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The Australian bee bulletin. Vol. 13, no. 8 November 29, 1904

West Maitland, N.S.W.: E. Tipper, November 29, 1904

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Registered at the General Post Office Sydney, for transmission by post as a Newspaper

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. 13. No. 8.

NOVEMBER 29, 1904.

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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 know 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.

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E. TIPPER,

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NOTICE.


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



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"You never hear the bee complain,
Nor hear it weep or wail;
But if it wish it can unfold
A very painful tail.—*Extracted.*

In Austria an ounce of honey is put in a pound of butter when making the latter.

The good queen is the one whose bees get the most honey, no matter about her looks.

Will our friends kindly deal with our advertisers, at same time mentioning "A. B. Bulletin."

It is vain to look for good honey results from stocks that are weak, or queens that are aged.

The worst crop to sow is a crop of falsehoods. It always returns a big per centage—of trouble.

Will beekeepers look over the rules of the N.S.W. Bee Farmers' Association on inside of front cover.

Honey thickened with dry sulphur—a teaspoonful every morning—has cured some cases of rheumatism.

Mr. Abram was greatly disappointed this season. Anticipated a big crop of orange blossom honey, a three days gale blew all the bloom away.

Recently, in California, a man named Worster, a salesman for a syrup company, was fined 25 dollars for selling honey adulterated with glucose.

Speaking of the deluge of Cuban honey into the United States, an American writer says:—The 'future' may be all

right—we don't know as to that—but heaven knows the present is bad enough, from the standpoint of the American honey producer.

In three instances, when we sent honey to Sydney and Melbourne last March, one was settled up August, one 4th October, the other is not settled up yet. It was all of the best quality.

A correspondent asks our opinion of lucerne as a honey plant. It is a good honey producer, a thin, sweet honey. Customers of ours that had been getting box honey would not take lucerne honey. Lucerne honey candies quickly.

Migratory beekeeping is much in vogue on the large rivers flowing south in Russia. Large log rafts are covered with soil, and gardening is done on them. The apiary is placed on them, and the attendants use a tent for shelter.

A circular issued by the New South Wales Institute for the Deaf and Dumb and the Blind, Newtown Road, Sydney, shows that the Institution is badly in debt, having an overdraft of £201 14s 5d, and there is a debt on the Institute for the Adult Deaf of over £3000.

Owing to the large amount of grass in the bush, now ripening and decaying, one of our apiaries recently had a very narrow escape of being destroyed. It was by the most strenuous efforts of good neighbours, that rushed and worked very hard for a time that only some half-dozen hives were consumed. For several days previously bush fires had raged in the vicinity, but for a few smouldering logs some half-mile away, no danger was feared. The neighbouring family were at dinner a few hundred yards away from the apiary, when a sudden hurricane of wind came on, and the place seemed filled with smoke from the apiary direction. The sudden change of wind had blown sparks in the direction of the apiary. The long grass and dead timber were seized on immediately. When a look out was made one dense mass of smoke mingled with flame was all that could be seen. Buckets of water were seized; the parties were twice driven back by the fury of the wind and smoke,

but persevering, they reached the hives, several of which were a mass of flames nine or ten feet high. Knocking the burning ones over, and throwing water on those just caught, the danger was soon minimised, but not till some five or six of the best hives were completely destroyed, together with thousands of bewildered bees from the other hives. The bloom on the trees was gone, and this season's prospects at that apiary totally destroyed. We cannot too much appreciate or thank the good neighbours who so courageously fought for and saved what was left. How anxiously we are looking for rain?

One firm of commission agents in Sydney who has tried to export honey, picking and sending only the very best, informed us it was done at a heavy loss. One of them said it was *criminal cruelty* the way many had been induced to go into beekeeping. The sale for honey in Sydney was very dull.

A 12-inch drain tile set upon end, the upper end projecting a few inches above the surface of the earth, gives a circular surface, one foot in diameter, upon which to set a hive. A piece of thin board leaning against the alighting board, its lower edge resting upon the ground, completes the arrangement.

The same old yarn. This time it is from the *Jamaica Times*:—The honey resources of this country are not half utilised. Tons of nectar go to waste every year for want of bees to gather it. A great many people can take up beekeeping without any hindrance to their present employment and thus add a very important item to their income.

MR. PENBERTHY IN REPLY.

In reply to W. H., Telegraph Point, I don't mean to say that all the north coast honey is inferior, but a large proportion is, judging by the Sussex-street agent's aluding to it as the northern river "stuff" and by a few beekeepers up that way complaining of a glutted market and low prices. One beekeeper about 4 months ago complaining about the price being only 1½d to 1¾d per lb., when I was gett-

ing 2½d, 2¼d, and 3d in Sussex-street for my honey. Honey from this district was sold at Grafton freely at good prices about four months ago. It would be better for all of us if it was all prime honey produced, the consumption then would be enormous.

I don't remember saying anything that would lead anyone to think I wanted to wipe out the small man. The small man here don't seem to think so, judging by the number that come for advice.

Surely W. H., don't think I am so dense as not to know the difference between starvation and spring dwindling. In the first case the bees die of want of food; in the second they die off with plenty of food that is old stores. It is often the first extracting for the season is from hives the bees have died out of. I have reduced a hive of bees down to one half in two weeks by feeding them regular with candied honey melted with warm water. When I feed again it will be cooked by boiling it with water. I believe the extractor will play an important part in the future to prevent spring dwindling.

About five miles west the loss of bees has been about one-third, but a little further west there has not been any loss. My own bees made no progress for just a month, which cut my honey flow down to two instead of three months. I may say the bees have been breeding all winter, so it cannot be old age.

VICTORIAN APIARISTS' ASSOCIATION.

AN OPEN LETTER TO THE SECRETARY.

SIR,—As a member of the above I beg to inquire when we are to have the list of names and addresses of all our members published as directed by the last annual meeting in the official organ?

I freely admit that I want these names for something more than sentiment. I want them for business, and I daresay others do too; and as, perhaps, the larg-

est contributor to the Association funds as well as the smallest are all alike in this respect, I base my claim to have them upon the direction already referred to.

With regard to meeting place for next meeting, I am, personally, very much indifferent where it is. There may be some grounds to fear that it would cause trouble and dissension to hold it at wide extremes of distance, but I doubt it, nor do I credit others either with the overcrowding propensity for other pastures, or the fear of it that our secretary foresees. However, that may be, either Ballarat or Bendigo quartz hills would kill any such intention, even if Stawell was too much of a temptation to risk it. Beekeepers will be glad to know that the extension to 3 acres bee site is embodied in the draft, "Amendments to Land Bill" *vide Argus*, and will no doubt feel grateful for the persistency with which their secretary has followed it up.

There is a rattle of kerosene tins about the western district that augurs well for those who like cheap honey to buy. Will the Secretary formulate inquiries through the Agricultural Department as to the chances of say a *thousand* Victorian apiarists' and their families finding ready pasturage and better prices in the now awakening Argentine.

THOS. BOLTON.

Victorian Apiarists' Association.

MILDURA BRANCH.

[J. F. DEAN, HON. SEC.]

Sir,—Your favour of 27th Sept. is duly to hand, also copies of the "A.B.B." for September and October for which I thank you very much, and hasten to apologise for delay. I consider the "A.B.B." a very interesting and up-to-date journal, and I shall have much pleasure in recommending it to brother apiarists.

While thanking you for congratulations on behalf of our Branch, I may state that after much lost time and trouble we have succeeded in forming a Branch, and have now a membership of 14.

To bring about a better state of things for the beekeeping industry we must combine. I should be pleased to see other districts follow our example and try and make the V.A.A. a worthy combination, we could then make our influence felt in the preservation of forests, a better regulated honey market, and not have it strangled as it is at present.

A good deal of trouble has been caused in Mildura the last two years owing to the bees (where kept in any numbers) becoming a nuisance in the raisin drying season which is February and March. However, the climax was reached last year when all kinds of deaths was promised the little busy bee, if their owners did not shift them. The beekeepers, although having as much right to keep bees on their blocks as the raisin growers had to keep vines, consented to remove the bees a few miles away from the settlement during the raisin season. Since this arrangement was made things have worked more smoothly.

We had an early swarming season this year. Some swarms coming out first week in September. We will have a more or less flowering of the yellow box and mallee the whole year round this year, rather an unusual thing. Our red gum will bloom next month, and if appearances are worth anything we should have a big flow from that source.

