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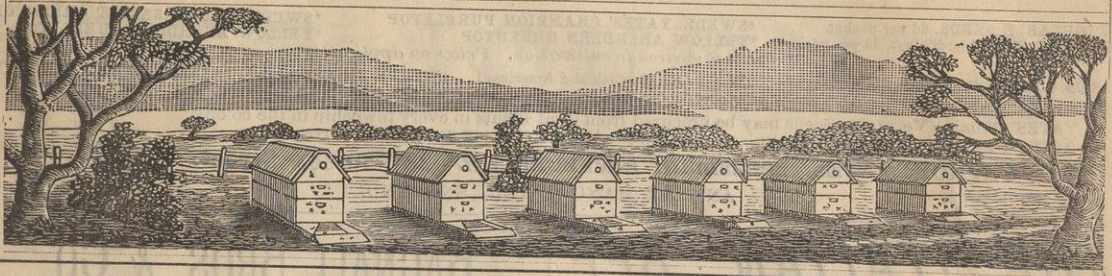
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*H. J. Lamb*  
13/10/87

THE AUSTRALASIAN

# BEE JOURNAL



No. 4. Vol. 1.] AUCKLAND, N.Z., OCTOBER 1, 1887.

[PUBLISHED MONTHLY SIXPENCE.

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Telephone 285.

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# THE AUSTRALASIAN

# BEE JOURNAL

No. 4. Vol. I.] AUCKLAND, N.Z., OCTOBER 1, 1887.

[PUBLISHED MONTHLY  
SIXPENCE.

## The Australasian Bee Journal.

PUBLISHED MONTHLY

I. HOPKINS EDITOR.

HOPKINS, HAYR & CO.,

Proprietors and Publishers.

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### NOTICE.

*Will those who receive this number of the Journal and who do not wish it continued, kindly drop us a postal card to that effect. This number would not have been sent to any but subscribers only that we know a thing of this kind is apt to be overlooked.*

## Editorial.

### SEASONABLE OPERATIONS.

#### OCTOBER.

SEPTEMBER was rather a boisterous month throughout New Zealand, and not at all favourable for the bees gathering nectar from the early spring forage, which, by the way, was later than usual coming into blossom. Equinoctial weather appeared to have set in early this season, so that instead of getting the two or three weeks' fine weather we have been accustomed to in the fore part of September, we had it very unsettled with strong gales. There is a good show of blossoms of various kinds at the present time, though not of much use to the bees just now. It is just possible after the Equinoctial blow is over we may get a good spell of settled weather, which would give the bees a chance to make up for lost time.

The honey season in New South Wales, which sets in from six to eight weeks before that in New Zealand, came upon the beekeepers there rather suddenly, and promises to be a very favourable one. A great number have lately joined the beekeeping ranks in that colony, and it will be very satisfactory to them to get a good season at the start.

Very little would have yet been done in the way of transferring or queen-rearing in New Zealand, owing to the unfavourable weather, but as soon as there is an opportunity advantage should be taken of it to get on with both. The main thing to attend to at present is to promote brood-rearing, and to this end there should be a good supply of food in the hives, and the latter should be made snug. Where food must be given give medicated syrup, and before any hives or combs that have been stowed away for the winter are used again let them be disinfected by spraying with a solution of carbolic acid, or, as Mr. H. Naveau recommends, with chloride of mercury. It will act as a preventive if disease be not already present.

Sow honey-plant seeds, keep down weeds, and cut the grass close about the hives. Note those colonies whose queens do not come up to the mark for prolificness with a view to supersede the latter the first opportunity. Set out the hives for increase, and have everything prepared for the swarming season before it sets in. Beginners should have their hives ready shortly, and make

arrangements for getting their bees. Start with the common bees, and purchase Italian queens to introduce later on, if it is the wish to have Italian bees. This is the cheapest way of getting them, and don't forget to ask through the *Journal* for any information you desire.

### THE PROPOSED PAMPHLET.

THE importance attached to the question of co-operation between beekeepers in the Australasian colonies, with the view of removing the difficulties now standing in the way of developing the honey trade, may be gauged by the opinions of experienced apiarists expressed in the correspondence in every number of this journal issued. The opinion is unanimous that some steps should be taken to act conjointly for our mutual benefit. Then the sooner this is put into practice the better for all of us. The most weighty consideration just now is to increase the demand for our produce, and the great obstacle in the way of doing so is the want of knowledge among the general public of the value of honey and the many uses to which it may be profitably put. The experience of beekeepers in other countries in this matter has been the same, and to obviate the difficulty they have issued pamphlets, setting forth the value of honey as food and for other purposes, which are distributed gratis to their customers and the public generally. This appears to be the best course that could possibly be pursued.

The need of taking similar steps here was shown by Mr. Mulvany in the *Farmer* some few months ago, and the suggestion was strongly supported by Mr. Brickell, of Dunedin. At our request Mr. Mulvany kindly consented to draft the text of a suitable pamphlet, and some short time ago he forwarded the manuscript to us, leaving it to ourselves to take what further steps in the matter we deemed best. It should be mentioned that Mr. Mulvany is anxious that as many as convenient of those interested in the movement should examine the subject-matter of the draft, and give their opinions and suggestions if any. We therefore concluded that the best plan would be to publish it, so that all our readers could see it. The first half appears in this issue, and the other will be given in our next.

We may state that the idea, as sketched out at present, is to get out a decent pamphlet, the body of which shall contain 12 pages about the size of those in the *Australian Bee Manual*, enclosed in a coloured cover, about eight pages to contain explanatory matter, and the other four recipes, while the front cover will be taken up by the title, leaving a small blank space to be filled in either by letterpress or writing, stating who presented by, and on the back cover the circular or the card of the beekeeper presenting them; the whole to be got up in a tasteful and attractive form. We have made some inquiries regarding the cost of getting out an edition of 5,000 of such pamphlets, and we believe they would not come to more than 5s. 6d. per 100, or something under three farthings

each. This would be a very cheap method of advertising one's wares, and the most effective for increasing the demand for honey, as such a useful pamphlet would be kept for reference.

It now rests with beekeepers to show how far they are in earnest in the matter of setting the co-operation ball rolling by combining to get out this pamphlet, we will commence by putting our name down for 1,000.

It is as well to state that every subscriber to or reader of this journal will get them at *actual cost price*. If we are entrusted with the work of bringing them out we guarantee to get them done in the best style, at the very cheapest rate, and to issue them at cost price to beekeepers. Beekeepers in any part of Australasia can join in the movement, for the pamphlet will not be a local affair, and send us word how many they will agree to take. Don't miss this opportunity of acting together in a good cause, but let every beekeeper help by taking some, whether it be a few dozen or a few hundreds.

We will give full particulars of cost, etc., in our next.

### THE VALUE OF HONEY AS FOOD AND MEDICINE.

(Continued from page 39.)

