

The Australian bee bulletin. Vol. 10, no. 7 October 28, 1901

West Maitland, N.S.W.: E. Tipper, October 28, 1901

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A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.
EDITED AND PUBLISHED BY E. TIPPER, WILLOW TREE, N.S.W.
Circulated in all the Australian Colonies, New Zealand, & Cape of Good Hope.

Vol. 10. No 7. OCTOBER 28, 1901. Per Copy,

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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 — OCTOBER 28, 1901.

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

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HOUGH the praiseworthy efforts of the Farmers' Co-operative Co., Ltd., to dispose of honey in the English market, the past season did not come off successful as far as prices realised, through the extraordinary good honey season in England, and possibly arriving at the height of that, there is no great cause for discouragement. Those good seasons don't follow each other but very seldom. It is just possible we are on the eve of a good season in Australia. But there are influences at work now that will work in the beekeeper's favour, which have not operated in former

The Federal tariff is now in seasons. operation, one result being increase in the price of sugar. Increase in the price of jams is sure to follow. The vast sums of money hitherto sent out of the Commonwealth to provide things that will in the future be more largely produced in it will be a source of wealth circulating through all classes. These matters are all in favour of the better consumption of honey. Therefore there is no cause for the price of honey to go down. should there be a good season our advice to beekeepers is to hold back and keep up prices. It is easier to do that than to raise them when once they are down. Our greatest trouble is not how prices are going to rule, but from interested persons who for their own selfish ends or vanity advise all and every to take up beekeeping, creating a class of people who will not care what price the honey is sold at. These are the people who should be watched and shunned by every bee farmer, and are one of the main causes of the low price of honey in Australia at the present time.

A putty knife is the most popular hive tool in America.

It is said that in Sweden bees work on red clover all the time.

An American writer recommends hive covers should be boiled in linseed oil.

Don't lift a frame until you are sure you have a secure hold of both ends of it.

A German paper says when a colony is ripe for swarming smoke will precipitate it

If removing bees in hot weather it would be well the closing up and travelling be all done at night time,

44lbs gathered by one hive in three days is not a bad record, says an American.

A honey room should have a good solid foundation and be mouse and ant proof.

Hot water preferred before steam for wax presses favoured by Dr. Miller and

beekeepers in Germany.

Among publications received is the "Australian Poultry Gazette," a very full and up-to-date journal on poultry.

Should you have any doubt of anything in your apiary don't be backward

in writing to us for information.

A queenless hive will not only not kill queens in the fall of the year, but tolerate drones that have been driven from other hives.

Smoker fuel, if dipped in a solution of salt-petre (loz to a quart of water) and then dried, will not go out till all is consumed.

Fruit trees, if sprayed when in bloom, by poisonous spray, the delicate organs of the blossoms are injured and the crop as well.

Reasons why bees will cluster out:— Too small an entrance; too much exposed to sun's rays; hive too small; a poor season.

Seven years beekeeping in Southern California gave three excellent seasons, two middling ones, and two complete failures.

Beekeepers in Davis country and Salt Lake country, U. S. A., are afraid to use an extractor, believing it would cause foul brood!!

The British yield of honey this year has been exceptionally large. No wonder the price of honey from Australia there just at the time it was coming in was small.

If a swarm, after being given a frame of brood, will not stay in the hive in which they are placed, remove them to a new location, and which is well shaded.

To take off sections.—Place an escape board under the sections on evening previous. Simply raise the section box, puff in a little smoke, then push the escape board under. In the morning all the bees will be out of this super. Those supers fitted with section holders of four are very handy.

An American beekeeper says:—I have no reason to doubt that my bees would be in good condition, and not show a sign of disease at the end of eight months of

confinement.

Sticks instead of wires, placed parallel to and in the centre of top and bottom bars. We have seen such firmly fastened in by bees when only fixed with a bit of comb wax—no nails.

We notice our idea of using slips of wood in centre of frames parrallel with top and bottom bars, instead of wire, which we gave some two or three years

ago, is getting into common use.

We are in receipt of Mr. A. A. Roberts' usual annual circular. In addition to Mr. Roberts doing a large trade in queens he goes also extensively into poultry, Wyandottes and Leghorns from choicest breeders being specialties.

The British Beekeepers' Record reports the past honey season in Great Britain as a record one. One writer says, "We mean to wipe out that £14,237 worth of foreigh "stuff" imported." We hope he does not include Australian among the rest.

At a meeting of a Beekeepers' Association in Yorkshire, England, a talk took place on the question of long-tongue bees, and the conclusion arrived at was "that the trying to lengthen out the bee's tongue is a farce, and that our American friends are running after a shadow that never will possess substance."

H. S. Hyde, in *Progressive Beekeeper*, asserts that single hive swarms build up faster in spring than those wintered in three or four stories. Our experience has not gone that way. But we have always removed the blanket to top of lowest box in winter and replaced it on top when spring commenced.

A queen cell giving on the twenty-first day a worker instead of a queen, is accounted for in the "British Beekeepers Record," that the larve had been fed as a worker for three days, not as a queen. The case in point was where an artificial swarm had been attempted to be made, a frame of brood being given to receive flying bees to raise a queen from.

The year 1900-1901 was evidently a very good one for apiarists in South Australia, and it witnessed a marvellous expansion in the industry. The number of hives increased from 12,000 to 26,000, and the honey yield from about half-amillion lb. to nearly a million and three-quarters, as compared with the previous 12 months.

We have received from Mr. C. F. England, of Foxti, New Zealand, a model of what he terms a finished hive tool. It is 9 inches long, and comprehends scraper, knife, bottom board cleaner, hook for lifting end of a division board or frame, screw driver, tin rabbet cleaner, and fulcrum. We fear when made, according to his ideas, it will be an expensive tool, and we do not think it will supersede the putty or pocket knife for general use. It will weigh six ounces.

The Honey Crop of 1901.—Mr. Root has been scanning the American honey field, and concludes that beekeepers need not be in haste to dispose of their crop for fear of glut. Even if the season were better than last year, there were fewer bees to gather it this year, especially in Southern California, where probably three-fourths of the bees have through neglect or starvation, their discouraged owners thinking they could not afford to continue feeding them year after vear. Elsewhere in general, there is a ralling off in bees, and he thinks prices in America should not fall below those of last season.

Some twelve months ago we recommended that those drawing up prize lists for shows should make as a chief feature displays suitable for storekeepers shops or windows. We note in the British Beekeepers Record some shows of honey and bee produce to come off in London. The principal prizes at one, and perhaps all is

—"Trophy or display of honey products, "shown in suitable attractive form for a "tradesman's window. Weight of honey "shown to be about 200lbs. Four prizes, "first prize, £4; second, £3; third, £2; "fourth, £1." Is not this more practical and more likely to benefit bee farmers than some things on the prize lists in Australia?

PAINT FOR BEEHIVES.—Cold Water Paint.—Mr. L. T. Chambers writes:—As beekeepers we all know something of the cost of paint, and also the unsatisfactory nature of the ordinary oil in common use, hence it follows that our beehives, as our own houses, often go for a long time without the necessary coat of paint, which both preserves and adds to appearance. Then again painting is a messy job, especially when the occupants of the dwelling are about. We know also the annovance of paint which has lost its nature by weathering, and rubs off upon the clothes and hands. For years I have been trying and looking for experiments in the way of discovering a paint which will be inexpensive and yet durable, and I am happy to say that at last I have found what is needed. Cold water paint needs simply mixing with water in place of oil, saving the cost of the oil. powder of which it is composed is no dearer than white-lead, but will spread much further, and will adhere to any surface with more tenacity than oil paint, being unaffected by weather, and at the same time it is water proof as well as fire proof.—See advertisment elsewhere.

WORK FOR THE MONTH.