We lost a good many colonies this last winter, due, we think, to the late honey gathered. I shall give you the symptoms and would be pleased if you can give us the name of the complaint and a cure. The hives become spotted, especially about the entrances, with a brownish looking stuff, also inside on the frames. It has rather an offensive smell. A good many bees crawl about the front of the hive on the grass, they look swollen and of a dark sticky appearance. They uncapped sealed combs and cause the honey to leak down amongst them, when they become a sticky mass. They eventually dwindle away to about a handful which dies in the hive. Very few bees can be seen in the hive dead. We used nothing for

them, simply giving clean dry frames, but it had no effect. Some are still bad with the same complaint. We had our bees in several apiaries many miles distant from each other, but this made no difference. The same complaint can be seen, more or less, throughout the district.

I am sending a sample of brood, pollen, honey, and some dead bees, to Dr. Cherry for examination and on his advice shall advise you.

[The disease you speak of is evidently what is known as paralysis. It is well-known both in Australia and America. Many seem to think it is derived from some pollen the bees may be feeding on. The only known remedies are, sulphuring the frames—all except the brood frames, and requeening.]

HOW TO TEST A QUEEN.

In 1895 I requeened most of my apiary from a purchased queen. The result was disastrous to the next year's honey crop, the new blood proving worthless. The lesson was so costly that I resolved never to breed from a queen until she was thoroughly tested. I offer my experience that beginners may not fall into error.

My method, briefly, is to send the cash to some reliable breeder, asking for a queen for "business." On arrival she is given to young nurse bees only, at evening, enough of the good candy being gouged out so she will be released before morning. The nurse bees, queenless for several hours, accept her readily. I allow no stock running in the yard, not even a chicken which might fly upon the hive, jarring it and thereby causing the queen to be in danger of "balling."

After several days I proceed to test her, using the following table of gradation, based on a scale of 1000 points:

THE QUEEN.			
1. Prolificence, from zero to	...	...	1000
HER PROGENY.			
1. Honey-gathering	...	...	975
2. Non-swarming	...	...	12
3. Gentleness	...	...	5
4. Long life	...	...	4
5. Size of workers and drones	...	...	4
Total for the progeny	...	...	1000

Honey being my object, "beauty" is not considered at all. I do not add *size* to a queen, because, if she is *prolific*, she will have the size 99 times in 100. When I get a queen having a small thorax and a short, dumpy abdomen, I know she will fall short.

A small abdomen, little ovaries, a stunted capacity for egg-laying, are the rule. I should prefer to buy my queens by weight if such a thing could be done. It takes a 10-frame hive to test the queen's capacity. If she fills it to overflowing, practically all the frames full at the beginning of the harvest, I give her a high grade. If she lays only a few frames full, not enough larvae to consume the pollen, she is graded accordingly. One frame of brood would equal 100; two frames, 200, etc. If she grades high and her progeny low, or if she is low and her progeny high, then I do not breed from her.

How long does it take to test a queen? I buy mine in mid-season. I get a *partial* test on *prolificness* of the queen—a fair notion of gentleness, size, and honey-gathering qualities by the close of the fall crop. The following winter will test long life.

But the real severe test, and the one that settles the question, is the succeeding harvest. If queen and progeny equal or outstrip the stock I already have, then, and not till then, do I breed from new and strange stock. When I conclude to do so I never fail to carry the test a little further by rearing a granddaughter or two to guard against "back" breeding, for it sometimes happens that the daughters of a queen are the best, yet some of the granddaughters develop undesirable traits. When I put a queen through this ideal she is "tested." If I requeen my apiary from her she is "select tested."
—Evan E. Edwards, in *Gleanings*.

The making of money in a legitimate manner is honorable, but an editor, like a teacher, a physician, or a clergyman, must have another and higher object—that of doing good.—*Beekeepers Review*.

PARALYSIS, ETC.

[BY W. ABRAM.]

I am at a loss to comprehend Mr. Beuhne's reply, page 146, to my P.S. in the August issue, and therefore find it necessary to ask for further explanation.

Permit me to explain that I have no knowledge of Mr. B's. letters in the *Leader*, but what appeared in the "B.B." indicated, especially respecting box hives, that his opinion agreed with my view. If he now finds that that is not so he might have explained himself more clearly than he did. That a hive full of honey is not so cold in winter as one having mostly empty combs in itself-evident, but why give more than what is needed or the bees can cover? Space underneath the bee cluster is not so harmful as space above the cluster, which provides loss of heat and sometimes proves detrimental to the bees.

What I want Mr. B. to specially explain is this: Did he wish to implicate any one beekeeper in particular by his words, "There are some beekeepers who can tell what is wrong with other people's bees without ever seeing a leg or a wing, and without having any personal experience of the matter" or, as he uses the plural "beekeepers" will he name those he refers to? It is due to every reader of his letter that they should know what his insinuation means. I am as adverse to polemic controversy as is Mr. B., but I hope he will remove a suspicion which his word cannot fail to impress upon me, and the meaning of which words must create a misconception of facts in the minds of the readers if not clearer specified. In any case his own position regarding his questions on the mortality of bees and the answers to be submitted to an expert becomes an unenviable one, and it appears Mr. B. did not fully see the force of what he said. As to the methods of clairvoyants and medical men that has nothing whatever to do with the matter in question.

No doubt Mr. B. has done his best to solve the difficult problem, but has he solved it? Whilst he attributes the mor-

tality to the food, others can show that that is not the cause, so he has yet to learn to prove his hypothesis, not alone to his satisfaction, but to that of others as well. Besides, has he investigated any and every theory besides his own? Therefore the matter is not settled yet, on the contrary, it will require very dear and decisive investigations before any one theory can claim special recognition as solving the problem, and I shall be happy to congratulate the lucky discoverer of a sure remedy. That others lost heavily whilst Mr. B. escaped free is no proof that he discovered a remedy any more than if I claimed the same, though my bees have been full for many years; but prevention is no cure, though it is better than a cure, perhaps.

Whilst Mr. B. deserves credit for what he has done in the matter let me inform him that long before his troubles commenced whole apiaries were depleted in N.S.W. the same way as his later, and I was the first to draw the attention of beekeepers to the fact that it appeared to be a disease and similar to the one in America; and the importation of queens from America was then in full swing here. Moreover, the importers were the first sufferers, and how far they helped to spread the malady—who can tell? More than 12 years ago I sent affected bees to Germany for investigation because I would not get satisfaction here, and I reported the result. Yes! I have spent more time and thoughts on that subject than Mr. B. has, judging by his writing on the matter, and I still continue to study it in the hope that some day it may be possible to definitely pronounce on the subject. In the meantime Mr. B. may send out his questions and submit the answers to a clairvoyant, no, to an expert! I wish him success, but I doubt if that will solve the difficulty, since the subject is now better understood than 12 to 15 years ago and plausible theory alone will not suffice.

Beekeepers! Send for Samples of our Honey Labels. New and attractive.

How to Make Honey Candy Quickly.

Any movement in honey, however small, encourages, assists and hastens candying, and the smaller the movements and the slower the motion the better will be the results. The honey will be finer in the grain and smoother in the mouth, and if it has been well ripened by the bees and properly handled it will not leak and drain in the least.

When the time comes for bagging the honey or putting it into small containers, on a warm day, the honey should be thoroughly stirred from top to bottom. Specific gravity of dextrose is greater than that of levulose, and hence the former gradually finds its way more or less toward the bottom of the tank. The stirring should be done on a warm day for two reasons. First, when the honey is warm the mixing can be more thoroughly done; and second, whatever air through the stirring may be mixed with the honey can rise to the surface and be skimmed off.

Now we are ready to bag, bottle, or tin our honey. It should be done when somewhat warm, as the honey moves quickly in that condition, and takes in and holds less air than when cold and stiff.

Now that we have our honey or a small portion of it in the containers ready for the market except the candying, make it as nearly air tight as possible. Place it in some thin-walled building—a building that will cool off quickly and take on about the same temperature as outdoor air. On very warm days the place must be aired to keep the temperature from rising too high, as the heat retards granulation.