#### HONEY IN DRINKS.

UNQUESTIONABLY honey formerly occupied a high position in the manufacture of fermented drinks, before the use of beer and ardent spirits became general. Mead, metheglin, midomel, and hydromel, which are very similar beverages, were once famous and almost universal drinks, particularly in those countries where the vine did not flourish. The similarity of the words denoting "a wine or strong drink made with honey" in the Sanscrit, Zend, or ancient Persian, Greek, Latin, Teutonic, Saxon, and Gaelic languages, with that of our own "mead," serves to indicate its very extended use and great antiquity. The sugar of honey, like that of the grape, is better adapted for the basis of wines and other fermented drinks than any other sugar we have, as it completely decomposes during the process of fermentation. Mr. Hehner says:—"Most saccharine matters when brought into contact with yeast at a suitable temperature undergo fermentation, that is to say, they essentially split up into alcohol and carbonic acid. Honey then ferments when diluted with water, and after the action of the yeast has run its course hardly anything remains of the honey but spirit, and some amount of acid and glycerine as products of the fermentation, the resulting solution being without appreciable action upon polarised light.

"But allow a solution of starch sugar, or corn syrup (glucose) to ferment, and you will find that, long before the total sugary substance has decomposed, the activity of the yeast will have come to a stop, and a very considerable portion of the syrup is left proof against the attack of the yeast, in other words unfermentable, and examining this unfermentable portion with polarised light it is seen to polarise most strongly to the right." This is a point worthy the notice of those who I am told import glucose largely for the manufacture of beer, &c. It would be very much to the consumers' benefit if honey were used instead.

I note in an English paper received last mail that in Great Britain alone, 9,000,000 lbs of honey are used annually in the breweries, it being, as stated, very much better for beer-makers' use than sugar. Blue ribbon men may object to its use for this purpose on the ground that it is making a poison, but as many of us still persist in taking the poison, then I say let us have it as good and palatable as it can be made. Nine million pounds means in round numbers 4,018 tons. Colonial brewers take note!

I can myself testify to the excellency of mead, fruit wines and vinegar, made with honey, having made a considerable quantity of each since I first went into bee-keeping, and I can see some friends here to night who, I think, can at least speak for some I have made. The manufacture of mead is very simple. If honey is mixed with water till the latter is strong enough to float a sound potato (about 4lbs to the gallon), and half a teaspoonful of ground ginger, with a little allspice, mace, and cloves to each gallon is put in, and the whole allowed to stand in a warm place under cover for about three weeks, to ferment, and just before the latter has run its course the cask is bunged down, you will have a sparkling honey-wine at the end of twelve months as good as anything you could reasonably desire. It will be better if racked off and bottled in the usual way. The cost, even if you have to purchase the honey, will be very little over 1s per gallon. Fruit wines with honey are as easily made. Honey vinegar is manufactured by simply mixing honey and water together in the same proportions as for the mead, and letting it stand in a warm place to ferment, leaving the barrel open all the time but the opening covered with a piece of muslin to keep out flies and dust. It is excellent pickling vinegar. A variety of summer drinks—some of which may be ready for consumption in 24 hours—can be made with honey, and while the latter is so cheap no family should be without them.

Mead was so much esteemed by Royalty in former times that, "according to an antique rule of the Welsh Court, there were three things which had to be communicated to the King before they were imparted to any other person: first, every sentence of the judge; second, every new song; and third, every cask of mead." The brewer of mead to the Princes of Wales in bygone times was no less a person than the physician to the royal household, and ranked eleventh in point of dignity. Queen Elizabeth liked her mead prepared in a most elaborate manner, and so much attention was given to the brewing of this once celebrated beverage by monks and friars that we are told a celebrated monastery was more famous for its excellent midomel than for its miraculous holy virgin. Apart from mead and honey wines being pleasant to the taste, they are invigorating, strengthening to the stomach and digestive organs, and valuable in cases of gout and rheumatism. We stand much in need of something good and strengthening in the way just mentioned at the present time, to counteract the baneful effects of the abominably adulterated foods we have to eat and drink. Before closing this part of the subject I must mention a rather important item, but blue ribbon men please don't listen:—"Whiskey and water, hot or cold, sweetened with honey, is just too seductive for general consumption, but not at all bad." Eh! I fancied I heard someone ask me if I have ever tried it? Well, I must confess that I have, and can recommend it to those who don't object to a good thing.

#### HONEY PRESERVES.

It is said, and with truth, that well ripened honey has the quality of preserving for a long time, in a fresh state, anything that may be laid in it or mixed with it, and preventing its corrupting, in a far superior manner to sugar; thus many species of fruit may be preserved by being laid in honey, and by this means will obtain a pleasant taste, and give to the stomach a healthy tone. One who has once tried it will not again use sugar for preserving fruit. Now, I can confirm all this, and I do not know anything more delicious than fruit preserved in this way. All that it is necessary to do with soft fruits such as grapes, figs, plums, cherries, gooseberries, etc., is to wipe and pack them in jars, cover the fruit with honey, seal the jars (no heat is required), and keep them in a cool place. In a few months the fruit will be luxurious. For jams, and in fact for nearly every household purpose where sugar is now used, honey can be used instead with great advantage.

#### HONEY AS A MEDICINE.

Not the least valuable part of honey is its medicinal properties. Its worth as a medicine for particular complaints has been recognised more or less in all ages, and though its value in this respect is very little understood generally now-a-days, there is still a lingering belief

among the majority of people that it is a valuable medicine. Beyond administering it to give temporary relief in simple childish ailments we rarely use it in sickness; yet if we can believe what we are told by those whom we may consider as qualified to speak with authority—I allude to chemists and physicians—we must admit that it is a most valuable medicine in certain disorders. Dr. G. P. Hashenburt, himself a beekeeper, wrote an article on the "Medicinal Properties of Honey," published in the *American Bee Journal* a short time ago, which is so instructive, I gladly quote it:

"The physiological effects of honey are singularly effective, though mild and passive in their character. It occupies a broad line between alimentation and therapeutics, being both food and medicine; therefore it belongs to that class of medicinal remedies that cure indirectly, that is, by putting the vital forces in such a condition as to enable them to overcome diseased action. Mineral waters, cod-liver oil, glycerine, malt, etc., all belong to this class of remedies.

"Before speaking of the curative properties of honey we will note its physical properties.

"In the first place where is honey from? Some assert that it is a secretion of the bee, others that it is a natural product in plants. If it is a natural vegetable product, the laboratory would have furnished us, long ago, with genuine honey. It must be remembered that the sugar and glucose in the flowers and the fruit that bees resort to, is never honey until it has passed through the stomach of the bee, and please do not call this organ a bladder, as some do. It is virtually a stomach and performs the functions of that organ. The bee gathers into it a saccharine material. After its reception, a gastric element is mixed with it for two purposes, one to give it the character of honey, and the other to make it assimilative for the formation of an oil, that is, perfect wax.