So far a beautiful spring. We hear of swarms issuing in different directions. As we go principally for extracted honey we do not want swarms. We left all combs on the hives last fall, but putting the blankets above the bottom ones. We have now placed them above the upper boxes, under the covers, and the bees have plenty of room, so do not want to swarm, and we have had none yet. The

queens are laying well, and there is plenty of brood. We were very careful to have none but worker comb in the bottom hive. The queens after filling three or four of the frames here on the northern or sunny side, instead of completing the bottom box go to the frames above the brood. Of course this might be prevented by having queen excluding zinc. As a consequence there are more drones reared than we care for. As far as our present knowledge goes drones are only consumers, so we have either to cut the cappings off the cells or cut the cells out altogether. In the former case bees have the extra work of cleaning the combs out. In the latter case we lose or spoil the combs, but have the wax.

If the hive is small it soon becomes crowded and queen cells are formed. To let them run their full course, in time swarm after swarm will issue every few days, and the hive will become so weakened there will be no possible chance of any surplus honey being gathered. If you want plenty of honey keep your hive strong, and the greater the strength the greater the proportionate increase. 20,000 bees in one hive will gather a great deal more than 20,000 in two hives. You should therefore examine the combs every week for queen cells, and cut them out if you do not desire increase. If you wish to increase your number of hives gradually and still get a crop of honey, you may do so by removing the hive to a new location, putting a new hive in its place, and in it a frame with queen cell, and brood from the removed hive. All the field bees will stick to the hive on the new location. The removed hive being depleted of the working bees will destroy the cells left in it, and swarming for the time is done with. In raising comb honey the trouble is to get the bees to go first into the Foundation will not always draw them. A comb of honey placed in the middle of the brood nest will often do it. In their desire to keep the brood nest compact they will clean the honey out in

to the super to enable the queen to lay. Have your swarm catcher handy for any swarms that may issue. dealers have a very handy arrangement called a Manum Swarm-Catcher. can make one yourself by say a piece of cheese-cloth or other material made in the shape of a bag with large mouth held open by a piece of fencing wire, on the end of say a clothes prop. Also a box or spare hive to place the swarm in. If the queen's wing is clipped she will not fly with the swarm, but you will find her on the ground near the hive surrounded with a little knot of bees. Place her on a frame containing larvae, then dump the swarm on to it and put cover on hive. What bees are not left in the hive with this dumping will soon run in. Leave them there till evening, and then remove to intended permanent place.

SPRING DWINDLING WITH A VENGEANCE.

[BY LOYALSTONE.]

There's something mighty wrong with the bees. Spring dwindling has set in here with a vengeance. Strong colonies of bees vanished away in a week's timehardly a dead bee to be found near the hive, but find plenty lying about dead in the bush, some bush nests not escaping this plague. A neighbour of mine had 24 strong hives in early spring, has now one left. I had 160 strong and going well in early spring, have now 45 left. But the worst has passed, and now all colonies that are alive will do O.K., as fresh honey is coming in. My honey crop this year will be nil as I will go in for artificial increase, and see if I can't winter up with 150 next winter. This spring dwindling will happen in the best of regulated families. I hear from all parts similar reports to mine. The cause is from the honey gathered in late autumn proving unsuitable for brood-rearing, and feeding in the early spring following before fresh honey comes in. Immediately a flow sets in the dwindling stops.

have hives with six and eight frames of honey, and pollen in galore, and devil a bee in them—all gone. Some of the frames of honey fit for any show bench, the combs look splendid, but evil lurks therein. At the commencement of this spring when opening up hives bees looked splendid, plenty stores, working well, and from 3 to 5 frames of brood. Later on, having another look, broodrearing not going so well, bees, having a "loafy" look about them, as if they did not care whether they flew out or stopped at home. Later on again, another look, colonies decidedly weaker, very little Yet again another look, some hives empty of bees, some with a few bees, the queen and small patches of brood, and so on, worse and worse, till this last week. Things are on the mend owing to honey flow setting in. Trees in blossom all around, red and yellow box, and more the pity not enough bees to gather the nectar that will go to waste. I always infuse fresh blood among my bees every season. Of those that have survived some are three-year-old queens, some only nine months. Holyland, Cyprian, Italians, (golden and leathercoloured), are among the survivers. Crossbreds of those breeds have all gone, owing to the fact that they were more vigorous than the pure-breds at the commencement of this season, and so consumed more of the undesirable honey. One fact worth noticing—at an apiary situated two miles away from home apiary (my brother's place), I had 50 colonies in an open paddock where sheep are always running about. I visit this apiary about once a week during the winter and it is a common occurrence to find a dozen lids off the hives, knocked off by sheep running through them, leaving the bees exposed to hail, rain, sleet, frost, and snow, yet strange to say these bees are always strong, vigourous, and healthy, and I only lost 7 with spring dwindling, three others succumbed during the winter through queens dying. At this place there is an orchard 30 years old, area 10 acres, last year there was an

enormous crop of fruit, tons going to The bees literally hummed on this fruit, vet it did them no harm. The only source I know of that they gathered honey from in the late autumn was from the black thistle. Again this may account for the dwindling. Since 1894 we have had dry seasons, this season is proving an exception. We have cold weather and rain nearly every week, only just now turning warm. At the commencement of spring the weather was warm and bees working well, later on came changeable weather and heavy winds preventing the bees gathering Though bush trees were in blossom the weather was not warm enough to draw the nectar into the blossom for the bees to suck therefrom. and so the bees had to fall back on the autumn gathered honey. Another thing I noticed, hives I did not extract from at all last season (using them for making fresh swarms and strengthening other hives) came along O.K., owing to them having different food to feed on compared to the others. Can we cure spring dwindling? Oh! yes, but, who will go to the trouble and expense. If this dwindling was a regular annual affair we would take the trouble, but it only comes after lapses of many years. I have never experienced it before, and hope never to do so again. This is what I consider the cure for spring dwindling, viz:—Extract all honey gathered during the late autumn, and feed back for winter use honey that was gathered in the spring, for, from what I have read and know honey gathered in the spring of the year will not cause spring dwindling. If this spring had been warm enough for bees to gather honey the dwindling would not have put in an appearance at all, as there would have been no need for the bees to feed on the autumn gathered food alone. When honey comes in the spring the bees ficticiously mix the old and the new together for brood, but if brood is fed on autumn gathered food alone they can stand it for a while and then the dwindle starts. Pollen does not affect them, as I

took some from a hive that dwindled away and gave to another colony strong and vigorous without any bad results. At the out apiary that did not suffer so much, I put down to having their lids knocked off, and the air, circulating through the hives purified them to a certain extent, and took away the bad effect of the autumn honey. I don't advise any one to go kicking the lids off their hives now and again, but I assert that it will do the colonies of bees no harm, at least not as far as I am concerned. I have not heard of other apiaries where the lids of hives are kicked off by sheep or other animals at their own Still I know owners of large apiaries who have their hives with cracks in the bottom, top, and sides, and in the summer time it is hard to guess which is the correct entrance, as far as the bees are concerned, and these apiaries have always been free from disease. Certainly when these hives get a soaking after rain they soon dry after the many different currents of air passing through, and mouldy combs are a thing unknown in these hives. Now, who's going to make a start with these airy hives, as hives of the future? Now, fellow beekeepers, come on? comment on this letter. us hear if you have been troubled with this spring dwindling. I don't care how much you tear this logic of mine to pieces as long as we get some knowledge. think when all arguments are finished I won't be far wrong.

Since writing you yesterday I am inclined to fancy that the bees may have visited the poison that is laid all through the district for killing the rabbits, which are very numerous. This poison is phospherised pollard and a large amount of treacle is mixed with it. As there was a scarcity of honey in the bush, the treacle would most likely attract the bees, and once they got a taste of it they would not be able to find their way home again. I have not heard of any bees being seen on this poisoned pollard, and I have not pover a small lamp.

had the time to inquire. As this thought only struck me to day, I will endeavour to find out, and if true, we will have to give up bees wherever this poison is laid. Have you heard anything of bees visiting it? My brother's places where the bees are doing well, is away from people who are poisoning rabbits, whereas my other apiaries are close to neighbours who poison.

VICTORIA.

VICTORIAN NOTES.