Well, I have indicated our part and nature will do the rest, as follows:—The daily alternate contraction and expansion of the honey, caused by the cool nights and the warmth of each succeeding day as it passes, will furnish all the necessary movements in the honey for the best results in the finished article. The daily variations in temperature are strong factors in candying honey. They move the honey in itself. This is an important

matter, and I wish to say that, if we get in too much haste and put upon the markets candied honey that is not of good quality, or so handled that the good qualities will perish, it will be a grave mistake. It is much more easy to hold a good position than to regain it once it is lost.

With our present experience my impression is that we had not better undertake to carry much honey in bags very far into the heat of summer.

RECAPITULATION.

To produce a perfect candied honey, smooth and fine in the grain, and that will not drain:

Let the bees ripen and cap before extracting.

Extract on a drying day.

Keep the honey well protected from the air.

Stir and mix well before putting it into small containers.

To candy it, jar, agitate or rock the honey while in the small vessels. This can be done by machinery, but I prefer to let the changes in temperature caused by day and night do it. Place the honey in a thin-walled building—in one whose intense temperature changes rapidly with outside changes. The expansion and contraction furnish the necessary movements in the honey.

Note 1.—This unripe honey candies coarse and rough, and it is ill-flavoured and will drain, and more, the selling and keeping qualities are of a low grade.

2.—With plenty of combs you will get as much capped honey as of the thin stuff, and the wax will pay for uncapping. The young bees that do not go to the fields anyway are just anxiously waiting for the job.—T. J. Pettit, in "Gleanings."

BEES IN THE HOUSE.—According to "The King," a bee-hive in a drawing-room is the latest freak in the way of ladies' pets. An English correspondent writes:—"I have bees in every room in the house, not in drawingroom only, since morning."

PRICES OF HONEY.

Maitland Mercury.—Honey, 1d to 1½d per lb.; small tins, 1s 9d; large tins, 8s 6d.

Melbourne Australasian.—Honey, business in honey is rather quiet at 3d. for prime clear samples, and 2d to 2½d for cloudy and dark lots. Beeswax, unaltered at 1/3.

Melbourne Leader.—Honey—Trade is slack. Prime clear garden lots are on offer at from 2¾d to 3d; medium to good from 2½d to 2½d; congealed on offer at a reduction.

Garden & Field, S. A.—Clear extracted 2½d to 2½d per lb., dark and inferior 1d to 1½d.

S. M. Herald.—Choice liquid 2½d per lb., candied and good liquid 2d to 2½d., inferior 1d to 1½d.

Tamworth News.—Honey, 6/- per dozen bottles; 1/8 per 7lb tin; 9/- to 10/- per 60lb tin.

London Market, *Argus*, 29th August, 1904—Honey. Business is quiet. Australian is quoted at 12/- to 18/- per cwt.; and New Zealand at 25/- to 40/-.

HONEY.—

There is a considerable quantity of old candied on the market which is unsaleable. A few choice lots of new season's are selling from 2½d to 2½d per lb. Medium, 2d per lb.

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The "American Bee Journal" says:—With almost every article of common consumption, building materials, help, and even bee-keepers' supplies continually going up, the wholesale price of honey, in this market, is steadily on the decline. Surely, this is not as it should be!

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Buangor—Dear Sir, The selected queen I got from you is very prolific, her young queens being as much alike as peas in a pod, and are real beauties. Anyone getting your bees will want more, as they are an exceptionally fine strain.—T. G. Matthews.

Claremont, N.S.W.—The queens arrived in splendid condition, and have started to lay.—W. H. Farley.

Vasse Road, Bunbury, West Australia.—I am pleased with the last queen you sent; there was not one dead bee in the cage. Please send six untested and one tested.—John A. Ayre.

Willow Tree, N.S.W.—The two queens I got from you worked up well and quickly. Unfortunately there has been no flow yet to test their honey producing qualities or their offspring, but I have no fear for them.—E. Tipper.

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Specialty v. Mixed Beekeeping.

Time was when many of the industries were represented in one family. Flax and wool were grown, spun and made into cloth and worked up into clothing. Cows were kept, and cheese as well as butter made for home use. Poultry and a few colonies of bees added to the comforts of the household. But there is no need of going into detail; everyone knows how people lived 100 years ago.

Cheap and rapid transportation has encouraged the invention of machinery, the building of factories, and the classification of labor. This has brought about *specialty*. No one disputes that this condition of things is better. By it our comforts are more than trebled. Some industries branched out as specialties much sooner than others. Beekeeping was among the later ones. At least, however, it has become recognised as an industry of itself.

At present, however, there are farmers who are keeping a few bees—perhaps a good many bees—and apiarists who are managing small farms, perhaps large ones; there are men engaged in some other occupation who are thinking of taking up beekeeping, or may have already done so; and there are beekeepers asking, "What will best mix with beekeeping?"

I have little faith in that old saw about "not having all of the eggs in one basket." I say, yes, have them all in one basket, and then carry that basket so skillfully that none are broken. I know there are trying seasons for specialties in any branch of business; times when it might be better, *in that particular year*, if there were more than one egg-basket; but the specialist does enough better, in the good year, to bring specialty out at the head in the long run. The specialist can have the best tools, appliances, and labour-saving implements—things that the dabbler can't afford. He can do and have many things in a wholesale way that would be unprofitable upon a small scale. Upon this point Mr. R. L. Taylor once wrote:

"A multiplicity of occupations multiplies the burdens of responsibility, induces unrest and embarrassment, and our powers becoming overtaxed, carelessness, slovenliness, unthrift and failure result. A 'Jack at all trades' is almost a synonym of a ne'er-do-well. What reason is there for dulling the edge of skill, and sacrificing thoroughness, by combining another business with that of beekeeping? Not certainly to fill up time. Beekeeping as a specialty is no small business. It is capable of great expansion. It can well furnish work for every day in the year, and the larger the business the smaller the proportional expense of the plant and the management, and, consequently the larger the profits. If beekeeping is so unprofitable as a specialty that the operator must pursue another business to eke out a living, then it is too unprofitable to be pursued at all and should be abandoned altogether. If it can be made profitable as a specialty, with all the advantages that specialty brings, then it cannot be made profitable as a subsidiary pursuit. We see this demonstrated in practice. It is not the specialist, but the *non-specialist*, that fails."

Many professional men take up beekeeping as a pastime. With them I cannot have any more argument than with the beekeeper who studies music for pleasure. But upon a money basis it is a far different thing. When a man is engaged in some pursuit that is capable of absorbing all of his energy and capital, I doubt if he can add to his pleasure or his pocket-book by adding some other business to his regular occupation. The bee-keeping specialist, with his hundreds of colonies, his improved hives, appliances and methods, can and *does* produce honey more cheaply than the man with a few colonies. By specialty is not meant that a man does *nothing* else, but that it is his *main* business.

It is true that there are industries in which there is a mutual advantage in their combination. The fattening of hogs, and the running of a grist-mill, or of a slaughter-house, is an example. The

keeping of swine and the raising of apples also brings about a mutual advantage. The swine enrich and 'cultivate' the soil, and eat the wormy apples that fall. This is good for the trees, and the apples are good for the hogs. There is no business that can be united with bee-keeping to any *great* mutual advantage. There is a *slight* mutual advantage in the keeping of bees and the raising of fruit. Not small fruit that must be picked when the bees are swarming. There is also some advantage in the raising of alsike clover, or of buckwheat, but not sufficient to warrant a beekeeper in buying a farm, or a fruitgrower to run an apiary.—*American Bee Journal.*

POISONOUS HONEY IN NEW ZEALAND.

A SHOOTING PARTY'S EXPERIENCE.

A most regrettable honey-poisoning incident occurred to a duck-shooting party up the Piako River, as the result of which two men are now in the hospital dangerously ill, whilst two others had a narrow escape from a similar result.

The party comprised four well-known Ponsonby gentlemen—viz., Messrs. G. Carder, E. Owen (both of the firm of Carder Brothers and Co.), Arthur Cooper and James William Oldman; also a Maori named Thompson Hughes, the latter having joined the party at Kerepehi as a guide.

On Friday night last the party proceeded up the Piako River in an oil launch, and went about 12 miles above the junction with the Waitoa River. All went well until yesterday morning, when the party discovered a quantity of wild honey in an old Maori whare, situated in the kahikatea bush, near Morrisville.