"It is generally supposed that after a bee returns to its hive with its treasure, that it hurriedly dumps it into a cell and goes out for another, and so on. This is not the case; when the bee returns, from fatigue and under the stupefying influence of digestion, it has to abide its time, both to recuperate, and to get rid of its burden of honey and wax. We have reason to believe that even after the honey is deposited into the cells, it has yet to receive the finishing touch of perfection by the bees. In all probability by the young bees of the hive. The young bees are active housekeepers in the hive; they live on the honey imported, and this rich, concentrated food demands an excess of gastric secretion; when coming to a certain point, it creates a regurgitation something akin to vomiting. This the young bee economically puts back into the cells, thus completing the process of honey making. Another point as to the character of the bee's stomach: As soon as it is unloaded, an insatiable sense of hunger and restlessness ensues, which at once forces the old bee to work abroad and the young at home. We all know how to respect the buzz of the hungry bee, and admire the sweet disposition of the one that has just finished a sumptuous repast. And how rare are family jars when the pantry is ever full. It is Nature's law, in all the same.

"We go more especially into these details to point out the medical properties of honey. It has two physical elements that make it particularly a medicine, viz., 1. An aromatic irritant imparted to it by the stomach of the bee. 2. Its ready transformation into fat, without those complicated physiological operations necessary to transfer other saccharine elements into this material.

"These make it at once both a local and constitutional remedy. Locally, it is an irritant, sedative, emollient, detergent, antiseptic, resolvent, rubefacient and a parasiticide. Constitutionally it is nutrient, demulcent, laxative, deobstruent, alterative, tonic, expectorant, restorative, febrifuge, diuretic, diaphoretic, vermifuge and antaphrodisiac, as well as containing certain poisonous properties manifested under peculiar circumstances.

"When we say that honey is both an irritant and a sedative we mean that its first effects may irritate, followed with a sedative effect. All liniments work beneficially on this principle, the same with the most of eye-waters, etc. The solution of honey as an eye-water, proves par-

ticularly beneficial on account of its antiseptic, absorbent or resolvent properties. It cures inflammation of the eye, in the way a solution of borac acid does, that is, mainly by reason of its antiseptic and sedative properties.

"The irritant properties of honey are in a great measure destroyed by dilution. Therefore as a topical irritant, where we wish to favour resolution, by counteraction, it is used in a pure state or in conjunction with other more active irritants. It is its irritant or rubefacient effect joined with its emollient nature, that precipitate local inflammation into suppuration, and is, therefore, a suitable remedy for abscesses, boils, whitlows, carbuncles, etc. Therefore, woe to one that applies a honey plaster over an inflamed eye, in place of the solution! As a rubefacient and absorbent it makes an excellent local application in glandular swelling, and in chronic tumefaction, in particular when joined with iodine, iodoform or mercury.

"On account of the temperature of the body, it is difficult to keep pure, undiluted honey on the surface; this can in a measure be remedied by saturating layers of Canton flannel, and apply them, changing frequently.

"I speak of it as a parasiticide not only in connection with the theory of the pathogenesis of diseases as advocated by Pasteur, Cohn, Koch, Klebs, and others who have investigated the bacteria, but even those who created several skin diseases well known by almost every one. Take honey for the destruction of the bacteria, because of its antiseptic, tonic and laxative effects, its daily use would disarm every dire and malignant disease of its destruction force. Cholera, yellow fever, small-pox, scarlatina, and diphtheria may run their course as before, but comparatively in such a mild form as to afford but little anxiety. I only speak of honey as a preventive of malignancy in these diseases, and not as a curative agent.

"I have reason to think that it may even serve as a prophylaxis in epidemic diseases. Last year, Austin and vicinity were afflicted with an epidemic of dengue, prostrating nine-tenths of its inhabitants. My residence and apiary is two miles south from the city; and I suppose almost every one in our neighbourhood had the disease; however my family and servants never took it, although we kept a daily communication with the city, and with persons having the disease. I cannot account for this exemption, which created a great surprise among our friends, unless it was the honey we ate almost at every meal.

"The constitutional effects of honey cannot be fully understood and appreciated, except to study it from its medical properties, as represented above. All scientific investigation of remedies are made in like manner. It is the text to a long and complicated sermon. Every physician will read in it such a multiplicity of applications, that would astonish the uninitiated.

"As a nutrient I will not speak of it as food but in connection with its properties that serve to arrest the waste of certain diseases, in particular in consumption. The important features of the medical properties of honey lie in the nutrient, expectorant, deobstruent and restorative effects in the management of consumption, and its allied diseases. Now let us go back to a fact that exists in the process of making honey. No honey could be had, if it were not for its ready metamorphosis into oil, or in other words in the making of wax, as stated. The great object in the treatment of consumption is to arrest waste. Therefore we resort to the use of oils or remedies that will readily make fat in the system. But the great difficulty in the way, is to get the system to accept these remedies and effect their assimilation. Under Liebig's authority we give sugar freely to make fat, but the system often refuses it, as it does the oil, for before it can be assimilated it has to be changed into a glucose, or really into pretty much what honey itself is. This alone gives us a great advantage in giving honey to stay the waste caused by disease, that we have in no other remedy.

"Honey in being assimilated is disposed of in three ways: what is not deposited in the cellular tissue as fat is consumed by the liver, and its volatile principle is eliminated by the lungs. This elimination is a matter of the greatest importance as a remedy in all pulmonary disorders. But the most remarkable feature of honey as a pulmonary sedative is its administration by atomization and inhalation. The spray arising in extracting, has

been proved to exert a very beneficial effect upon cough and dyspnoea, thus revealing its curative tendency."

There is just one thing more I would like to bring under your notice, viz., the value of diluted honey as an eyewash for the relief and cure of sore and inflamed eyes. I have used it and recommended it in scores of cases, and never knew it fail in doing good. Mix one part honey in four or five parts of water and apply the solution to the eyelids three or four times a day; drop a little into the corner of the eye while lying on the back, and it must be a very bad case indeed if you do not get relief at once. It has even been reported to have cured cataract in the eyes and so saved the patient the necessity of undergoing an operation. A very credible case of this nature is mentioned in *Church Bells* for May 20th, 1880.

#### QUALITY OF HONEY.

Honey varies considerably in its properties according to the particular blossoms from which it has been gathered. Some is said to possess poisonous properties like that which overcame Xenophon's followers near Trebizond during his famous retreat. This we are told was gathered from the *Rhododendron ponticum*, or the *Azalia pontica*, both of which grew in great abundance there. *Kalmia latifolia*, or mountain laurel, *Kalmia hirsuta*, *Rhododendron maximum*, *Azalia nudiflora*, *Andromida mariana*, and the *Datura stramonium* are said to produce poisonous honey. They nearly all belong to one order, but as none of them are natives of this country we have nothing to fear from them. The only one plant in New Zealand, so far as I am aware, that is said to produce such honey is the *Waeranga*, or *Waerangapero*, but as this shrub is in flower in August and only to be found in certain localities, we need not have the slightest alarm about it. It is just possible that when we know more about the different kinds of honey we may find the poisonous varieties possessing properties more valuable from a medicinal point of view than the ordinary kind. A very interesting discovery in connection with eucalypti honey has lately been made by a distinguished French naturalist while travelling in Tasmania, the main feature of which is that it contains the active principles of eucalyptus.\*

There is still a great deal that requires investigating before we shall be able to apply scientifically the different properties of honey to the uses to which they are best adapted. Every year, however, fresh investigations are being made, and we may reasonably expect to see in a short time honey become a valuable therapeutic agent in the hands of skilful practitioners of the healing art.