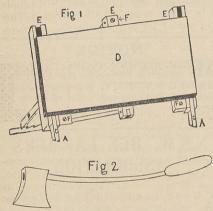
R. BEUHNE.

Queen Cages.—The article on introducing queens with illustrations of cages, in last issue, has evidently been read as an advertisement by some, for I have received several orders for cages. To prevent disappointment and save purposeless correspondence, I beg to state that I do not manufacture them, but gave the description because it was asked for, and to enable those who wished for the information to make the cages for themselves.

Fastening Foundation into Frames.—There are many different ways practised by different beekeepers. After trying all I have heard of I have finally adopted the method I am about to describe.

I use a plain top bar for my frames as I found the foundation groove a nuisance when combs had to be cut out and the frames cleaned, and I wire my frames horizontally, as wires are liable to be broken in removing burr comb when frames are wired up and down, there is also the disadvantage of drawing up the bottom bar in the centre, and thus leaving too much space between the sets of frames unless a very stout bottom bar is used, which is objectionable. The foundation is fastened into the frames with melted wax by means of a small hatchet-shaped solder iron. Fig. 2, heated over a small lamp.

Fig. 1. Is the foundation board carrying the frame, two of these stand in front of the operator with the left hand corner nearest to him. It stands on the three points forming a triangle, the face of the board inclines backwards and dips to the



left. Practice will soon show the right inclination and dip which may be altered —the former by shifting the prop B. into a different notch, and the latter by pulling out or pushing in the feet C. C. The frame is hung, top bar down, on the board D, and the sheet of foundation or starter stood into the frame. It should be warm enough to be pliable so as to lay flat against the board and show a straight edge resting on the top bar. Applying a stick of wax to the hot solder iron you follow the line of contact between foundation and top bar down from the highest point on the right to the lowest on the left, drawing the iron along the top bar without touching the foundation, but sufficiently near for the melted wax to thoroughly unite foundation and top bar. The operation is much the same as that of a tinsmith soldering a seam. The iron should be hot enough to quickly melt the wax but without frizzling it. The second board is operated on while the wax on the first is setting, and so on.

The board D is $\frac{1}{2}$ inch thick, and $\frac{1}{8}$ inch shorter and narrower than the inside of the frame, so that when the frame is

hung on it, the foundation will not be melted on to the edge of the board. E.E.E. are groved cleats which may be made of the grooved edge of a flooring board. The end ones have the grooved side to the board, forming the casing for the extension feet which should be movable without being loose; the centre cleat has the groove the reverse way, for the prop and notched stay to fold into.

The depth to which the frame goes over the board D is regulated to suit whichever thickness of foundation is used by turning the screws F.F.F. which are the only three points supporting the frame from the back, thus ensuring

accuracy.

When all the frames are supplied with sheets of foundation, the feet of the board are pushed back into the grooves, and the prop and stay folded in, and the boards laid flat on the table, the surface is damped with a wet sponge, the frame laid wires up onto the board, and the wires embedded into the foundation in the usual way, or by means of an embedder, a description of which I must hold over for a future occasion.

It is somewhat late in the season for getting frames ready, but pressure of work had prevented me complying with the requests for the publication of this method till now. What I said at the beginning of these notes about queen cages also refers to this foundation board, so please don't order any, not of me at any rate.

E. J. R., Wyee:—I hope you are in for a good honey flow. I have not much yet, but then we do not get one till late as a rule. The dry winter has caused the flower to delay opening. I got through the winter O.K., and never lost a swarm, even those nuclei came through in good order.

700 hives in one apiary is said to have been managed profitably by a Mr. R. Wilkin in California—great mountains on every side and large orange groves in the valley.

NOTES

BY W. ABRAM.

LARGE ENTRANCE.

In a good season the bees store sometimes too much honey in the brood chamber. This is no unsurmountable obstacle, still, if it can be prevented, so much the better. The American hive has the entrance the full width of the hive front about 3 of an inch high. Now, I have noticed that a wide opening has the effect to induce the bees to store their honey far away from it; I also have noticed that bees do not store honey close to an opening in the hive anywhere. Would an opening all round the hive be the means to get the honey stored in the supers, provided the brood would not be at a disadvantage on account of too much fresh air?

CANDIED HONEY.

The principal properties of honey are dextrose and levulose. Dextrose has the candying propensity, levulose has not. Some honey candies sooner, some later, some remains liquid for years. The candying honey contains a larger percentage of dextrose than levulose. honey neutralises the candving properties partly or wholly, but the sugar percentage of heated honey is the same, and honey whether liquified or not remains honey still. Where liquid honey is in greater demand than candied the producer of honey that does not candy has the advantage, though the sugar percentage of either is very near the same, as analysis show.

THE ENGLISH HONEY MARKET.

The English honey market is still as obscure as ever. Californian and Jamaica honey selling at 15s per cwt., and a home beekeeper who offered his crop of honey to grocers at 8½d per lb. in 1lb. bottles found no buyers. Why did he go to the grocers and not to the consumers direct? And how is it left to grocers to buy at £30 per ton, and retail at £112 per ton? Is enterprise done, or better employed, or is life made so easy that such profits have no

attractions for other but grocers? Something is wrong somewhere, and it is hard to find a way out of the mass of conflicting information. Some beekeepers here having relations or friends at home should be best able to establish a connection, and once that is done there is sure to be ample support forthcoming in honey and money for any extension.

NOTICE.

MR. R. BEUHNE, Tooborac, is appointed Agent for Victoria for the AUSTRAL-IAN BEE BULLETIN, and is authorised to receive subscriptions and advertisements for same.

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DO BEES OBTAIN HONEY FROM CORN (MAIZE)?

A statement has been made in the N.S.W. Agricultural Gazette that there is no honey in maize. Mr. Hessell Hall, in a lengthy article, has contradicted this statement. He sums up his conclusions thus:-

(1.) When the maize fields are in bloom, if no other honey flow is on, the whole apiary makes for the corn tassels. At such times the bees roar and show signs of excitement over their work, such as they never show except when they are bringing in honey. Moreover, the bees show no signs of robbing each other when the hives are opened—a clear sign to every beekeeper that the bees are getting plenty of honey. If other honey-blooms are out a large proportion of the hives still keep to the maize and bring in the same type of honey.

(2.) The bloom of the tassel is not closed like the cob, but when the flower is secreting honey (especially close thundery weather) the bees eagerly work in to the bottom of the cup, fairly jostling each other to get at the sweet-

smelling nectar therein.

(3) During the period of maize-bloom, the bees working on maize bring in large quantities of dull greenish-coloured honey, mild and pleasant in flavour, candying speedily into soft white crystals. rather brittle in the grain. This honey is not so glutinous as most honey, cuts differently in uncapping, and when new, carries with it the odour of the maize blooms.

(4.) I have not observed this honey except in maize districts, and never anywhere except when the maize is in bloom. In my own district this type of honey is plentiful. A sample I took to Sydney was at once recognised by an old Hunter River resident as "Corn-honey," like that known and enjoyed on the Hunter in early life. I have noticed the same type of honey in the Tumut District in a sample gathered around the Tumut maize

flats. This fact is significant, as the native honey-producing timbers in the Tumut District are quite different from

those on the Hawkesbury.

(5.) During a visit to the Richmond Agricultural College apiary some years ago, Mr. McCue, the College apiarist, informed me that maize formed the main source of honey supply at the College, and his description of the characteristics of maize honey coincided exactly with my own experience.

(6.) When this "maize-honey" is coming in at my apiary the bees of the colonies gathering it may be observed flying direct to the maize field on the plains, and not to the mountains where most other honey in the neighbourhood

(7.) The bees gathering this maize honey may be observed to have the maize pollen on their legs. Moreover, when they return home from the maize fields with the maize-pollen they have the rings of their body extended to full length. showing plainly that their honey sacs are also full. And as bees do not visit more than one type of flower at a time, this fact affords a clear proof that the load of honey was gathered from the maize tassels as well as the load of pollen. If one of these bees be crushed a clear drop of honey will be seen exuding from its body, and this honey with that in the hive carries the odour of the maize-blooms. Surely such evidence is conclusive to all save those who go to the Botanists instead of to Nature for their facts.