At first the European members held aloof from eating any of the honey, but being eventually assured by Hughes (the Maori), who partook of it pretty freely, that it was all right, Cooper and Owen finally sampled it, the former especially eating a fair quantity. This was at 11

a.m. At two p.m. they ate some more of the honey, being joined on this occasion by Carder, but Oldham declined to participate.

About half-past two the honey began to affect the Maori, who was taken in the form of a fit, and soon afterwards Cooper developed symptoms of poisoning by violent vomiting.

Shortly afterwards Carder and Owen also began to feel bad, but Owen at once took an emetic and kept on doing so, the others, however, declined to follow his example.

Immediately on the Maori and Cooper being taken ill their comrades put them on board the launch, and made a start for the Thames, but by the time Kerepehi was reached the former two were unconscious, and Carder and Owen were gradually becoming weaker. Owen, however, was the only one who could manage the oil engine, and bad as he was he manfully remained at his post until Thames was reached, at about half-past nine p.m., whilst Oldham did what he could in looking after those who were so ill.

As soon as possible, Oldham came ashore, informed the hospital authorities through the telephone what had occurred, and then assisted by Constable Blake, the four sufferers were conveyed in a cab to that institution, where emetics were administered, and the stomach pump used.

Carder's and Owen's condition at this time, however, was not considered serious enough for them to remain in the hospital, but at a later hour Owen began to feel bad again, and was readmitted. He, however, is now, nearly alright again, and so is Carder.

Cooper and the Maori were in a bad condition, and remained unconscious all through the night and to-day, despite the efforts made by Dr. Auburn and the hospital staff to relieve them. Towards evening, however, Cooper began to show signs of regaining consciousness, and now seems to be in a fair way towards recovery. The Maori still remains unconscious, but there seems to be a slight change for the better setting in.

Owen deserves credit for the pluck he exhibited in sticking to his post at the engine, for had he not done so it is hard to say what would have become of the party, as he alone, as previously stated, knew how to manage the oil engine.

The inquiry at the hospital at nine o'clock to-night elicited the fact that both Cooper and Hughes (the Maori) are now conscious and progressing favourably towards recovery, although not yet considered out of danger.

In connection with the above, Mr. Isaac Hopkins, apiarist of Auckland, informs us that the only plant likely to cause poisoning at the present time is the waikariki, a plant which much resembles watercress, and has a yellow blossom.—“Exchange.”

HAMILTON, VICTORIA.

One of the most attractive features of yesterday's exhibition was a display of bees, honey and apiarists' utensils made by Mr. T. Bolton, and throughout the afternoon this was the centre of an interested group of spectators. The exhibit included an assortment of grocers' lines of honey, some granulated and some liquid, in tins and glass jars of various sizes. In some of the glass jars are shown pieces of comb honey, which makes an especially attractive form of putting the product on the market. A big block of beeswax was shown as a sample of the product resulting from a recent invention of Mr. Bolton's, which is called a cappings reducer. This invention supplies a means of dealing expeditiously with the cappings, enabling the apiarist to complete in a couple of hours in one operation by the use of steam work which formerly involved many operations in straining and separating the honey from the wax and extended over several days. The appliance also refines the wax, making it fit to be put on the market without further trouble, and the take is finished with straight away, leaving everything clear for the following day's work. The apparatus is the first of its kind seen in

Australia, and was constructed on the lines of one Mr. Bolton had formerly made and tested for a couple of seasons. It is also a long way in advance of anything of the sort in America and England. Before he succeeded in hitting on the present idea Mr. Bolton had made many numerous experiments to deal with the difficulty, and a screw press formerly used was shown. This stands about five feet high, and the method employed was to fill it with cappings and broken comb, and squeeze the honey from the wax by screw pressure. This was effective, but too slow for a large apiarists' requirements, although it is just the thing now for people with apiaries of 50 hives or so, or for people who keep bees in the old style, and require a means of dealing with the honey and wax. Mr. Bolton also showed a hive without frame suitable for small apiaries and cottages, especially in the country where the honey is of a dark and inferior description—as it is, generally speaking, south of Hamilton, towards the sea coast—as by using the hive in conjunction with the press, or if on a large scale with the steam reducer, most of the people could go in for beekeeping more with the view of wax production. As an example of the progress made during the past few years a little machine for extracting one comb at a time was shown alongside a modern 4-framed Cowan reversible extractor. Both these are worked by hand, but in his apiaries at Glenisla, Mr. Bolton uses an extractor of twice the capacity, and worked by steam. Samples of vinegar made from honey, two observatory hives—one with pure Italian bees, and the other with the common black bee—and a large quantity of beekeeper's sundries, such as bee medicine, smokers, etc., were also shown. Several exhibits, interesting to beekeepers, have been added by last evening's train from Melbourne. It is to be regretted that only open shed accommodation has been found for this handsome display, and it is hoped that by next year an adequate bee pavilion may be provided where a display of handling live bees and instruction in

apiculture may be imparted by one or other of the district experts, as well as a yet more extensive display of apiary appliances and products. With such material as was at hand at short notice, and at the close of a bad season in bee-keeping, Mr. B. N. Reed, an English expert, who has recently arrived in this State to take up the position as managing apiarist with Mr. Bolton, has succeeded in making a most creditable display.—*Hamilton Spectator*.

A LITTLE EXPERIENCE.

Recently an apiarist in the interior received a wire from a metropolitan agent to send at once a ton of honey. The urgency, and boxes not being immediately procurable, the tins (38) were sent unprotected, and, it was afterwards found, were re-trucked in transit. Three days after a communication was received from the agents, in which was the following:

"We received the 38 tins to-day, but the whole lot were in an awful condition on rail. We had to get a tinsmith to solder most of them up, and a few tins we had to fill into other new ones. This was very annoying and expensive to us."

Within 40 hours the sender had put himself at the receiving railway station. He saw the railway officials that had handled the honey, who informed him that six of the tins were leaking—it might have been eight, but were not positive of that; were positive there were not more than eight. From them he proceeded to the agents, where after conversation it was agreed that the value of one 60lb. tin of honey would more than cover loss of honey, two tinsmiths' labours, and all other trouble.

CAPPINGS.

The Beekeepers' Record thus speaks in its August number of the past honey season in Great Britain:—There will, we fear, be much disappointment in many districts to find that, notwithstanding the abnormally warm and bright weather which continued for nearly the whole of

July, the yield of good bee-produce for 1904 will, according to the present outlook be found below the average. We have had too often to complain of wet spoiling our honey harvests, but this time whatever there is of failure must largely be attributable to want of rain, along with a stunted and sickly growth of the white clover plant caused by the cold and inclement weather last year, when the plant should have made vigorous root growth to ensure honey-yielding blooms. Added to this we have had the plentiful supply of honey-dew that rarely fails us in a hot, rainless month of July. So plentiful is this in some parts as to seriously damage the later honey crop, mixing with and spoiling that gathered earlier on. It is not easy to say how far this trouble has extended, though a good many very dark samples have reached us from beginners, who cannot understand the cause of its bad colour, etc.

RECIPE FOR HONEY CAKES.—Three pounds of honey, three pounds of flour, 1 ounce of powdered ammonia, a small teaspoonful of ground cloves, 6 ounces orange peel cut very small, 4 ounces of sweet almonds cut small. Directions.—Pour the honey in a copper or enamelled pan, and set on a stove or quick fire. When it boils, draw it aside and remove the scum (as honey boils up very quickly, great care must be taken not to let it boil over). Then pour the honey in the vessel in which the paste is to be made; leave it to cool; then add flour and other ingredients except the ammonia, which latter must not be added till the flour and honey has been mixed up, and the paste has become quite cold. In preparing for use, place the ammonia in a cup, pour on a few drops of cold water and stir it well so as to form a thick paste, then mix it up with the rest. Then take a piece of the paste, roll it out into a cake not over $\frac{1}{4}$ -inch thick, and cut up into convenient sizes as desired. This done, put cakes on a flat tin (which must be greased beforehand), and bake from 12 to 15 minutes in a hot oven.—*British Bee Journal*.

Where hives stand out in the open in a cold country with strong winds, there will be more suffering if hives face toward prevailing winds, especially with large entrances. In such a place it is well for the hives to have their backs to the wind, with entrances in spring closed all but about a square inch, even though it might not do to have so small an entrance through the winter.