Let me advise you, especially the heads of families, before I conclude, to beware of many of the saccharine substances now sold, particularly those imported. Do not give your children sweets unless you are certain they are free from injurious matters. Remember that glucose is largely used in the manufacture of syrups and sweets, and that in converting the starch in corn and other substances into glucose sulphuric acid is used, and there is, according to Mr Hehner, always more or less of the acid which cannot be extracted from the glucose. It is natural for children to crave for sweets. Give them, then, nature's unadulterated sweet, honey, and not the doubtful imported syrups that are likely to undermine their constitutions.

I may perhaps have unduly prolonged my remarks, though the subject is so extensive that I fear I have done but scant justice to it. But if I have succeeded in throwing some light upon the matter sufficient to make you desire to know more my object is accomplished.

Let me finally remark that honey is one of the good gifts of a bountiful nature, scattered in exuberant plenty over the whole of the habitable portion of the globe, and the honey-bee, without whose handiwork the gift would be worthless to us, has ever been, and ever will be, the helpmate and companion of man.

Votes of thanks to the lecturer and chairman concluded the meeting.

\*The article, which was kindly sent by Mr. C. W. Brown, of Dunedin, appeared in our last issue.—Ed.

## BEEKEEPING IN NEW SOUTH WALES.

By S. A. B.

I AM afraid I cannot send you a long letter this month, the spring has come upon us with such a rush, and we are hard at work; for, although we had every reason to expect an early season, we did not anticipate anything like what we are experiencing. The bees are filling their hives with honey so fast we shall be obliged to extract to give the queens more room for their operations. (What should we do without the extractor now?) Some hives are already working in upper stories, and we have every indication of early swarming as drones are appearing in some of them. They have wintered splendidly; only one casualty—the loss of one queen and the development of fertile workers in that hive. Owing to the keen winds we were rather late in examining the hives, and when we did, found that the bees in this hive had made a large number of queen-cells over drone-brood, the result being some of the largest and handsomest drones I have ever seen. A. J. Root says that drones fed like queens usually die in the cell, but these seem to have thriven amazingly on their royal diet. I am trying to get rid of the fertile workers, and hope to be able to tell you next month that these ladies have either disappeared or retired into private life. This brings me to another important point in bee culture—the value of autumn queens, and I think if the subject were thoroughly ventilated in your columns it might prove one of interest to your readers. Our experience goes to prove they are failures; for instance, in the autumn of 1886, the largest swarm I ever saw (it filled to overflowing a two and a-half story Langstroth) lost its queen through an accident. The next day the bees had started fifty-four queen cells, twenty-nine on one sheet alone. Nearly all these were removed, leaving one or two for them to rear a queen. She began laying, and the swarm seemed to do fairly well in the winter, but, in the spring it was the weakest and most spiritless of the lot. We retained the queen, and have her still, but she has never maintained even an average swarm, although her mother was a perfect beauty. Again this autumn we tried the experiment; we made five swarms, *a la* Doolittle, all as nearly as possible the same size; into four we placed autumn queens, in the fifth we put a queen reared last spring. They all went into winter quarters in much the same condition, with plenty of honey and bees; all five had commenced laying in their new hives, and there was no apparent difference in them when finally closed. The last spring's queen has her hive just brimming over with bees now, and we have had to help the autumn queens with brood from the others. I should be glad to hear if the experience of other beekeepers has led them to conclude, as I have done, that autumn-reared queens are inferior to those reared in the spring and summer.

Before I close let me tell you of a very interesting meeting of the New South Wales Beekeepers' Association which took place on the 4th instant. I mentioned in my last that a

committee had been formed "to inquire into the adulteration and sale of adulterated honey in the market." The question being one of such very great importance the committee hesitated to submit a definite report at present. Mr Abram, however, read a very able paper on this subject, the establishment of a depôt for the sale of honey, and the appointment of experts; all three subjects of great interest to the beekeeping fraternity. In the matter of experts I am not aware that any attempt has been made in these colonies to classify beekeepers in regard to their qualifications as such. It is proposed by the Association that candidates for the honour should pass a strict examination in practical and theoretical beekeeping before receiving certificates, said certificates pronouncing them to be duly-qualified beekeepers of the first, second, or third grade, as the case may be. Although our Association is but in its infancy you see it is not afraid to do battle with some of the most important questions connected with bee culture.

[Our experience of late autumn-reared queens bears out what you say with regard to them. Those reared through the spring and summer, that is, during the months when swarming takes place we have found are the only ones worth keeping; the others are very short-lived and apt to turn to drone layers at a very early age. Your experience with regard to drones developing in queen-cells is certainly singular: we never saw such a thing, nor remember having heard of the like before. We are glad to hear that your infant association is so vigorous, and trust that it may continue to gain strength with age and set a good example to beekeepers in other districts.—ED.]

## BEEKEEPING AND FARMING.

By R. J. KENDALL.

THIS month I am going to get somebody's back up—whose I do not know—but I am dead sure it will be somebody—the Editor as likely as not; and for this reason, I am going to be heterodox on the above subject. I am going to take the position that beekeeping is a special business and has got to be attended to as such, and that it is not a business for the general farmer to go at as a business if he makes his farm his main occupation; and I am the more confident of this because it is a conviction that has forced itself upon me after some years of experience with farmers and beekeepers, and that, too, against my will rather, and when my interest would have led me to argue in the opposite direction. For some time I had the charge and conducting of the apiary department in the *Texas Farm and Rancho*, a farmer's paper, and there my readers will see that I wrote mainly for farmers' reading, and I advocated farmers keeping bees as a question of dollars and cents purely, and believed what I wrote. But Mr. James Heddon, of Michigan, America's premier practical beekeeper, came at me on the subject and just knocked the bottom out of my position, and converted me to my present ideas. The time taken up in attending to bees, to do the thing



properly, interferes too much with the farmer's business to allow him to attend to his crops properly, and a man has simply got to chose between beekeeping and farming—which he will take as *his business*. Beekeeping is too jealous a mistress to stand any half-devotion, and it will result in more dissatisfaction, discontent, worry, etc., than the thing is worth to try to run the two both as businesses. It is not part of my present argument to discuss whether farming will pay or whether beekeeping will pay. It has been demonstrated enough, I should think, that both will, but they will only pay when conducted as are other businesses—*i.e.*, made specialties of. By paying I mean here that they will bring in a living and a margin over, that they are worth going into as occupations. A newspaper friend of mine some little time ago made the statement, extraordinary to me, that the man who seriously contemplated going into farming in New Zealand, expecting to make it pay, was fit for a lunatic asylum. A beekeeper within a measurable distance of Auckland also once told me he had given up beekeeping because it did not pay. The value of the two statements the farmer and the beekeeper must settle for themselves. I believe beekeeping will pay if the apiarist can only get his market. At the same time, I believe the man who goes into it thinking "there's millions in it" will be disappointed. I do not think there are, but I think there is a living in it, and a little to spare. However, I do not want my readers who are farmers to misunderstand me. I do not say that it will not pay a farmer his expenses to keep bees. The very opposite, but he will get his profit out of his bees indirectly by the increased fruitfulness of his orchard, and directly by getting enough honey to supply his family, perhaps one or two neighbours, and a little addition to his income, more or less as the case may be, by the sale of the honey over and above what he or his neighbours require, precisely as he gets a little extra income from butter, eggs, poultry, fruit, etc. And beekeeping such as will do this he can attend to without interfering with his farm work. If I was a farmer I would keep a few bees, say five, ten, or fifteen hives; but I would not attempt to run, as the specialist must, fifty, seventy-five, one hundred, or two hundred hives. The apiarist as a specialist must have from one hundred to two hundred hives, and no man can attend to that number properly and attend to his farm properly. The specialist must attend to his own hives. It is folly to have an apiary and hire an apiarist to attend to it, for the simple reason that the apiarist, if he is worth his salt, will set up his own apiary and be master of his own business; and it is no use having a man who has not got "gumption" enough to do this to attend to bees, for he will only do it half-heartedly unless he is getting a big salary, and then he will always be contemplating being his own "boss." Therefore, either keep bees yourself or do not go into it, if you want your bees to be an income. But if the farmer desires to keep bees as a side issue, as I have pointed out, he can do so with profit, and without loss; but this thing of inducing a man to think that he can