(8.) The other great honey-producing flowers in this district have definite periods of bloom extending over from about three weeks to six weeks. Moreover, they do not bloom every year but at intervals of two and sometimes three years. But the honey I identify as cornhoney comes in during the whole period of maize-bloom extending over a period of some four or five months. It never comes in before the early maize-blooms and ends with the bloom of the late sown

crops.

(9.) There is no other flower about this part that covers this period of maize-bloom, except possibly the lucerne, but in this district we seldom get lucerne-honey in appreciable quantities because the farmers cut the crops for hay as soon as the flower buds begin to burst. Moreover, when bees bring in lucerne-honey they also bring in lucerne-pollen; this is of a dull dirty greenish colour like clover-pollen and not in the least like maize-pollen.

(10.) During the past season my bees brought me in between 3 and 4 tons of corn-honey. An extended experience in the matter has convinced me that the maize-plant is one of the most reliable and abundant producers of honey that we have, while the quality is such that it is relished wherever it is known.

MAKING SWARMS.

"Have you any queen-cells on hand?"
"I suppose there are plenty in any of
those hives which have swarmed during
the last week."

"You will see why I asked about the queen-cells before we getthrough. Now to the plan: Take a box holding from three pecks to a bushel, and place it on a wide board a few feet from the hive you wish to make the swarm from, raising the front edge on a little block, enough so the bees can run under. Now open the hive you wish to make the swarm from and find the queen, caging her on one of the combs, when all the frames are put back If you do not see in the hive again. plenty of unsealed honey, uncap some along the top bars of the frames and close the hive. Now blow in quite a little smoke at the entrance of the hive, and rap on the sides of it as you would in driving bees, rapping at intervals, and leaving the entrance open so that the bees returning from the fields may enter the hive. In from five to eight minutes open the hive and take out the frames and shake the bees in front of the box, and thus continue till you get at least three-

fourths of the bees in the box. When you come to the frame which has the queen on it, place her at the entrance of the box and let her run in with the bees. When you get the desired amount of bees in the box, put the frames back in the hive and close it."

"Why do you run the bees into such a box instead of into a hive all prepared

for them?"

Now, we will suppose that you have three-fourths of the bees, and the queen in your box. You are next to take the box of bees to the shade of some tree and lean the box against the tree in an inclined position, with the open side of the box outward, leaving it there threequarters of an hour, at which time you will find them clustered in the upper part of the box as they would be on the limb of a tree if they had swarmed naturally. During the three-quarters of an hour, if you have more to make, keep on making from other hives in the same way. the end of the time, hive the bees that are in the box the same as you would hive any natural swarm. Put the hive on the stand you wish them to occupy, and see that all of them go into the hive. and they will stay and work the same as a natural swarm would.

"Then this leaving them the threefourths of an hour with the open-side of the box out is to make them think they have left home, so they will mark their

location as does a swarm?"

"Exactly."

"I see now why mine would not stay when I shook them into a hive. But what about what is left in the old hive?"

"The next day after making such a swarm, give the old colony a queen-cell from one of the hives you say have such giving cells from the colonies which have those the nearest ripe, and the work is done. If you have stopped to think as we went along you will see that you have bees of all ages in your made swarm, just as there would be in a natural swarm, and that each bee has its sac full of honey the same as they do when they come out

themselves, the drumming causing them to fill themselves full more completely than they do when swarming. By being left three-quarters of an hour to cluster in the box they mark their location anew, the same as a natural swarm, as you expressed a few moments ago."

"But is the old colony in as good condition as if it had swarmed naturally?"

"I think so, fully, and more so; for in natural swarming the first young queen does not emerge from her cell in less than seven days, unless the swarm has been kept back by bad weather; while with our made swarm, and a ripe cell being given, they will have a queen in two days from the time of making. If preferred, and you have them, a laying queen can be given to the old colony."

"Why would not this be a good plan to work an out-apiary, where there was no one to take care of swarms when they

issue?"

"It would. And it is equally adapted for those who cannot be at home between the hours of 8 a.m. and 4 p.m. to care for their bees when swarming naturally."

"Well, I have bothered you long enough, and think I understand how to work. Good day."—G. M. DOOLITTLE, in

Gleanings.

Mr. Alley's System of Queen Rearing.

First, his breeding queens are kept in little hives containing five frames about five inches square, and from these little frames he cuts a comb whenever he wants eggs for cell-building. For doing this work he prefers black bees, buying many colonies of them every spring. When received, the entrance is covered with a drone-trap, and all black drones kept from flying until he is all ready to use the colony for cell-building. To prepare them for this they are taken into his workshop where the queen is found and removed, and the bees are brushed into an empty hive and shut in with a wirecloth cover, so to remain for several hours.

When they have been shut up long enough, the prepared eggs are given to them and they are left until night when they are placed on a stand out of doors, and the entrance opened. The operation of preparing the cells I will describe as I saw him do it. In-his shop he lighted a kerosene-stove and set on it a pan containing a mixture of beeswax and rosin. Then he took two L frames from which the lower half of the combs had been cut, and, by a quick stroke of his knife, removed the remains of a previous lot of cells. He then went to the colony of one of his breeding-queens, picked out one of the little combs, stepped back into the shop, and, with a hot knife, cut the comb from the frame, slit it into strips containing one row of cells each, took a match and destroyed the egg in each alternate cell on one side of the strips, dipped the other side into the melted rosin and wax, and stuck them to the bottom edge of the L combs above referred to. His next step was to hang these in an empty hive, fill the rest of the hive with combs of honey and pollen, jar the confined bees to the bottom of the hive they were in, put on the top of it a zinc excluder ("drone-strainer" he calls it), place on this the hive containing the prepared strips of eggs (enough for 60 cells), and over this a wire screen. In a few minutes a large part of the bees were in the upper hive. The operation from the time he went for the eggs until they were given to the bees was just eight minutes. When the cells are sealed they are cut apart and each one put into a little cage by itself, and a lot of these cages are fastened into an L frame and hung in any queenless colony until they hatch. The next step is the making of a lot of little nuclei from the small 5 x 5 frames, stocking them with bees, giving them a virgin queen and carrying them to an out-apiary where he has his drone rearing colonies. I am fairly familiar with both this and the cell-cup system; and for celerity of operation and excellence of results I consider Mr. Alley's plan far ahead of the others. His system is certainly best for those beekeepers who rear queens solely for their own use; but each commercial queen-raiser will use the system he is most accustomed to.

Feeding Back Honey by a Most Novel Method.

Having for several years practiced the following described method to secure the completion of unfinished sections at the close of the honey gathering season, it may be of benefit or interest to some who might like to experiment by trying the plan; as every apiarist has generally a good many sections that if completed would bring better prices to the producer and sell better in the markets. The honey to be fed back, which may consist of unfinished sections or any combs of suitable honey from three to four pounds in quantity, is daily placed in a hive (the entrance to which must be contracted to admit only one or two bees at a time) a few rods from the apiary, and not a great distance from the colony upon which are placed the unfinished sections to be completed. A section of honey, bruised so that the honey is ready to run, and covered with bees, is then taken from the colony upon which are the unfinished sections, and placed in the hive containing the honey to be fed. Or we can place a section or piece of comb honey on the alighting board and leave it there until sufficient bees from this colony are taking the honey, then place in the hive as above These bees, thus carried from their home and placed in a hive containing honey, will work back and forth between this hive and their home, carrying the honey to the latter, and the strange part of it is that they will defend both hives from robbers. In selecting the colony to do this work, choose one containing good workers that will protect their own home against the intruding robber bees. fact that the work of carrying away the honey is commenced by bees that are all from one colony accounts for their combining in a defence of the spoil. When a

super is nearly completed, raise it up and place another of unfinished sections underneath. I have had a single colony complete 125 to 150 sections in the above manner. Several hives may be arranged in this way, each colony working back, and forth between its respective hives.—
H. Fargo, in American Beekeeper's Review.