For removing bees short distances.—The day before their first flight would be a good time. It's hard for you to tell just when that will be, and the next best thing will be the next day after. After moving put boards in front of the entrances so as to bother the bees the next time they fly out. It might also be well to fasten the bees in the hives the first day you think it is warm enough to fly, and let them fuss trying to get out for two or three hours before the opening of entrances; that will help you to make them mark the location. If you pound on the hives after imprisoning them, that will make a shorter imprisonment necessary. But look out for smothering them.

To ascertain if wax is adulterated, — If there is tallow in it, it will have a greasy smell and a greasy feeling. Put a piece of beeswax that you *know* to be pure in a jar partly filled with water, and add alcohol till the wax sinks just to the bottom. Then put in your suspected sample, and if it does not sink to the bottom you may pronounce it adulterated.

HONEY FROM PINE NEEDLES.—In reading Prof. Cook's article on vegetable physiology, p 281, in which he speaks of "great drops of delicious honey dew" on the pine foliage in the Yosemite region, I was reminded of a similar incident I once witnessed in Northern Michigan. It was in October, after severe frosts had killed all the flowers, and bees had quit work for the season. One pleasant morning I was surprised to find my bees as busy, and coming in as heavily laden as in the midst of a rich basswood flow. Of course, I was greatly surprised; but on reflection I said to myself, "Some one has

cut a bee-tree in the woods near by, and the bees are gathering the waste honey." For two days the work went on, hundreds of bees dropping in front of their hives from weariness, and so heavily loaded it was difficult for them to rise. The third morning they went to work as vigorously as before. I was then satisfied it was not waste honey they were gathering, and started out to investigate. It was easy to follow up their line, as they all went in one direction, and kept up a constant roar over my head. Going about a fourth of a mile I came to a grove of young white pines from five to twenty feet high, and the mystery was solved. There on the ends of numberless pine needles hung drops of nectar, glistening in the sunlight clear as crystal, and sweet as honey. A bee had but to alight on one of the needles, fill its honey-sac, and depart, leaving enough to supply its successor. In taste the nectar was deliciously sweet and pleasant. It seemed to be perfectly transparent, and must have made excellent honey. I kept bees for twenty years in the pine regions, but this was the only time I ever knew honey to be gathered from pine needles.—D. C. LEACH, in *Gleanings*.

A good honey crop reported from Germany.

EXTERNAL INDICATIONS OF CELL-BUILDING.—How entrance indications enable us to select those that are making preparations to swarm is a little difficult to explain. In the first place, we use large entrances during the honey-flow, about $\frac{3}{4}$ x $1\frac{1}{2}$ inches, and with the amount of super-room given, there is hardly ever any hanging out. The heat of the day is the best time of the day to read these indications. We will go down through this south row, and watch the entrances a moment. These first three, here on this row, are working with a vim that shows very clearly that there is nothing on their minds except the storing of all the honey they can. Notice them closely. There are no robbers to bother them now, so there are no guards on duty, and it seems as though every bee was trying to

see how quickly it could run in after alighting. And when they come out, it is the same "hurrah boys." They hardly stop running out before they take wing, and are off. Does anyone think they will swarm during the next six days? I guess not. So, all we do is to see to the super-room, and pass on to the next. At the fourth one, things appear different. We don't find quite the energy that the others had. The bees do more standing round at the entrance; then there are a dozen or two fanning, showing that the swarming-fever is keeping a good many workers at home. These, with the amount of young bees that are hatching at this season, make them feel crowded and warm.

We think they are making preparations to swarm. We raise the cover. What do we find? Just what we expected. Every bee-space and empty section is full of clustering bees; that swarming-fever clustering we all know so well—the last doubt is gone. We know there is cell building going on. Let us see. We will remove the super, then pry the two sections of the hive apart, using only enough smoke to keep the bees quiet, draw the upper section of the hive toward us, say, 10 inches, now lift the back end up until the section stands on end, resting on the lower section. Now we will gently puff in a little smoke along the bottom-bars, just enough to keep the bees out of the way, while we look for cells. We look carefully along each space. If they have cells nearly completed we will see them at a glance; but, as we want to brush every swarm that has eggs in queen cells, and these little cell-cups are hard to find, sometimes, when we see a suspicious looking cell, where we cannot see in it otherwise, we use a knife to cut it out so we can examine it. We will suppose we find cell-building going on. The two sections of the brood-nest are set to one side (we stand them on end), then one of these shallow (empty) bodies is placed on the bottom-board, then a body or section filled with drawn combs, or full sheets of foundation, is placed on top of the empty body, then on top of

this, the super that we had previously removed from this same colony. Next, we set one section of the brood-nest on top of all, and, with smoke in good trim, gently commence smoking the bees down into the new hive. When the bees are out of this section, it is removed, and the other half is treated the same.—*Beekeepers' Review.*

As a honey producer, the orange blossom is often over-estimated as to quantity, but never as to quality. Of the latter too much can hardly be said; for I am sure that pure orange blossom honey has no superior in any one of the three qualities, color, body or flavor; the essentials that go to the making of a perfect product. It is, in fact, one of Nature's most nearly perfect productions; and, like most such quite limited in quantity.—*Beekeepers' Review.*

Water has a wonderful effect on swarms and should be used on all kinds. If you find them on a tree, give them a sprinkling with water the first thing—you can hold them in this way as long as you wish; and when shook from the limb in front of a hive, if you sprinkle them instantly they will not fly up as they otherwise often do.

Something like thirty years ago, Prof. Cook (I think it was) said that it was not necessary for bees to cap their honey in the combs before extracting, if we would ripen it sufficiently ourselves before putting it into barrels. This I tested thoroughly and found the Professor was right. I then had five tanks made, and lined with tin, each one having a capacity of over 4,000 pounds, which we used as follows: Our apiary is on ground sloping to the southeast. Our extracting building is in the center of the yard, while the storage tanks are in another building enough below the extracting house so that the honey will run from the extractor through a pipe into the top of either tank. These tanks are covered with thin sheeting so that the moisture can easily escape from the honey; and, at the same time, not allow an ant or a particle of dirt to enter the tank. The honey goes through

a wire cloth strainer before it enters the tank. These storage buildings are only about six and one-half feet high, with a flat, tin roof painted dark to draw the heat. In this way the honey keeps about as warm in the tanks as it did in the hives before extracting; and I think it *ripens faster*. We have large faucets at the bottom of the tanks to draw off the honey as fast as it thickens; but it sometimes gets ahead of us and we have a tank of solid candied honey to dig out with shovels, so, after a long experience in producing and selling hundreds of tons of extracted honey, I am sure it makes no difference whatever in the quality of the honey whether it is left in the hive until the bees have it all capped over nicely before extracting, or whether it is extracted every five or six days, *provided* it is ripened in tanks, so it will weigh 12 to 13 pounds to the gallon, before it is put into barrels.—*Exchange*.

"The way to raise the price of honey, is to raise it. Set an honest price, and then stick to that price. Do not undersell another bee-keeper one cent. If you do so to-day, to-morrow the other feller will be asked to undersell you; and the next day you will be asked to keep the ball rolling. Do not begin! I say.—*Exchange*."

Honey is a valuable medicine, and has many uses. It is excellent in most throat and lung affections, and is often used with great benefit in place of cod-liver oil. Occasionally there is a person with whom it does not agree, but most people can learn to use it with beneficial results. Children who have natural appetites generally prefer it to butter. Honey is a laxative and sedative, and in diseases of the bladder and kidneys it is an excellent remedy. I should not care one cent whether my yellow queens mated with drones from black or hybrid stock, as all of my experience goes to prove that the thoroughbred golden Italian queens, mated to drones of either black or hybrid stock, give bees equal to the very best for comb-honey purposes."

I want to enter a protest on the use of glass to scrape the bee glue off the

sections. That is the last thing I would ever think of using for that purpose. I would use my finger nails first. Glass becomes dulled by scraping wood, and certainly some of the particles must find lodgment on the combs or in unsealed cells when using it for scrapping sections. It might help the honey comb to digest but surely is not a very wholesome article of diet. For cleaning the tops of the sections before taking out of the super I made a little tool out of an old saw blade. The edge is the same width of the top of the sections and is bent down about one-half an inch in the form of a hoe; a light handle of wood is attached, which makes it more handy for that purpose, besides, in my opinion, more sanitary in its effects than glass. For cleaning the balance of the sections I use a broken table knife with a stiff blade about 2½ inches long. These and a putty knife for separating and loosing the sections in the super are all the tools I use in connection with cleaning sections. Glass I have no use for about the apiary except in solar wax extractor.—A. F. FOOTE.