farm—for all farming is worth—and run an apiary also, is gammon: he cannot do it. He must neglect one or the other. There has been too much of the idea that "bees work for nothing and keep themselves" taught. Bees do not do any such thing in the proper sense of the term. They need attention, and they need care, and they need study; and the man who thinks that all he has got to do is to get a few hives and his work is done, will find out that he is on the wrong side of the fence as sure as he is his own mother's son. If you only keep one hive, attend to it. It will not take very much, it is true, but it will take some, and some study also. Then, when we are talking of beekeeping as a business, let us be understood to mean we are talking of it as a specialty and we will not disappoint anybody; and when we are talking about farmers keeping bees, let it be also clearly understood that we mean keeping them as a side issue, precisely as poultry, fruit, etc., is kept. Such understanding will be better for all parties, and then we shall hear less wailing about "disappointed hopes" and so forth in the future.

[It will no doubt be satisfactory to Mr. Kendall to learn that the Editor's back still retains its usual graceful curve, and that instead of his remarks on "Beekeeping and Farming" having a tendency to distort it, on the contrary, the Editor feels that his back has been strengthened thereby. If Mr. Kendall will refer to page 21 and more particularly to page 307 of the *Australasian Bee Manual*, or to any of our writings bearing upon the subject, he will find that we have always warned and spoken strongly against farmers and others keeping more bees than they can attend to properly. Neglected apiaries are not only a loss to their owners, but both directly and indirectly they are injurious to the beekeeping industry. We commend the above article to the notice of farmers.—Ed.]

#### PURE MATING WITH SELECT DRONES. HOW TO CURE A COLONY OF LAY- ING WORKERS.

BY N. SCHUMAKER.

THE appearance of the *Australasian Bee Journal* agreeably surprised me. Let us hope that its success will be as great as it ought to be, and that it may do much towards awaking an interest in such a noble occupation as beekeeping, counting amongst its patrons some of the greatest intellects of ancient and modern times, and men whose names shine brilliantly in the scientific world.

I am not a beekeeper on a large scale, I only keep about twenty-five good, strong colonies, from which I get a fair return. It is not my intention to increase beyond this number, as I would hardly be able to attend to more without seriously neglecting other business. Besides this I personally abhor monopolies, and when we see how, principally in America, almost every branch of industry is made into a huge monopoly by a few capitalists, who after running the small trader or producer off, raise the price of their goods again. It is no wonder that every noble minded man sets his face

against it, and begins to entertain ideas of socialism, perhaps as undesirable as the disease, but ultimately the only cure for it. May beekeeping forever remain an occupation of the amateurs, farmers, and cottagers, and may this journal be the means of diffusing the necessary knowledge to manage bees by humane and scientific systems, so as to afford to those who engage in it much pleasure and profit, open new fields for their studies and researches, and may the ennobling influences of this occupation be extended to many of our fellow settlers.

To return to my subject, on the 18th February, 1885, I received an Italian queen bee in a nucleus hive from Matamata. I believe it was the first of this colour ever introduced in Taranaki. I soon worked this nucleus up into a strong colony by supplying it with worker brood from other hives. Early in the following spring I encouraged these Italians by stimulative feeding; and by the beginning of October had any amount of Italian drones, and queen-cells were well forward. I formed three nuclei, the queens of which I intended to have purely mated after Dzierzon's plan. As soon as the queen-cells in the three nuclei were about hatched, I removed the latter to a dark room, also a ordinary single hive containing the Italian drones, and there kept them confined for about four days, giving them plenty of ventilation and supplying them with water. Then on a fine day, about 4 p.m., when all the black drones had already retired, I put them out in the garden again, but kept the entrance, turned towards the sun, closed for another fifteen minutes, to let the inmates get quietened. Then I carefully removed the wire netting at the entrance, and syringed some lukewarm honey-water into the hive. The bees at once commenced flying with a joyous hum, and the drones all came out as if it was in the morning. I kept watching one nucleus at a little distance off, and noticed the young virgin queen appear at the entrance and take wing, describing gradually enlarged circles, until I lost sight of her. Eight minutes later she appeared again on the alighting board and was fertilised, as I could see by her changed appearance. In four cases, to which for want of time I had to confine my operations, I was every time perfectly successful in securing the pure mating of young queens with select drones. In the last case I had to repeat the operation on the following day, the queen on the first day taking wing, and after describing a few rings in the air, returned again. In such cases care should be taken to have the nucleus placed in the same position and surroundings as it was the previous time, as queens often take preliminary flights before their wedding tour to mark the surroundings.

About February, 1886, the hive which contained the imported Italian queen sent off a swarm, which, after settling for one hour on a young sugar maple I have growing in the garden, returned to the hive again. We kept a good watch, but no further attempt was made at swarming by this colony. About four weeks later I examined the hive and found it to contain all drone brood and eggs, sometimes three and four in one cell. I searched

for the queen, but, it is hardly necessary to remark, without result. So my fancy queen got lost, and laying workers, of which the Italians are said to be prolific to produce in queenless colonies, were at their mischievous work. But how to get rid of these, and introduce a queen? It is well known that colonies in this state accept neither queen nor queen-cells, unless the pseudo-queen is removed, and she, owing to her similarity to other workers, can very rarely indeed be found out from amongst them. Old friend Huber comes again to the rescue. At 11 a.m. I removed the whole hive about three chains away to the shade of a large rata stump, placing an empty hive on the old stand in the meantime. Then I took out every frame and brushed all the bees into an empty box. Not even one bee was allowed to remain on the combs or in the hive. The hive with the combs thus cleared of all bees was returned to the old stand, to which all worker bees found their way back again, only about a dozen I noticed in the evening in a cluster in the box into which they were brushed. Amongst these, I presume, was the laying worker, which, not flying out like other bees, would never find her way back to the hive, and would probably also be too heavy to fly, as she carries eggs, and is without exercise. Early the following morning I introduced a queen from a nucleus which was accepted, and the colony was cured.

