if a strong dose of brandy would have done some good. The doctor announced that very likely it would, as the venom of bees seems to act like that of snakes. He further explained that the effect of the snake's venom is to paralyze the nervous system, especially some portions of it. The effect of this is to stop the beating of the heart. However, the venom is soon dissipated and taken away by the lymphatic system. The effect of the brandy, or alcohol, is to counteract the paralysis caused by the venom, and if the movements of the heart can thus be continued until the venom is dissipated, the patient is saved.—*Exchange*.

At a recent Texas Beekeepers Convention, Mr. H. H. Hyde read a paper on "How can queens be forced to lay in queen cell cups?" He cited a case where he put his cell-cups in top stories of good colonies before grafting, to have them polished by the bees, where he distinctly remembers where in one case the queen laid an egg into such a cell, which was built out and hatched a queen. Went on to say that by placing cell-cups conveniently in a hive of bees, who wish to supersede their queen, such queens could be forced to lay in them. Also at swarming time queens can be forced to lay into such cell-cups conveniently placed in the hive. At other times it would not seem practical and hard to accomplish.—**Mr. Stachelhausen** thought it can only be done during swarming time.—**Mr. Atchley** spoke about how it could possibly be done by placing cell-cups around and near drone brood, conveniently, and where queens are mostly found after their regular season's laying has been at its fullest, when the queens are almost worn out from the hard work of depositing worker-eggs. It is then that they are almost crazy to resort to depositing drone eggs, as it seems to be easier for them to do this than that of laying worker-eggs. This of course, like the other cases cited, will be at about swarming time.



I think the effort for breeding longer tongues is all right. But if we will use a little logic that we used to study in school, we shall find that queens have always been raised with the one thing in view; i.e., better workers. The queen-breeders and honey-producers, large and small, have always bred from their best queen, the one whose bees have done the best, and that's just what is being done now. All that we gain is the *knowledge* that the "long tongue" is what does it; so the matter can be summed up by the following syllogism: All good workers (bees) have long tongues. These workers (bees) have long tongues. Therefore they are good workers. So all we have gained is that we know what makes good workers, provided it is entirely long tongues that do the trick.—*Gleanings*.

You are entirely right in thinking that what you call dome-shaped cells did not contain drone brood; but you are just as far wrong if you think such cells could not contain good queens. If you find at any time a queen-cell that is rather small and smooth, in a place where there is plenty of room for it to be made larger, as on or near the edge of a comb, you are safe to reject it as one not likely to produce a good queen. The case is different if the cell is in the middle of a comb with all the surrounding cells occupied with brood. The bees do not seem to have room to enlarge and ornament such a cell; and all that I have ever seen in such situations had the surfaces as smooth as the cappings of drone-cells, a slight difference in size and shape being the only thing to distinguish such a cell from a drone-cell. But you may generally expect a good queen from such a cell; and I think it probable that, if you had allowed the cells you mention to go on to maturity, instead of laying workers you might have had good queens.—C. C. MILLER, in *Gleanings*.

BRITISH BEEKEEPERS.—The great majority of beekeepers in Great Britain are in no way to be compared with the bulk of our brethren across the Atlantic. There, and also in our own Colonies, beekeeping is regarded as a branch of the

farming industry, and is thus made a business of. With us, on the contrary, the bee-men who regard it even as their main source of income are comparatively few. Many of those who take to the craft do so, first, for the pleasure it gives, without shutting their eyes to the cash side of the business, and give to that side varying degrees of importance, according to their surroundings; others, more fortunately situated, include a few hives among their home hobbies; and some, again, are likened to the old gentleman who gave us our first swarm: "I never take any honey from my bees," he said; "but I like to see the little beggars work!"—*Beekeeper's Record*.

Two or more colonies placed in one hive, with the right amount of stores, stand quite a good chance of coming out in the spring one good working colony; while, if left separate, the chances are that empty hives and combs will be all that will remain of the two or three in early spring.

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### RULES & OBJECTS.

1. The careful watching of the interests of the industry.

2. To arrange for combined action in exporting honey to relieve local glut when necessary.

3. To advise members as to suitable localities for establishing apiaries.

4. Any beekeeper can become a member on approval of committee, subscription 2/6 per annum.

5. That every member with more than 50 hives shall be allowed an extra vote for every additional 50 effective hives.

6. No member be eligible for office who has less than 50 effective hives, or his subscription is in arrear.

7. The Association to consist of a central body and district branches affiliated with it.

8. The principal officers be such as will undertake to meet each other in committee at least once in twelve months.

9. The officers shall consist of President, Vice-President, Treasurer and Secretary, and Executive Committee.

10. After the first election of officers, arrangements to be made by the Secretary to call for nominations for office-bearers, and issue ballot papers prior to the next annual meeting.

11. Supply dealers or commission agents cannot become members.

12. Members unable to attend meetings or conventions can authorise or nominate any member they now will be present to vote for them on any subject brought forward. Such vote or votes to be in addition to the member's present own vote.