Don't try to rush matters by attempting to rear queens before your colonies get strong. Don't wait until the season is nearly over, and drones nearly all killed off; the bees know when the drones are killed and winter is close by, and seem to prefer their old queens rather than take chances on getting a young one fertilized. Don't winter a queen that has been clipped and at the head of a cell-building colony all summer; quit off in time to allow a young queen to become fertile and laying, and use another colony next summer.

"Bees in collecting honey afford a good example of this law. They secure from the flowers the nectar which is cane-sugar and which is digested by them, or changed into reducing sugar, partly in their stomachs and partly in the honey-comb cells, through the action of a ferment which they add to it as it is gathered. This makes a necessary and most admirable food, when mixed with the proteid food-elements of the bee-bread, and supports the larvæ or brood and the

mature bees. Nor do the flowers receive a less benefit. The bees, as they plunge into the flower-tube, become dusted with pollen, and, as they push on to the next blossom, they carry this pollen to the stigma of that flower, and so the bloom is cross-pollinated. Research has proved that the flowers will not be able to seed when pollinated with their own pollen, and thus we may say that the bees in these visits become the very saviors of the species of plant whose bloom attracts them. Thus the flower feeds the bee, and the bee saves to the world the flower.

Mr. Whitney, in an article in *Gleanings in Bee-Culture*, talks as though it would be right and proper to urge all farmers to keep bees. I think there is very little sense to such an argument. There is no more reason why every farmer should keep bees than that he should raise every kind of crop that is produced on earth, and engage in every other line of work that can be done on a farm. I believe that bee-keeping is a profession, and should be followed by those who make it their calling. The nectar in flowers belongs no more to certain land-owners that do the fish in the sea, or the birds that fly over the land. If the land-owner keeps bees he can not confine them to his own land unless he owns a large tract, in which case he can certainly prevent others from establishing apiaries. As a rule, bee-papers urge many people to go into bee-keeping because it is to their interest to do so, but there is a limit to all things; and short crops, low prices, winter losses, and the good common-sense of many farmers, keep things level, and make it possible for those in the business to sell their product for a reasonably fair price. There is a campaign of education going on all the time, educating going on all the time, educating the general public to use honey. If this work was not kept up honey would be only a drug on the market at the present stage of the business.—HARRY LATHROP, in *American Bee Journal*.

TO INCREASE BY THE NUCLEUS PLAN.—The first thing is to get the original

number strong, and it would not be far out of the way to say that the next thing was to keep them strong, for generally when brood with adhering bees was drawn from a colony four frames of brood were left. The increase was made chiefly at an apiary which was visited every nine or ten days. When the colonies became strong enough, brood was drawn from them and put in a pile, sometimes 32 combs of brood being in a pile. Adhering bees were taken with the brood. On the next visit nuclei were formed by taking for each nucleus two frames of brood and bees from the queenless pile, giving each nucleus a mature cell or a queen. No draft was made upon any of these nuclei until they were strong colonies, indeed; sometimes brood was given to them to strengthen them. After the queenless pile was used up, upon any visit, by drawing from it to make nuclei, it was again built up by fresh brood and bees drawn from colonies that were strong enough to spare. You see, it's nothing but the nucleus plan, along with the idea of keeping all fairly strong. That avoided the danger of being suddenly left at any time with a large number of weaklings and the flow brought to a sharp close.

During the 80's, we had a number of good crops in succession, and our honey was of the very best quality. I remember that at that time it was about four years before we reached the bottom of our pile of barrels full of honey. We were thus able to get our price during a season of scarcity. I believe that all producers of comb-honey will agree with me that it would have been bad policy to keep comb honey so long. But the extracted honey, well ripened, and in a dry store-room, would keep as good and fresh. A gain of one-third in value between the price of the crop in a season of plenty and the price of the same crop in a season of scarcity, is well worth considering, especially if we think of the fact that you keep your trade if you can supply the customers when no one else can.—Exchange.

CORRESPONDENCE.

W. A., Beecroft.—This is a very changeable season as regards weather conditions, and north-westerly gales have done considerable damage to the honey crop from orange blossom. Ironbark is now in bloom, but it is very dry. The demand for queens has been very brisk so far. I am now breeding from queens from Italy, they are not too bright in color but work well.

J. C., Mitta Mitta.—The bees are doing well but the wet weather has spoiled the messmate bloom. Plenty of swarms this season. The white gum will bloom this month, it is a good honey producer here.

W.H.C., Nelson, New Zealand.—I find a lot of useful and interesting information in the "A.B.B." and receive them regular. My bees have wintered well and should swarm within a week so I found when going through some of them this morning. The season here is promising enough so far, and hope we have a good one. The honey flow was very short last season, therefore I did not get a big yield, which was an average of 50 odd pounds of section honey.

C. L., Perth, N.S.W.—I have not got sufficient honey this last two years for my own use. I have only one hive of bees left.

J. W., Glenorchy, Vic.—I am doing a little in the bee line. I had 30 hives a few years ago but I lost the lot three years ago. They died off with plenty of honey in the hives. There was a lot of bees died off about here at that time and no one seemed to know the cause. I am trying to get another start now. I have only got seven hives at present, but I am going to increase this summer all I can.

H. H. Waitahuna Gully, Otago, N.Z.—We have rather a late spring, plums just nicely in bloom. One of your correspondents wrote in your late issue rather despairingly of self-spacing frames. Why did he do so? What is wrong with them?

I made a lot of new boxes out of old boards and gave them a coat of hot tar. Did you ever see it tried? Would it be objectionable to the bees?

[In putting hives together we always put hot tar under the bottom boards. It protects them against white ants, and perhaps acts as a disinfectant.]

W. R., Paupong.—Last autumn was poor for honey and bees went into winter short of stores. Result, weak in spring. Very little honey up-to-date, but splendid summer and autumn prospects.

Ancient Directions for practise among Bees.

In making early spring manipulations use very little smoke, and, indeed, this should be a golden rule all through the season. Bees before being deprived of their hard-won stores very rarely show much ill-temper, and are not at all inclined to sting if gently dealt with. Keep hives open as short a time as possible, and do not expose brood in the uncapped stage for any length of time, and never if the temperature is low or a chill wind blowing. Handle the frames coolly and deliberately, avoiding all hasty, jerky movements, as these irritate the bees, and lead them to imagine that they are being attacked. Do not bump frames when returning them to the hive, but raise and lower each without touching the others or the sides of the body box. Do not crush a single bee if possible, as the smell of the mutilated body rouses its fellows to a high pitch of excitement. Cover up all frames as examined to avoid chilling bees or brood. Handle all recently built-out comb with special gentleness and care, as it is apt to give way readily if roughly dealt with. If a bee chances to light on the hand or any part of the operator, he should take no notice of it, but proceed quietly and leisurely with his operations, and it will soon take wing and fly away. Novices are apt to imagine that every bee approaching within reach of the skin is bound to sting, but the sooner they recognise that this is a fallacy the better for both bees

and beeman, as generally nothing is further from their thoughts. Care and tact keep them in good humour, even without intimidation, and gentleness in handling secures a reciprocal gentleness on their part, so that as the ancient writer expresses it, they are "gentle as sheep." When the well-known buzz of an irate bee is heard, a perfect stillness on the part of the operator is best, as this stoical attitude either leads them to think that he is inanimate matter, or that he is at least something that they need not fear, and which it would be useless to vent their ire on attacking. Fuss or anger on the part of the bee-keeper, however, begets a spirit of anger and retaliation on the part of the bees. Every one of the thousands of workers inhabiting the hive is provided with a weapon well fitted for either defence or offence, and they can use them with telling effect at times. So it is well that he, too, should have his armour ready to act as a defence against their poisonous weapons. Here, again, when "stinged," we find sage advice as to treatment has been given by the ancients. It appears that bees had stings and could use them, too, centuries back, for one advises: "If stung, take a sage leaf, cabbage leaf, or a piece of dock leaf, and rub it in, and the pain will soon cease." This "sage" advice gives as good a cure as any since discovered, I am inclined to think. Perhaps the best treatment I can give is to rub out the sting with the thumb-nail drawn across the skin, or rub the hand briskly, at an angle across the clothing, thus extracting the sting—and then grin and bear it!