I fear I have trespassed too much on your valuable space. Should you desire it, I will try to write again at a future time.

*Midhurst Apiary, Taranaki, September 3, 1887.*

[Many thanks for your good wishes and valuable communication. We shall be glad to hear from you frequently; it is the experiences of careful and observant beekeepers that we desire to publish, and such cannot fail to be of great service to all our readers. If the majority of our subscribers were to contribute their mite occasionally, or when they have had some interesting experience, it would be the means of making the journal of greater value to all, and tend to advance the interests of the beekeeping industry more rapidly.—Ed].

## HONEY.

### THE NATURAL SWEET.

The following is the draft of the proposed pamphlet, kindly furnished by Mr. Mulvany:—

Saccharine matter, in some form or other, is one of the essential elements of nutrition in human food.

The *only form* in which it is found provided by nature in a concentrated state, and directly fitted for human consumption without being subjected to any process of preparation, is that of HONEY as it is stored by the bee.

The nectar gathered by the bee from flowers and blossoms of all sorts, is a simple product of the vegetable kingdom; but in order to become HONEY it has to go through a process of chemical change in the honey-sac of the bee, and one of ripening in the cell of the honeycomb while in the hive. It is then in fact a prepared article of food, and it is to this special natural preparation that it owes many of its qualities.

The manufacture of what may be termed artificial sweets (sugar, syrups, etc.), from vegetable juices, such as those of the sugar cane, maple tree, beet, and other roots, has been the means of supplying the world, in latter times, with immense quantities of cheap *sweetening*

*matter*, which was quite unknown in former ages, and which is suitable for mixing in various ways with the food and drinks in common use. The sugar of commerce, however, differs from honey in one important particular. It is not of itself *directly fitted* for use as human food. It requires, as physicians tell us, to undergo a certain chemical change to convert what is technically called "cane sugar" into "grape sugar," before it becomes adapted for easy assimilation into the system, and to produce this change a certain demand is made upon the digestive organs. In the case of HONEY this change has been, as above mentioned, already effected, and it can therefore be eaten in its natural state, not only with impunity, but, within due bounds of moderation, with advantage to the digestive organs and general health. It may therefore with propriety be termed *the natural sweet for human food*.

THE GENERAL USE OF HONEY CONDUCTIVE TO HEALTH,  
ENJOYMENT, AND ECONOMY.

FIRST, AS TO HEALTH.—This has been universally recognised in all countries and at all times of which we have any knowledge. In the earliest records of the human race the name of *honey* is united with that of *milk*, which is the most primitive and universal of all foods, and the figure of speech used to designate a land of plenty and of promise is "*a land flowing with milk and honey*."

Solomon mentions honey frequently as a type of something which is not only pleasant and agreeable but also good and wholesome, as in the passage, "My son, eat *honey* because it is good, and the *honey-comb* which is sweet to thy taste;" and in the expressive simile, "Pleasant words are as an *honey-comb*, sweet to the soul, and *health to the bones*."

All nations, ancient and modern, savage and civilized, have prized and used the "God-given sweet" whenever and as far as they could obtain it. The ancient Greeks prized it so much that we are told "they taught that health might be preserved and life prolonged by the external use of oil, and internal use of *honey*;" and in the decline of their glory, when the city of Athens was sacked by the Goths under Alaric (A.D. 396), it is stated that the once great city "was, at that time, less famous for its schools of philosophy than for its trade in *honey*."

In countries where the modern system of apiculture has been successfully practiced the consumption of honey has increased enormously of late years, and with great admitted benefit to the people. In the United States of America in particular, where, according to Professor Cook, the production of honey had already, in 1881, reached the amount of *one hundred thousand tons yearly*, and has since been rapidly increasing, the advantages, in a hygienic point of view, of the increased general use of honey are freely admitted. Dr. W. G. Phelps, writing in an American paper, says:—"Honey in its purity is a God-given sweet, and in its proper use is conducive to health and strength. Indulged in immoderately, and only then at rare intervals, it may, like many other excellent articles of food, provoke an attack of colic or indigestion. Used however frequently, and in connection with other food, it has a tendency to produce pure blood and give tone to the human system."

There are, no doubt, some people of exceptional constitutions who cannot with impunity eat even in moderation of the purest honey, but such cases are very rare. Referring to them, Dr. Phelps says:—"To the rare individual for whom the temperate use of honey may produce functional disorders, I would say, try heating the honey before using it, and see if all such trouble is not remedied." Perhaps, however, it would be wiser for such people to abstain altogether from the use of honey.

SECONDLY, AS TO ENJOYMENT.—It is unnecessary to say much about the ordinary use of honey as a condiment for the breakfast or tea-table. Every one knows, and has known from his childhood, the enticing appearance of the luscious sweet in its delicate comb—the aroma, and the delicious flavour, so different from most other sweets; and of late years people are becoming accustomed to appreciate also the pure honey, separated from its comb by means of the extractor, without any unappetising process of squeezing through cloths, and served either in its clear liquid state, or in a thick granulated condition,

which is now gradually gaining favour with honey-eaters. But in addition to this well-known use of honey it can be used with the greatest advantage in a hundred different ways in domestic cookery. Mr Newman, in his "Bees and Honey," remarks: "The use of honey instead of sugar for almost every kind of cooking is as pleasant for the palate as it is healthy for the stomach." And again: "In fact, honey may replace sugar as an ingredient in the cooking of almost any article of food, and at the same time greatly add to its relish." At the end of this pamphlet will be found a few of the recipes usually given for honey-cakes of different kinds.

Honey is an excellent medium for stewing peaches or fresh fruits for table use, or for fruit pies: and it is also strongly recommended for preserving fruits of all kinds. Dr Phelps, already quoted above, says:—"Used instead of sugar for preserving raspberries and other fruits, I know of nothing its equal, as to many such compounds it imparts a peculiarly delicious flavour."

And Mr Newman observes:—"Well purified honey has the quality of preserving, for a long time in a fresh state, anything that may be laid in it or mixed with it, and preventing its corrupting in a far superior manner to sugar; thus many species of fruit may be preserved by being laid in honey, and by this means will obtain a pleasant taste, and give to the stomach a healthy tone. One who has tried it will not use sugar for preserving fruit."

THIRDLY, AS TO ECONOMY.—This is the great *new feature* in the use of honey, which is not by any means as generally known as it ought to be. People who have not as yet had opportunities of conveniently procuring supplies of honey at the greatly reduced prices at which it can now be produced and sold, are likely to still think of it as the rare and expensive luxury it used to be, and it escapes their notice that it is now in their power, while gratifying a natural taste for this wholesome and agreeable article of consumption, to effect at the same time an actual saving in their household expenditure.