IMPROVEMENT OF STOCK.

To improve our stock we must supersede our poorer queens with those from the better stock. I find that there is no time of the year in which queens are so generally superseded as immediately after the principal honey flow, and we can always rest assured that when the bees are willing to do such work, then is our best time. With me, fully three-fourths of all the queens superseded by the bees are so superseded during the three weeks immediately following the basswood honey-flow. Knowing this fact I have, for years, done the most of my requeening at this time of the year, and with success which has always pleased me, and that without interfering with my honey crop in the least. To this end I start a greater number of queen-cells than usual from five to eight days before the expected close of the basswood honey harvest, and, when these cells mature, hunt out the old queen and dispose of her, giving a mature cell twenty-four hours after having removed the old queen. If cell-protectors are used, the cell can be given at the time of removing the old queen, thus saving once opening of the hive; for as a rule, the bees allow a queen to hatch all right where a cell protector is used. If the young queen emerges from her cell in an hour or so after giving the cell, or before the bees are aware that their mother is gone, they will sometimes kill her and start cells from their own brood; but if the cells do . not hatch in less that from twelve to twenty-four hours after the old queen was removed, nearly every queen will be accepted all right. By raising the queens before the honey harvest closes; that is,

the bees doing the feeding of the embryo queens while in the larval form before the honey flow is over; they are sure to be fed in such a way that the very best of queens are produced, this also having a great advantage toward accomplishing our object over and above what would be if we raised our queens before the harvest commenced, or after it was over.

Another plan which I have often used since my Apiary became very much improved beyond what it formerly was, is to raise a lot of cells from my best queen at the time given above and, twenty-four to forty-eight hours before they are booked mature, give one to each colony having a queen more than one year old, using a cell-protector for each one, and placing this protected cell in one of the sections on the hive, or anywhere I best can where the bees can cluster about it, without hunting out the old queen at all; when, if the bees have any notion to supersede their queen, they will accept of this young one and destroy the old queen. If they destroy the young queen I allow the old one to remain, thinking that the bees know what is right, and in nineteen cases out of twenty where the bees decide on keeping the old queen I find she proves par excellence till after the honey flow of the next year is over.—S. M. Doolittle, American Beekeeper.

SUGAR SYRUP

From experience in feeding both honey and sugar last year, syrup from the latter turning the combs green and mouldy, we mentioned the matter to Mr. Helms, of the N.S.W. Agricultural Department, who has kindly sent us the following reply:—

Chemical Laboratory,
Department of Agriculture,
136, George-Street, Sydney.
18th September, 1901.

My dear Mr. Tipper,
Your card to hand. As you know honey
contains a minute quantity of formic acid
sufficient at any rate to prevent fermentation
developing in the honey, and I should not be
surprised if it were found to be sufficient to

check the developments of mould spores. Mould spores are omnipresent, and as sugar is frequently exposed to air, etc., much foreign matter in the shape of different kinds of mould germs may accumulate upon it. Then there is the water generally somewhat contaminated with them, and they may also largely adhere to the vessels used for mixing in together with the ladle or other implement used for stirring. If the vessel were well scalded as well as the ladle, and then the water that had been boiled for twenty minutes were poured over it when boiling hot, and the vessel closely covered from dusts, I consider that any spores would be killed and kept from the syrup later. A small quantity of formic acid added when the syrup is cold would be advantageous. 0.1 per cent. or 1: 1000 is sufficient. However, commercial formic acid is a very unreliable drug and always weaker than it ought to be. Water saturated with formic acid, which is socalled formic acid of commerce, contains about 30 per cent. of formic acid. But the formic acid readily evaporates even through well corked openings, and one gets rarely a mixture better than 20 per cent. formic acid, and frequently of a considerably lower grade. When I bought some about 7 years ago I found it on examination to contain only 11 per cent. You see that 0.1 means 0.3 or 3: 1000 of commercial formic acid, and as it is never full strength 0.5 per cent. or 5: 1000 would not be too much to add to the syrup. have looked up formic acid in the Chemical Dictionary and find that the highest percentage of a hydrous acid obtainable contains 77 per cent formic acid. This, however, cannot be obtained except by repeated distillations and as I mentioned before is a very unstable compound. This is one reason why commercial formic acid contains rarely more than 30 per cent. at any time. It is more readily produced and less subject to alterations than the higher quality.—Yours faithfully, R HELMS.

THE RESERVE OF THE PARTY OF THE PARTY.

HUNDRED-DOLLAR QUEENS.

There are a good many queen dealers in this country, and it is safe to say that any of them have some particular queen or queens that money cannot buy—that is, a reasonable sum. If there are any queen breeders who do not have queens worth, as breeders, at least \$150, all such should go out of the business. First-class stock—"blood that's 'way up''—does not come from ordinary animals. Stallions for instance, are valued 'way up in the

thousands, some as high as \$25,000. Do you suppose for a moment that all the offspring from such a valuable animal will be worth \$25,000 each? Well, 'tis the same way with queen bees. I have several queens that, for the common beekeeper, would not be worth more than one dollar each; but for breeding purposes I would not part with them. I have a queen that will duplicate herself in 90 per cent. of her progeny, I consider her worth anywhere from \$150 to \$200. All queens are not worth fifty dollars each; in fact, I have seen one hundred queens that would not be worth even a dollar for the entire lot; and to-day I believe there are hundreds of queens reared and shipped that are as worthless In some of the beeas so many flies. papers there have appeared articles on queen-rearing and profusely illustrated by queen-cells or cell-cups fastened to a stick. All the writers claim that their way of rearing queens is far superior to any other in use. The methods given and things illustrated are as far from the natural way of cell-building as anything can be. Why go so far from nature's way to rear queen bees? Why not rear queen bees by a method that comes nearer to the way the bee does it? Why spend so much time in making cell-cups and transfering eggs and larvæ? Give the bees a chance to construct cell-cups and to rear queens in their own way. If queendealers persist in rearing queens the way they do, I really believe the bee-industry of the world is on the road to ruin. Where are we to-day as compared to the years 1865 to 1885? In that peried we had but one disease among bees; now we have a good many bad and fatal bee-Foul-brood, pickle-brood, dead-brood, dysentery, etc. What is the cause of it all? 'Tis the way queens are being reared, in my opinion. In-breeding so much for colour; rearing queens in chambers over the brood-nest and the cell-cup-and-transferring-larvæ mode of producing queens, is working destruction in thousands of apiaries in this country.

Mother-bees cannot be otherwise than constitutionally weak. Her infirmities are transmitted to her progeny. Colonies are so weak that they cannot resist the inroads of disease. We must return to and adopt the methods for rearing queens that were in vogue thirty-five years ago. In those years there were no complaints about bee-diseases, spring dwindling etc.—Henry Alley, in American Beekeeper.

CAPPINGS.

From American and other Ree Journals.

My conclusion would be that we should give but little attention to the possible use of drones for any but fertilising purposes. If we can avoid the breeding of them, we must surely be well repaid by the additional number of workers that we can rear in their stead.—C. P. DADANT.

Mr. G. J. Yoder, of Cass Co., Mo., gives the following about where sweet clover should be sown, and something about cutting and thrashing the seed: It will grow almost anywhere, even on very rocky hillsides and waste lands, but I prefer to sow where I can keep control of it and get a crop of bloom and a crop of seed; then the next spring a crop of some kind, and in the fall a crop of hay, or to wheat in the fall, and in the next fall a crop of hay. Every other year it reseeds itself; but if put to cultivated crops a few years it can all be killed out. I made a garden spot on a sweet-clover patch where there were millions of seeds, and in two years it was all gone. Wish us it grows from four to eight feet high, thus making it almost impossible to get it into a thrasher or huller. We cut it with a self-rake reaper, then make a platform on a 16-foot hay-rack, placing it on a skid made of poles bolted together with cross-pieces; then hitch three horses to it, and pull it to the field. With two light poles about eight feet long, and just heavy enough for a man to handle, and two pitch-forks, we are ready for business. Now fill your platform, not too

full; and if the clover is very dry, a few good strokes will land the seed in the bottom of the platform. Now tumble out the refuse; drive up, put more on, and so on around the field. A little experience will show how it should be done. When all is thrashed off, run it through a huller, and you have the Bokhara seed.—

American Bee Journal.