Never open a hive to carry on any manipulation without some set purpose in making the examination. Then get the bees under subjection, by carbolie cloth or smoker, and proceed coolly and deliberately to carry out your proposed investigation. In spring it may be that circumstances demand a regular overhaul of the hive. If disease is even suspected do not rest with half measures, but go to the root of the matter, and act accordingly. When placing on supers and taking them

off, smartness and dispatch are the secrets of success. Let the whole operation be over before the bees fully realise that they have been tampered with.—*British Bee Journal*.

LAYING WORKERS.

Laying workers will appear under all sorts of conditions. For example, one colony was accidentally divided by two old black combs. The queen did not pass by them, and in a few days laying workers were doing a land office business in the other half of the brood nest. Another case was of a virgin queen in a one-frame nucleus of old bees. She mated, began to lay, and simultaneously so did the workers. The comb was a sight. Apparently the queen was worthless, but the addition of two combs of emerging brood changed the whole complexion of affairs. The queen enlarged her work, and though the worker's drone brood came to maturity, their laying stopped. The presence of laying workers does not necessarily mean queenlessness, for they are often present with a queen under either of the following conditions: extremely small colony; absence or scarcity of young bees; a divided brood nest; a failing queen; or before a newly introduced queen has got to laying. They cause but little trouble other than occupying a little comb which the queen could use. They do not interfere with the safe introduction of queens when proper methods are followed. A failing queen is often said to have gone to laying an excess of drone eggs when as a matter of fact laying workers are responsible for much of the trouble.—*Exchange*.

Honey that Seems to be Yeasty.

In the Southern States of America they seem to have some trouble with honey that is obtained from cabbage palmetto and perhaps from other sources, the honey never ripening in the hive, but working like yeast in the cells. Even if only a little of this acid honey is stored

along with other honey in the hive, it makes trouble with the whole. A Florida woman turns to advantage this objectionable quality of the honey. She tells about it in the "American Beekeeper." Any part of the honey intended for table use she puts on the stove and heats for at least six hours, but never hotter than to allow the hand to remain in it. The scum is removed, and this honey then has a caramel flavour, preferred by some to other honey. But for cooking purposes she much prefers this acid honey raw. She says:—

I make all fruit-cakes and plum-puddings from it, and everyone who eats them is sure to ask how they are made, and of what. I always use soda instead of baking powder, and as honey-cake must be baked slowly, that is much better, because it is slower to fall than the baking powder.

The acid and soda makes a complete raising combination, and is very much ahead of baking powder, and is very cheap too.

The cakes and puddings made from this honey would keep for months, and improve every day. For bakers' use, it would be the cheapest and best of any honey, for no cream of tartar would be needed in using it, and that is the most costly part of baking powder.—"American Beekeeper."

Anecdote of Rev. L. L. Langstroth.

Mr. Langstroth was a most eloquent preacher, and a speaker who would hold his audience perfectly. He took an active part in the business affairs of the church; and I recall once when there had been a feeling of depression in our business meeting he made an address in which he used the following illustration to show that our church was no worse off than others, and that the churches of to-day were very much freer from jealousy and troubles which hinder their work than in the former days. His story was as follows:

An old farmer in Kentucky, who lived on a farm where they were obliged to grub the sassafras sprouts every spring from the cornfields (they called them "sassafig" in the vernacular), finally became so discouraged he determined to locate in a better country. He sent two of his sons to the then new State of Missouri, of which he had heard wonderful stories as to the fertility of the soil and healthfulness of the climate. Their first letters were optimistic, and the old man became so enthused by them that he determined to emigrate to Missouri. He could not sell his farm, but made some arrangement to have it cared for by a neighbour, loaded his effects on a waggon, and started on his long journey. According to the custom of the locality, the neighbours gathered to the number of a score or more to ride out on horseback with him as far as they could and get back that day; but as they passed the postoffice the postmaster handed him a letter. In those days of 25-cent postage the receipt of a letter was an event in the neighbourhood, and he stood up in his waggon to read it aloud to his neighbours. It contained bad news. The frost had ruined the wheat crop; the corn was nearly a failure; his sons had shaken with ague until they had lost courage; and the letter closed with the following: "And, father, sassafig grows here, too." The old man turned to his neighbours and said, "I've been fitin' sassafig all my life in old Kaintuck, and I'm not goin' to a new country to begin the battle over again." And he turned his team around and drove back home.—Waldo F. Brown, in *American Bee Journal*.

Some Facts about Honey And Bees.

BY J. E. JOHNSON.

Did you ever give much thought to the subject of why the people of to-day are neither as strong nor as healthy as they were in former times? also why so many of the wealthiest men and women are invalids? and why our hospitals and sanitoriums are forever crowded with patients, many of whom must undergo

dangerous and painful operations, being brought under the influence of powerful anesthetics, such as chloroform, ether, etc., and are too frail to withstand the shock, and die?

It has been said that the world is growing weaker and wiser, but such should not be the case. If we grow wiser we should use our wisdom to retain health, as that is next in value to the salvation of our immortal soul.

There may be many causes for ill-health. Rich food, and the excessive use of sugar, candy, etc., are the principal agents that undermine our health. When papa goes to town he is reminded by the children not to forget to buy some candy; while at home they think there is nothing so good as cookies, cake, pie, and other nicknacks. And soon they become candidates for the doctor's attention.

A certain amount of sweet is necessary to promote health, but the excessive use of sugar is very injurious, especially to children, because it overtaxes their delicate digestive organs.

The best form of sweets for either old or young is honey, because honey is practically predigested, and is restful to the digestive organs. God created bees to store honey, and for several thousand years honey was the principal diet in the line of sweets, long before a sugar-refinery was even thought of. Let us look into the history of honey.

In Genesis, 43rd chapter, we find that the sons of Israel took honey with them when they went down into Egypt for corn.

In the 16th chapter of Exodus we find that the manna sent from heaven to the children of Israel tasted like wafers made with honey. A food prepared by an All-wise Creator for his beloved children was certainly of the very best, and most wholesome.

In olden times bees lived largely in cliffs. Moses sang of honey; see Deuteronomy, 32nd chapter, 13th verse.

Honey is also mentioned in the Psalms of David; see the 81st Psalm, 16th verse.

In the 13th verse of the 24th chapter of Proverbs we find these words from Solomon: "My son, eat thou honey because it is good."

In Isaiah, 7th chapter, 15th verse, we find these words: "Butter and honey shall he eat that he may know to refuse the evil and choose the good." In the 29th verse of the 14th chapter of I. Samuel we find that when Jonathan tasted of honey his eyes were enlightened so that Saul and his army were able to overcome the Philistines. And in many other places in the Bible is honey mentioned with favor, and as an emblem of purity and sweetness.—*American Bee Journal.*

LOCATION OF BAIT-SECTIONS IN THE SUPER.

The general practice probably has been to put one or more partly drawn sections in the centre of the super, in order to induce the bees to begin work in the super more promptly than they would without such inducement. Of late there is some tendency toward putting baits in the corners of the super rather than the centre.

There is something to be said on both sides. With the bait in the centre, work will begin in the centre, gradually extending outward, and the central sections will be finished while the corner sections are not yet filled. With baits in the corners the work will be more evenly distributed from the start, and there will be a more even finishing of the entire super. But if baits are used in the corners, it is absolutely necessary for even work that there be at least one section in each corner, making four times as many baits needed as when putting baits in the centre. Moreover, a single bait in the centre will start work in the super a little sooner than will four corner baits; and that little is sometimes a very important matter.

Some have no difficulty in taking the unfinished sections from the corners of several supers, massing them in a super and returning them to the bees to be

finished. For these the best plan may be to use a central bait. Those who can not get good work by such returning may do well to plan in advance to have the number of baits quadrupled in order to use them in the corners.—*American Bee Journal*.

THIEVISH BEES.