It is probable that the greater portion of all the honey now produced, whether as comb-honey, or in its extracted state, is consumed in the manner already alluded to, as an extra condiment at the breakfast or tea-table, but still it has not reached the tables of the hundredth part of those who could afford to use it in that way, as a cheap luxury, if it were as generally produced as it might easily be and brought within easy reach of all consumers at reasonable prices. But it is capable of being made not only a cheap luxury, but a really economical article of food for those to whom strict economy is a necessity. Under proper arrangements it can be placed on the table, as extracted honey, at less than half the price, weight for weight, of ordinary butter, and might, with decided advantage, be used as a partial substitute for that admittedly desirable article of consumption. Dr Phelps says on this point:—"Honey can really no longer be considered one of the mere luxuries of life. For the poor it has become a cheap and wholesome substitute for the too frequently impure butter. Millions of pounds are to-day consumed by rich and poor alike, where ten or fifteen years ago but a few thousands were used. The severe stab which the manufacturer of the miserable glucose has received is due to a great extent to this production of extracted honey. This being the pure article, and produced even at a profit for ten cents (five pence) per pound, has virtually gained the mastery in competition with the above 'falsely so-named cheap sweet.'"

COMB-HONEY.

There is undoubtedly a charm attaching to the appearance of good comb-honey which will cause it always to be preferred for table use by those who have an opportunity of obtaining it fresh and in good condition, and who can afford to pay the higher price which it must always command as compared with extracted honey. The modern system of beekeeping puts it in the power of the apiarist to obtain this sort of honey, stored by the bees with great regularity, in newly-built comb, contained in neat and convenient wooden frames, called "sections," of one or two pounds weight. It must be understood, however, that the preparation of honey to be put on the market in this form involves a great deal of extra care and trouble

to the apiarist, who cannot, as a rule, obtain much more than half as much in quantity from a given number of hives as he can if working for extracted honey, and who certainly cannot afford to sell it for less than about double the price of the latter. It must therefore be looked upon as a luxury to some extent, but certainly a very cheap one. At even double the present price of extracted honey it will cost scarcely half the price which is still willingly paid for it in England and in most of the European countries.

## Correspondence.

### CO-OPERATION AND TESTING HONEY.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—It was with feelings of great pleasure I read in a recent *Australasian* of a bee journal being devoted exclusively to bee culture having again started in New Zealand. I hastened to procure a copy, and eagerly perused its contents. Some few years ago a friend sent me *The New Zealand Bee Manual* (edited by yourself in 1882), and it was owing to that invaluable little work that I first gained an insight into beekeeping.

In the first issue of your journal I note some very sensible articles, one in particular from the pen of R. J. Kendall, viz., in which he says, "It is astonishing how many people go without information they would like to have, for fear of exposing their own ignorance." Again, "If we all chip in the thing will boom." Now, Mr. Editor, I am not afraid of exposing my ignorance, and furthermore shall be only too glad to be told when I am wrong, and secondly, will do my best to "chip in" with the rest and make the thing boom.

I note what you say about co-operation. It is co-operation that we want. No half-hearted measures, but the hearty endeavour of every beekeeper in the country to attain that end. If every sensible beekeeper, no matter whether he owns only half a dozen hives, or whether he owns a hundred or two, were to co-operate and send his product to one respectable dealer who resides in the centre of a beekeeping district (*and has the welfare of the honey industry at heart*), and trust him to grade and market his honey in the best manner, and if every beekeeper were to do his best to persuade his brother apiarists to join together and form associations in their several districts, and when they had got them started to *keep them going*, then we should have some chance of success.

Some will say, "Ah, it's very easy to give advice and air your opinions." Granted. Well, friend, if the advice is good, why not try and follow it? I heartily endorse every one of your sentiments Mr. Editor, and think you cannot write enough in favour of co-operation.

I read about that bugbear, "The Middle Man." Ah! if we could only shunt him. The joker who buys up any stuff; the two penny and threepenny per pound joker, a sort of rag-and-bone picker, who goes round to people who have a gin case or kerosene box of bees, who murder their bees in barbaric style, with sulphur and brown paper; who scoop the mixture of foul brood, dirty comb, dead bees and embryonic nymphs out of the box—"hives they call them"—and slop it into any piece of scrim, and, squeezing out the mass of pollution into some old tin, call it—honey. (God save the mark!) He gives them, according to the appearance of the stuff, 2d. for indifferent, and 3d. for good. This accumulation is taken to the store and allowed to settle, and then tinned up or sold to the public for genuine honey. Now, Mr. Editor, if we could only trace the makers up of these messes, and show them up, we should be doing good service to the trade.

A dry season like last year honey was practically very scarce. How much genuine honey was tinned up I wonder, and how much sugar syrup? I once had an opportunity of testing some so-called Californian honey, and the result was glucose. My test was as follows:—Take an ounce or so of the suspected honey; put it in a glass; add double the weight of water and well mix it; then add chloride of barium, say two tablespoonsful of the diluted mixture chl. barii. If the honey is pure it

will remain unclouded, if impure the liquid will soon be opaque, and on clearing, a white precipitate will fall to the bottom of the glass; this precipitate is sulphate of barium. I have tried the above and can vouch for it being a sure test for glucose. Now we want a test for cane sugar in honey. The microscope certainly will detect the honey crystals from sugar crystals, but I believe it requires a practised person to be able to find it out, and if any of your readers can tell me of a good test for sugar adulteration I shall be glad to hear of it.

LAMH DEARG ERIN.

[Thanks for "chipping in;" we want everyone interested in beekeeping to "chip in" with their mite, be it ever so small, and show that they are in earnest in promoting the welfare of the industry. If each and all assist with that end in view the thing must "boom." Co-operation between beekeepers in every sense of the term is the one thing needed before the honey industry can be satisfactorily established on a sound basis. This journal has been brought out at the present time with the view of bringing about as quickly as possible joint action among beekeepers, on every point affecting the general welfare of the industry, and the responsibility now rests on each individual apiarist of doing what he can to assist. We know of no test for cane sugar beyond that given in our late lecture, and published in our last issue. We shall be glad to hear from our correspondent again.—Ed.]

### REVERSIBLE FRAME DEVICE

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—A great many devices have been suggested for reversing the Langstroth frame, and, I suppose, every beekeeper has his own pet notion. I confess I have mine, and it is simplicity itself. It may be in use in other apiaries, but I am not aware of it, nor have I seen it published. I have taken the liberty of forwarding you a set by this mail, and should you think them worthy of a trial I shall be glad to hear the result through the *Australasian Bee Journal*. I use medium  $\frac{5}{8}$  (five-eighths) screws for fastening them, but in the workshop shingle nails clinched would do as well for new frames; a spare end bar with a mark in the centre is about the handiest gauge, and they should be firmly fastened.

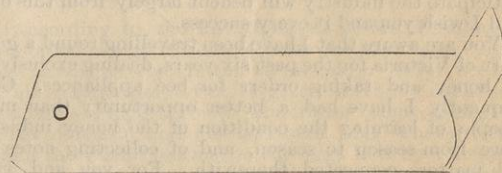
I tried the wire devices, but found the bees "bridged" considerably, owing to the frames swinging, but with mine it was not so, the frames hung as firm as with the original lugs, they stood the strain of the heaviest combs without any sign of giving way, and the propolis was an improvement rather than otherwise.

After trying it last season along with several others, and finding it immensely superior, I set to work, made a couple of gross, and fixed up all my frames. I have no doubt I shall be well rewarded this coming season, for many and great are the advantages of a reversible comb.