One day I opened a jar of honey for a lady to sample, and found a bee's leg in it. Several children were standing by, and I said, jocosely, "You see this is genuine honey because there is a bee's leg in it." I made the sale. I went up the street a little further, and when going to one house a little girl from the group came running into the yard, screaming, "O mamma, come quick; he is the man with genuine honey with bees' legs in it."—R. G. Haun, in American Bee Journal.

Bees will work better and carry in honey faster when they have lots of it stored in the hive. Bearing this fact in mind, it has become the regular rule with many beekeepers to 'tier-up' the supers on their hives as fast as the bees fill them, and to take none of them off before the honey-flow is played out. Those who have been doing this year after year, have become satisfied that it pays to do it; and that it doesn't pay to do otherwise.—J. D. Gehring, in A Bee Journal.

It is a noteworthy fact that the beekeeper with a large number of colonies, as a rule, does not get as much honey per colony as one with a smaller number when managed as well; and as his stock increases his average decreases. for a long time tried to solve this problem as far as myself was concerned and after 20 years I have come to the conclusion that I have been keeping too many in one place. Previous to last year I have had from 150 to 200 colonies in the home apiary with often not enough honey gathered to carry them over from fruit Last year just bloom to white clover. before fruit bloom I shipped 100 colonies to Owen Sound and lo! the difference, we never had so much honey in the hives at

the beginning of white clover bloom never had so large a surplus and never so little feeding to do except one year when the white clover continued to yield honey during August even after the queen had slackened up her laying. Now it may have been due to the season, but I feel safer in attributing it to the fewer bees.—A. Deadman, in Canadian Bee Journal.

Since there are days in early spring in which it is not advisable to open the hive, some prefer to feed candy instead of sugar and water, and this can be given in quantities that will last two or three days at a time. To make, moisten granulated sugar with a little water and cook until it "hairs." Test a small quantity by taking it out and stirring it constantly until cold. It should be opaque and not so hard but that it is easily broken. When done, take from the fire and stir constantly until it is of the consistency of thick Then pour into buttered tins to The stirring causes it to form grains. and it is less liable to be waxy, a quality which cannot be tolerated in bee-food. It also renders the product soft and easily broken, yet not so soft as to be sticky. A little practice will enable one to approximate the ideal; and this ideal can be made a clearer mental conception after feeding once or twice. For convenience the cakes should not exceed one-half inch in thickness. Lay pieces of this candy on top of the brood-frames and the bees will soon find and appropriate. Use granulated sugar, and never feed candy that has been scorched.—W. H. PRIDGEN. American Beekeeper.

A somewhat singular circumstance has just occurred at a market gardener's at Newchurch, Isle of Wight. The gardener, Mr. Ballard, lost a number of chickens, 70 in all, and three hens, and for no ostensible reason, but he brought some of the dead bodies to the well-known veterinary surgeon at Ryde, Mr. J. V. Blake, together with a sample of the corn upon which the birds had been fed, and which Mr. Ballard supposed must have been poisoned. Mr. Blake on examining

the bodies, found the birds had been stung to death by bees. Mr. Ballard then stated that the poultry pens were near his bees, and he had been removing honey from the hives, and knew that the bees had got very rngry, so much so that he and his assistants had to retire to a distance for a time. Mr. Blake tells us that this is a perfectly unique case in his experience of nearly 40 years.—English paper.

Bees in winter, when short of stores, have the same appearance as bees that die of starvation in summer. But death is not real, only apparent. Bring them into a warm room; and if the apparent death has not been too long continued they revive. So starvation in winter, properly speaking, is not starvation, but death by freezing.—German Journal.

A New York man had three colonies perish of foul brood early in the season in an out-apiary. The hives were stacked up against the side of the honey house where the robbers and moths soon made short work of the combs, the latter falling out of the rear half of each frame in one hive, thus leaving a vacant space. Later in the season the owner noticed bees going out and in the hive, and, upon examination, he found a swarm occupying the vacant space formed by the combs falling down. They built new combs, filled them with buckwheat honey, and have remained in a healthy condition.-American Beekeepers' Review.

I am in great doubt as to whether there is any better bees to-day than there was a thousand years ago, or from the creation if you please. It seems that the Italian bees are not as good as a rule, as they were twenty years ago. My notion is that the improvement lies in the manipulation, and in the hands of the bee master, nothing will be kept but the best. After he has gone through with his sharp bee-master's eye, and cut out all the bad and indifferent queens, and replaced them with good ones, he can reasonably expect the best results obtainable, as in the queen lies all there is in bee-keeping, and

with the master to fetch it out, you have the up-to-date bee man. I am sure that I do not mistake when I say that I believe in the improvement of stock as much as anyone, but fact and fallacy should occupy different booths, and the fact in my judgement is that there has been no improvement on the honey bee since the day of creation. I firmly believe that if I had the queen that produced the bees that made the honey in the lion's carcase, that I could raise as good queens from her to-day, as there is in the world.—C. J. Atchley, Southern Queen.

The most effective and enjoyable way to benefit from the general use of pure honey is to have in every home a ready supply, diluted with, say one pound to a quart of water, placed in a suitable glass or porcelain vessel—metal must not be used-from which about one tablespoonful put into a cupful of warm or cold water and taken at each meal, would benefit one a thousandfold more than the stupidly conventional decoctions with which we daily clog and seriously disarrange our physical and mental machinery. Let anyone who suffers from kidney and bladder trouble try the simple pleasant substitute for one week, and then faithfully report the wonderful results.—"Southland Queen."

The best non-swarming device for this locality we have ever used is a 10-frame Langstroth hive with plenty of super room given at the right time. Such a hive has proven practically non-swarming and is always strong and ready to catch every flow that comes along.—Exchange.

The man who rears queens with no attention to the stock from which his queens are reared, and no regard to the drones used, is not doing a scientific job, even if he uses up-to-date methods, Doolittle cups and all.—Exchange.

L. Stachelhausen says in Southland Queen, "When I kept bees in a cold climate, more than 30 years ago, I observed in outdoor wintering that, the colder the winter, the earlier brood-rearing commenced,"

N. S. W. BEE=FARMERS' ASSOCIATION.

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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 local-

ities 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

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 can-

lot become members.

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



12. What is the cause of so many imported queens arriving in Australia dead, both from America and Italy.

F. EVALD.

13.—Does yellow box honey in your district candy in frosty weather?

14.—Is there any other honey that does not candy?

J. THOMPSON.

12. The mails being furnigated to prevent plague or other disease spreading.

13. Not if taken off when ripe.

14. Don't know of any.

A. A. ROBERTS.

12. That is a question many of us want to know. The exporters do not seem to know either. I think the position they get in the bags has a lot to do with it.

13. As a rule it does not granulate until the

second winter.

14. Not to my knowledge, all honey in this district will granulate.

E. J. WARNER.

13. I have kept yellow box honey all through the winter without any signs of candying. and I have had it candy. I think it depends on the

weather at the time it is gathered.

14. Do not know of any other.

E. J. RIEN.

12. Considering the way the queens are enclosed in close mail bags in mail rooms of ships, etc., and way bags are handled, also the size of cages, I think the question ought to be, Why any arrive alive? Seriously, there are so many causes that one can only guess at best.

13. No yellow box, in these parts.

14. I have not obtained any here and have not met any that I know of.

QUESTIONS NEXT MONTH.

15. Have you ever tried queen raising in the following manner:—Take your choicest hive, before the honey flow is over, and take away all unsealed larvæ and queens, leaving only eggs. All the young bees that up to this time were busy feeding the larvæ (now taken away), will be ready for feeding larvæ for queen cells. Only eggs being present they cannot start too old larvæ to make queens with?