Buckner in his "Psychic Life of Animals" speaks of thievish bees which in order to save themselves the trouble of working attack well stocked hives in masses, kill the sentinels and the inhabitants, rob the hives and carry off the provisions. After repeated enterprises of this description they acquire a taste for robbery with violence. They recruit whole companies, which get more and more numerous, and finally they form regular colonies of brigand bees. But it is a still more curious fact that these brigand bees can be produced artificially by giving working bees a mixture of honey and brandy to drink. The bees soon acquire a taste for this beverage; which has the same disastrous effects upon them as upon men. They become ill disposed and irritable and lose all desire to work, and finally when they begin to feel hungry they attack and plunder the well supplied hives.—*Extracted*.

ABSENT TREATMENT FOR RHEUMATISM.

An innocent looking German boy walked into a drug-store the other day, says the "Cleveland Plain-Dealer," and facing the Proprietor, started in thus:

"Hav you got some bees' stings for rheumatisms?" he shyly inquired,

"Bees' stings for rheumatism?" the proprietor repeated. "Where did you hear of that?"

"Why, mother was reating it by de newspapers," replied the lad.

The proprietor laughed.

"I've seen something of that kind in the papers," he said, "but I won't attempt to offer you anything just as

good. Where is the rheumatism?"

"In de handt und in de arm," the boy replied.

"Well, see here," said the proprietor with a sudden smile, "I haven't got the cure on my shelves, but I keep it in my back yard. You go out through this door, and walk around my flower beds. When you see four or five bees resting on a flower, just try to pick them up."

The boy nodded and went out. He was gone at least ten minutes.

When he came back his face was red, and his nose—where an angry bee had alighted—was beginning to swell. He held out his hand.

"I picked me some of dose bees oop," he placidly remarked.

"Did you?" said the amused proprietor. "And does your hand feel any better?"

The boy looked up.

"It ain't for me," he placidly replied, "it's for my broder."

EXTRACTED Vs. COMB HONEY FOR FOOD.

The human digestive organs can no more act upon honey-comb or beeswax, and prepare it to be taken up by the assimilative organs as food and nourishment for the body, than they can prepare pills of glass or diamonds for the same purpose. Yet tons of beeswax pass through the digestive organs of the human family annually, and not one person in all the world can point to any benefit that has been derived from it as food since honey has been in use among mankind. But, on the contrary, it is, to my certain knowledge, an irritant, and positively harmful when taken with food in some diseased conditions of the stomach.

When I was a practicing physician I had under my care, at different times, several cases of cancer of the stomach, in each of which I advised the internal use of honey. And while extracted honey was fairly borne, that taken with the comb was irritating, and careful observation will prove beyond doubt or ques-

tion that honey-comb is in some degree or other a source of irritation in all cases of diseased conditions of the digestive organs; and when taken into the stomach that is in perfect health, it imposes an unnecessary amount of labour upon the alimentary canal for its removal. — DR. G. BOHRER, in "American Bee Journal."

VALUE OF HONEY IN COOKING.

I wish every one knew the worth of honey for cooking. The cost per pound may be more than sugar, but it is nevertheless cheaper to use in making cake, because cheaper fats and less eggs may be used than when sugar is; and, what is more, the cake or pudding may be eaten without harm by those with the weakest stomachs, and they seem to be complete food.

Where there are children, nothing could be better. They like and need sweets, and if you add good milk to the bill of fare, you will have one no child will find fault with. If less sawdust and straw, under the name of "breakfast foods," were used, and more honey-cakes made and consumed in their place, there would be less sickness and weak stomachs than at present. — MRS. S. A. SMITH, in the *American Bee-Keeper*.

FRANCE.

A discussion on the use of colonies on scales, and the meaning of figures in regard to the evaporation of nectar, consumption of the bees for living, producing wax, raising brood, etc., is going on in the *Apiculteur* between Messrs. Sylviac and Boris Spoerer. The whole thing does not seem very clear except one point. Up to this day it has been admitted that the amount of nectar gathered by the bees amounts to the difference in weight of the hive between early in the morning and late at night. But it is more than that. The honey or nectar evaporates during the day as well as during the night; the bees eat, secrete wax and feed the brood as well during the day as dur-

ing the night. So the difference in weight between morning and night does not show the whole amount brought in, but only that amount less what is consumed or evaporated. Now, suppose a hive weighs 40 pounds in the morning and 50 in the evening and 45 the next morning. Five pounds will have been consumed and evaporated during the night. Certainly something like five pounds must also have been used up during the day. So the bees must have brought in not only the 10 pounds shown by the scale (the difference between 50 and 40) but also five pounds consumed during the day, that is 15 pounds in all. — *L'Apiculteur*.

CAPPINGS.

Some years ago Professor Joseph Langer undertook a thorough study of the venom of the bee. Up to that time it was generally thought that the formic acid contained in it, though a number of able men did think that it must be an alkaloid, but nothing had been proven. Dr. Langer in the four years during which he experimented used about 120,000 bees to obtain the venom desired. The experiments were made on men and beasts, chiefly rabbits. Sometimes with the bee-stings, sometimes by introducing the venom under the skin with a syringe. The formic acid has a slight effect, as was proven by using it directly instead of venom. A poisonous substance, of the class called by chemists, alkaloids, is really the active principle of the bee-venom. Other scientists have lately added to Dr. Langer's researches. The bee-venom does not proceed out of a single gland, but from several, so minute that they are almost impossible to separate. The one producing the alkaloid is extremely small and had so far escaped observation. Among the 164 bee-keepers examined, 11 were not hurt much when stung, 126 became used to the stings, that is, became immune, and 21 did not become immune. Among the 164, 28 were at the beginning, exceedingly sensible and

subject to serious sickness when badly stung. As to the remedies, the only really useful are the permanganate of potash and chloroform. They should be introduced under the skin at the point stung, with hypodermic syringe, otherwise they have but little effect. It is also stated that the venom of snakes, wasps, scorpions, etc.; is of the same nature, so far as the alcaloid or active principle is concerned.—*German Paper per American Beekeeper.*

When settled warm weather has arrived and colonies have become strong, i. e., one hive-body well filled with bees, with brood in all combs excepting the two outside ones, and large numbers of young nurse-bees on hand; then, and not until then, should any one attempt to rear queens. When bees are in this condition, with plenty of honey and pollen coming in from the fields, I am then ready to begin queen rearing operations, provided queens are needed thus early.

The question of what becomes of a queen when she is superseded is more or less in a fog—and here's a beginner who has an observation that seems to be relevant. About a hundred bees appeared that were apparently pushing the queen in front of them. At the edge of the alighting-board a few took her, and the group flew away and disappeared. Could human beings manage a disagreeable job more politely.—*Exchange.*

Beekeepers have largely been instructed to place an empty super between a partly filled one and the brood chamber, when wishing to give more room, instead of putting it on top of the one that is already on the hive. It has been claimed for this that the bees are spurred to greater activity to fill in the empty space thus made between their surplus honey and brood combs than could be achieved in any other way. But careful observation leads me to question the correctness of such manipulation. My experience has been that the farther I could draw the comb builders from the brood combs by hive manipulation the better were the results in honey secured. We all know

that young bees are prone to cluster on or to keep close to the brood combs, and this action seriously obstructs ventilation, which in turn provokes swarming. The empty super next to the brood chamber might do all right where the hives sits in the cool shade of a tree, but when it has no further protection from the sun's rays than an ordinary shade board, I feel positively certain that better results will be obtained by putting it on top. When suitable bait combs are given, the young bees are soon compelled to go above, thus effecting a general distribution of them throughout the hive and preventing that unbearable jamming or clogging of the passage-ways in the brood chambers—*Exchange.*

A heavy flow on, bush fires all around, prevents us writing on different matters this issue.

The Trustees of the Public Library of New South Wales are anxious to secure, for preservation in the Public Library of the State, early records of the History of New South Wales—which is, for the first 50 years, practically the History of Australia. Copies of some of the historical documents in the archives of the Public Record Office in London have already been made, and printed in the Historical Records, and these cover the history of the earliest period of colonization. The Trustees are now desirous of obtaining local records of our early history, with special reference to the first settlements of the various country districts. They will be very grateful if old residents and others, who have in their possession documents relating to the early settlement of their districts, will present them to the Public Library of New South Wales, Sydney, where they will be preserved and made available for students. If in any case persons possessing valuable records of this nature are unwilling to part with them, the Trustees will esteem it a great favour if they will submit the documents for inspection, so that copies may be made and a record kept of their whereabouts.



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
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