** ★CORRESPONDENCE.**

Mr. W. Abram reports bees as doing His first swarm issued Sept. 22nd.

Mr. A. A. Roberts, Muswellbrook, writes: Fruit bloom over and no honey yet. I fear we will have a bad season. Hope you will have a good one.

R. M., Masterton, N.Z., October 7:-The bees are anyhow lately through want of attention, lost about half. Am just out of bed after laying up for two months to undergo an operation for varicose veins.

[Very sorry to hear of your trouble. you are getting well now.]

F. H., Glenorchy, Vic, Oct. 4th ---A few lines to let you know that I am still among the bees, and I am pleased to say that they are in splendid condition, and ought to give me a good swarming as they are on a sqlendid Cape weed flow. very pleased with the A.B.Bulletin which I receive very regular.

A. F., Darke's Forest, via Helensburgh, :-No bees news except that I am likely to lose the biggest part of my crop, for which there is a great show this season, as I am laid up through an accident, and not likely to get out for a

month yet.

[Very sorry to hear your bad news.] Hope

you will soon be well.]

Manager of the McFadyen, Farmers' Co-Operative Co, Ltd., writes :-Sydney, 16th Oct., 1901.—Honey market: At present there is a very good inquiry for prime clear, which is selling up to 21d per lb. Very little is coming forward, and stocks, generally speaking, are low. We could do with a ton or two if you can send on promptly.

E. J. W., Boggabri, Oct 15th:—I have shifted my quarters and I am now living now about seven and a half miles from of bees down about five weeks ago, and they are making a fair start. There is plenty of bloom for brood-rearing and a swarm, perhaps better luck in future.

good prospect for a good honey flow later on. I have received the A.B.B., very regularly, and would feel quite lost without

G. I., Amphitheatre, Vic.:—A good few of my bees have died this spring. * I think some are suffering from paralysis. I have a lot of tree lucerne growing near, do you think that there would be anything in the flowers of these injurious to the bees. Kindly answer through the A.B.B.

[If it is paralysis better get another queen. It may be bees that have lasted through the winter are dying off, or some food they may be getting is poisonous, in which case the disease

will disappear when the cause ceases.]

B. B., Rheola, Vic., Oct. 14:—It is a very late season in this district with the bees, or in fact with everything. are breeding up well, and some will I have commenced swarm this week. extracting a fortnight since and expect to be very busy from the end of this month at an out apiary, which is in the best honey producing country to be found in this district. I would like to know if any one can break the record of 1140lbs. from two hives which had three-year-old queens last season, and one has the same queen still, being her fourth year and at present has 14 frames of brood. I presume those are the queens we want to breed from, wishing you and other beekeepers every success.

—, Gunnedah, N.S.W., Oct. 15: -In the bee line in this district things are not making a bee line towards success. With good management, bees do fairly well along the river where there any green timber; they blossom regularly and do not appear to be much affected by drought. I am five miles from the river, all white box; it was in bloom when I came here three years ago. I have not seen any buds since. I think it is one of the worst parts of the country for bees. I fed mine and then they did Boggabri. I brought fourteen colonies not survive. I have not any bees now, but do not intend to give up trying yet. A friend on the river has promised me a

am trying to make a living by growing wheat. The recent rain has made me smile. I was beginning to get a bit anxious, all the early crops look well, but late ones will only yield half a crop. I have a lot of good wheat land, but heavily timbered, and it is not dry enough to burn yet. I think this would be a good place for raisin making, but my best grape land is half-a-mile from house.

R. L., Taree, Sept 25th:—The question involved in circular re ring-barking fees, etc, If I understand its bearings does not affect me. And as I take it, it applies to beekeepers individually, and it is for each one to say for himself, and not one for another. Where I am placed nearly the whole of the land has been taken up that is worth taking, and timber destroyed. It is only a question of time that bees will either have to be considerably reduced, taken further afield, or given up altogether. No honey here yet. Terribly dry, have had no soaking rains for upwards of two years. The dwindle is again slightly noticeable, no swarming to speak of. If rain does not soon come the prospects of a good honey season will be blighted.

BLACKS AND ITALIANS.

In the earlier days of the introduction and dissemination of the Italians, great stress was laid upon the claim that these new foreigners were able to get honey from flowers that the black bee could not, especially from the bloom of red clover, which, in the immense fields of it in this country "was wasting its sweetness on the desert air," that would all be saved by the Italians. There is no reliable authority that a large crop of surplus honey from the June or first bloom of red clover was ever gathered, and it is now generally admitted that too much was claimed by our ardent queen-breeders along this line. The Italians have been known to work on the second bloom or seed crop of red clover, but generally the black bees, in the same vicinity, work on

it at the same time, and the largest yield from this source that I know of on record. was gathered by black bees where there were no Italians at that time. The fact is that neither race works at all times upon this second crop of red clover, and, when the bees do work on it, very little is secured in the surplus boxes. effort now being made by certain prominent Italian queen-breeders and importers to obtain by selection and breeding a strain of Italians with longer tongues than ordinary, so that they may be able to get honey from red clover, is tantamount to an admission that the present race or strain is not able to get itnot, at least, in any appreciable or paying quantities. Another claim superiority of the Italians was, that they were much more prolific than the blacks, and would increase more rapidly, and swarm more frequently. Now, there is a great desire to find some way to prevent this rapid multiplication of colonies. and that claim is no particular recommendation. It has been found necessary to keep continually trying to improve the Italian bee, or to keep them up to the best standard of their kind: First, by constant new importation from Italy; then again, by careful selections of queens for breeders of large size and full development, and whose colonies have proven the most prolific, or the best honey-gatherers; and, third, by frequent crosses of different strains from the best breeders in different parts of the country, so as to have a constant infusion of new blood. All of these means are advocated and practised at the present time by the best queen-breeders, in order to keep the Italian bee at its best, and prove its superiority to other races. If this is necessary to keep the Italian bee from retrograding and to show its superiority, it is not to be wondered at that the discarded and neglected black bee stands a very poor show when compared to its much-coddled rival. I think it safe to say that no attempt has been made in this country to improve the black bee, after the manner the Italians have been improved viz.: by foreign importations and crosses, and by queen-breeders selecting from the hardiest and best honey-producing colonies. No, none of these things have been done for the black bee, and there are some who believe that, even in their neglected condition they will store more comb honey than the Italians. when both are given the same attention and management; and that they possess some valuable traits of superiority over the Italian. I will not say that in several respects the Italian is not superior to the black, but I will say that the black has never been coddled, and given an equal chance in all respects to do her best, as has her more fortunate sister.—Shadden Smith, in American Beekeeper.

SECRETION OF WAX.

I supposed that nearly all beekeepers knew that there is an involuntary wax secretion going on all of the time when bees are handling honey. Many times have I seen these little scales protruding from the "pockets" of a bee. If there is no comb building going on these flakes are shaken loose and lost, unless they are plastered upon some place where they are not needed. When I practiced "feeding back" to secure the completion of unfinished sections, and not much comb was being built, the secretion of wax was so great, and the demand for it was so small, that the inside of the feeders, and the top bars of the frames, and the wood of the sections, were all plastered up with litlte white mounds of wax. To prevent this waste, I finally allowed the bees to build comb in two or three sections in each case. After making this provision for the use of the involuntary secreted wax, the plastering of the inside of feeders stopped. I use the words "involuntary secretion," as there was no use for wax; it was secreted because the bees were handling large quantities of sweet, and could not avoid the secretion of wax. All summer long, when the bees are gathering honey, there is more or less of wax

secretion going on, and, if a beekeeper produces extracted honey, there is not much comb being built, hence there is little use of wax; for this reason Mr. Coggshall cuts deeply when extracting. and, in lengthening out these cells, the bees find use for their surplus wax. I think Mr. Coggshall is ahead just that much. I have practiced hiving bees upon empty combs in the brood nest, empty except narrow strips of foundation for starters, and secured more surplus of comb honey, and had the brood nest in as good condition in every respect, combs, brood and amount of stores, at the end of the season, as when foundation had been used in the frames of the brood nest. This is really an important matter. great deal of the foundation used is wasted, yes, in some instances, worse than wasted. Foundation is a great boon, but we must know when, and where, and how, to use it.—Beekeepers Review, U.S.A.

PAINTED OR UNPAINTED HIVES.

Mr. Doolittle on unpainted hives:—
As moisture cannot pass through the walls
of a painted hive, it condenses on the inside

of a painted hive it condenses on the inside; that paint is expensive, in twenty-one years equalling two and one-half times the cost of the hive; that in painted hives the combs would be all covered with ice after a spell of zero weather; that the propolis "checks" and lets the moisture through; that a chaff hive should be painted, "that the chaff walls or dead air space would allow the moisture from the bees to pass off and out;" that "nearly all beekeepers in the North now winter all single-walled hives in the cellar;" that "all practical bee-keepers use a shade-board;" and that his are covered with tin.

Mr. A. C. Miller's reply:—

An unpainted hive will let the water in as readily as out; that while the surface of the propolis "checks," the pores are still plugged with it; that if moisture is stopped by paint it cannot pass "off and out" of the outer shell of the painted chaff hive after it has passed "the chaff or dead air space;" that paint at \$1.80 per gallon is expensive (mine costs sixty cents a gallon, which will cover forty hives, and I can paint twelve an hour and take it easy); that combs in my painted single-walled

hives come through as dry and as nice as those in chaff hives; that not all nor nearly all practical beekeepers use shade boards; that he has not figured in the cost of the tin on the shade board as an offet against the saving in paint; that no shade board will keep off a driving rain; that the term "North" is a decidedly indefinite one; that he ignored the fact that I expressly called attention to the conditions of my locality; that between the 39 degrees and 42 north latitude there are thousands of colonies that are always wintered out of doors in single-walled hives; that if he winters his bees in the cellar it is strange they are out in zero-weather.—American Beekeeper.

Do Bees Select Their Future Home Before Swarming.

I have been a bee-hunter ever since the '60's and have found hundreds of swarms under almost every conceivable condition, from a hole in the ground to a WHOLE lot of other places, and my opinion is that it depends altogether upon circumstances. If the parent colony happens to be located near, or within a mile or so of a timber lot, and if the bees have visited it for honey, and the trees are large, with suitable holes to make homes for bees, if you are in those woods during the swarming season you will see bees looking the trees over. These searcher bees are from a colony near by about ready to swarm, or they are from a swarm that has clustered near by that may have come many miles without discovering a home to suit them. I have kept bees for many years, and have been situated near the timber and also on the prairies, and have studied their habits. On the prairie four miles from timber I have had swarms strike out, and they must have gone many miles before finding even a bush to settle on, and they were first swarms, too. They certainly had not selected a future home. When located near the timber I used to go into the woods in early swarming-time and see the searcher bees looking the trees over for a home, and wound find them cleaning out a hollow tree, or sometimes two or three of them, and have sometimes followed them from hive to the tree they were preparing two or three days before, and in these cases, of course, they had selected their future homes swarming. Again I have followed a swarm seven miles through the timber where there were fine places for a home for it, and would at last find it in an inferior place not fit for bees to winter in. This swarm went about five miles before reaching the timber, and had clustered twice before selecting a home. But had the parent colony been situated near the timber the swarm probably would have selected its home before swarming. So, I think, as I said in the beginning, that it depends altogether upon circumstances, whether they select their home before swarming or not; and I have come to this conclusion from an experience second to none on this particular subject.-J. M. Hobbs, in American Bee Journal.

THE UBIQUITOUS BEE.

In my wanderings after big game I have come across bees and honey in littletravelled parts of the world. It is only lately that I have taken up beekeeping. and the interest I took in the busy bee was entirely on account of the resulting honey, of which I was very fond. found bees very plentiful in "far Cashmere" the natives there going in for a rather primitive form of beekeeping. Their hives were made from short lengths of tree trunk split in halves and hollowed into the shape of a cylindrical box with a small pointed opening or nozzle at one end. This nozzle is put through a crack or hole in the log-wall hut of Cashmere dwellings, which are very much in the style of a Swiss mountain chalet; but how the honey is "taken" or the bees are induced to start in these boxes I have no idea. In some places food was very scarce, and, nothing loth, I made the bulk of my meals off honey pure and simple-eating it in the comb, and often alone. The combs were generally round and were brought by the natives for sale on plates, two or three combs lying one on the other. Again I met the honey

bee while on a quest after lions in East Africa. Here the bees were entirely wild, and the honey was "taken" by cutting down the hollow tree they were found in and smoking the bees. I was led to one tree by one of those curious little birds called by the natives the "honey bird." My men called me out of the tent one day to say that a honey bird was on one of the trees near camp, and the little brown bird, not so big as a sparrow, certainly did lead us, flying on ahead short distances from tree to tree until it arrived at a small withered thorn. which the men cut down, building a fire while I bravely retired to a distance, and eventually producing a small quantity of very dark honey in the comb. I notice that great elephant hunter, Mr. A. H. Neumann, relates how, some way south of the above country, near Lake Rudolf, he came across native hives on the same, plan as those I had seen in Cashmere, perched up in the branches of the trees, and from his account honey appears to be very plentiful. In India the bee is very feared indeed. Many instances of fatal attacks by these insects are known-in fact, it is not at all an uncoumon event. The reason for this seems to be that this particular kind—building its nest in the open, by the way-will follow one for many hundred yards if their nest is disturbed, and they seem generally to be extremely pugnacious and pertinacious. never had the curiosity to go near enough to one of their nests to examine it. They do not allow, apparently, anything to move unchallenged within a considerable radius of their hives, and I well remember the commotion that was raised when it was discovered that there was a nest of those inhospitables within the belt of forest we intended beating for deer .-George Campbell, in British Bee Journal.

Brush a sting off with your hand instantly. Don't press it in.

192 wax scales to the grain and 1,474,560 to the pound, so says E. J. Robinson in Canadian Bee Journal.

TIMBER INDUSTRIES ASSOCIA-

The Minister for Agriculture (Mr. J. Kidd) formally declared open recently the new rooms of the Timber Industries Association, which has been recently formed. The rooms are situate in the City Bank Chambers, at the corner of King and Sussex-streets, Sydney. The Minister was received by Mr. R. A. Price, M.L.A., who briefly explained the objects of the association. He pointed out that in the past the forests of New South Wales had been greatly neglected. Their control had been moved from one department to another until at last it had got into a state of confusion. In some cases reserves had been proclaimed where no timber existed, whilst in other instances Crown land had been sold at £1 per acre where the timber alone was worth £10 per acre. The Crown ought to classify the lands, and adopt some uniform system for the disposal of the timber. New regulations under the land Act of 1884 ought to be framed, and the newly formed association would be willing to assist the department in every way possible. Mr. Kidd, in response to the welcome given to him, admitted that in the past the forests of the country had been neglected, and agreed that something of a practical character ought to be done to further the industry. He thought that the association would be able to afford the Government a lot of valuable information, and he promised that during the recess a bill should be drawn up with the object of putting the timber industry upon a better footing. Minister then declared the rooms open, and wished the association every success .- S. M. Herald.

THE HONEY MARKET.

Sydney, Oct. 24.

Dear Sir,—The honey market is now firm and there is a demand for good quality. We have an outlet for white or yellow box honey at 2½d, and best quality river honey is bringing up to 2¼d; candied is worth 1½d to 2d. During the last two weeks large quantities have been forwarded to the other States, and this has been the means of relieving our market of any surplus; also, any prime honey arriving just now finds ready sale.—Yours etc., Allan & Co.

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Untested Italian Queens .. 5/- 13/- 20/- 39/- Tested ,, ,, .. 8/- 22/- 35/- 65/- Select Tested Breeding Queens 15/- 42/- 65/-

H. L. JONES, Goodna, Queensland.

W. M., Bathurst, writes; I got six queens last season from H. L. Jones, Goodna, real beauties, splendid honey gatherers. I intend to get six more this season.