C. J. N.

Lake Taupo, September 7, 1887.

[We have to thank "C. J. N." for the set of "devices" which came to hand, and we shall have much pleasure in giving them a trial and reporting progress through the *Journal*.



The above illustration represents the device. It is made of a piece of galvanised strap iron three-quarter of an inch wide, and five inches long, barely half an inch of one end being turned or bent to form the lug. A quarter of an inch from the bottom end a one-eighth inch hole is punched to allow of the device being screwed to the centre of the end bar of frame. The centre of the hole is exactly four and a quarter inches from the underneath part of the lug. The device, of course, works round from the centre towards the top or lower bar. Though it may work all right in practice, it seems that

something is needed to steady the frame when reversed particularly when the upper part happens to be heavier than the lower. If so, a hole in the upper part of the strap corresponding to one in the end bar in which a short nail could be slipped would answer the purpose. The device is simple enough and inexpensive.—Ed.]

### EATING POISONOUS HONEY.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—Mr. W. C. Brown's article on honey as a medicine in the August number of your journal calls to my mind an incident that occurred to a brother of mine some years ago in India.

One afternoon in the middle of the summer I happened to go into his room where I found him fast asleep. This was unusual, and seeing that his face was much flushed, I felt alarmed and determined to arouse him. This after some difficulty I succeeded in doing. He complained of giddiness, and could hardly stand. On inquiry he told me he had eaten some honey-comb which he had found in the garden; shortly afterwards he had felt drowsy, and as the sensation began to get overpowering, he had thrown himself on his bed and had fallen asleep.

On looking at his watch he declared he had been asleep nearly two hours. We concluded the honey must have been poisonous, a thing not at all uncommon in the jungle districts of India. Still we knew there was no jungle within miles of us, and we were wondering where the bees could have got the poison from when it flashed across our minds that perhaps a large bed of common red poppies just then in full bloom in the garden might be at the bottom of it all. The date-bush where we found the bees was not two hundred yards from this bed, and whether right or wrong we forthwith passed judgment on the flowers.

Now I wish to ask two questions in connection with the above. Firstly, do bees gather nectar from poppies? Secondly, if so, does this nectar possess any of the qualities of opium?

Since writing the above it has occurred to me that perhaps the pollen of the poppies might have had something to do with it.

Yours, etc.,

C B. MORRIS.

Dunedin, August 8.

[We have never had the opportunity of observing whether bees gather nectar from poppies or not, though we think it likely they do; nor do we know whether such nectar, if any, would possess the active properties of opium. Perhaps some of our readers may know.—Ed.]

### BEEKEEPING NOTES FROM VICTORIA.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—I am very much pleased with the appearance of your journal and its reading matter. There can be only one opinion about its need. Remembering the good your former journal did for beekeeping in Australasia, I anticipate the industry will benefit largely from this one, and I wish you and it every success.

You are aware that I have been travelling round a good part of Victoria for the past six years, dealing exclusively in honey and taking orders for bee appliances. Consequently I have had a better opportunity than most people of learning the condition of the honey industry here from season to season, and of collecting notes on all matters connected therewith. For you and your readers' information I shall give you a few items of news, believing that by so doing I may be helping a little for the general good. The items, as they occur to me may appear somewhat disconnected when jotted down, but probably will be none the worse for that.

The honey extractor is not in great demand here yet, for the majority of beekeepers in the country districts through which I travel give their attention to raising comb-honey for which there is a better demand than for extracted. The bulk of our honey is gathered, as you are no doubt aware, from the gum trees (*Eucalypti*), and as most of it is very good and does not granulate like

some other honeys, notably white clover, we have not the same difficulty in first teaching consumers that honey *does* granulate, the same as you have, before you can dispose of your clover honey. I have known gum honey to granulate after being kept for over two years. December, January, and February are the months in which the bulk of the gum honeys are gathered in Victoria, and they are very thick when gathered.

We feel the need of co-operation among beekeepers here very badly, and in nothing is joint action of more importance, not only in Victoria but in all the colonies, than in the working out and establishing some system of properly grading or classifying, tinning, and marketing honey. Until something is done to place our honey on the markets in a different manner to that in vogue at present, I think it is a fallacy to suppose the demand will increase. By co-operating we could take steps to expose the adulteration of honey now being carried on here and elsewhere in the colonies. You will no doubt be surprised when I tell you that glucose is being manufactured here and sold as honey, but such is the case. I have tried a very simple and reliable test to detect the spurious from genuine honey, one that can be readily applied at a minute's notice, viz., take about half an ounce of the suspected honey and the same quantity of genuine honey, put them into separate tea-cups and fill up with hot or boiling water, stir till dissolved and then see if there is any difference in smell and taste of the two liquids. I will guarantee that if one be made up of glucose you will soon detect it by this method. I got two chemists to try this plan, after they had been testing with drugs, and they both agreed that as a simple test it was a remarkably good one.

I have had several ladies complain to me about the ill effects they experienced after eating the so called honey. One person gave forty pounds of such honey away out of a parcel he bought after finding the members of his family were made ill by eating it. Quantities of this spurious honey are put up in 60lb. tins and sent to the auction rooms, and as the glucose costs the manufacturers very little, a low price—say twopence per pound—will pay them very well, and the genuine honey producer is the sufferer. So long as no action is taken by beekeepers to put a stop to such fraud, so long will it be perpetrated. Dairymen suffered a big loss some time back when butterine was being sold as butter, but owing to taking action against the fraud, there is now a fine of £50 inflicted upon any person selling the same, and this has put a stop to its sale.

In hawking I get for the best comb-honey 1s. to 1s. 6d. per pound, and for liquid honey from 6d. to 8d. retail. I could not of course get such prices but by travelling from house to house with my wares. In the season of 1884-85 I got rid of a good part of eleven tons, and that is not a small quantity to pass through one man's hands in a retail way. Let me conclude by impressing upon the minds of all your readers the necessity of co-operation, and as a step in that direction the formation of beekeepers' associations where practicable. Give the *Journal* your hearty support and so assist the Editor in the good work he has undertaken for the benefit of all of us.—Yours, etc.,

ZIBER SUMNER.

Melbourne, September, 1887.

[We trust you will furnish us with notes from time to time, and we shall be glad if you will favour us with a sample of the glucosed honey you speak of, also all the particulars connected with the manufacture and sales of it you can, and we will see what can be done to put a stop to selling it as honey.—Ed.]

### A TRAVELLING LECTURER.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—One of the principal drawbacks to advanced bee culture is the want of united effort on the part of those interested to push the industry ahead. A beekeepers' association has been formed in Melbourne, and its monthly meetings are kept up, but from this the beekeepers in the more immediate neighbourhood only are benefited, and something is needed to arouse the latent energies of those

residing in the out-districts. I am of opinion that in this respect the *Bee Journal* will be effectual. If we can find out in every separate district one or two energetic men to take the lead we shall eventually succeed. I took a trip to Ballarat last spring and got the beekeepers together at the residence of Mr. D. Glass, and as there were only a few people present, I proposed that every beekeeper should be at liberty that evening to put questions to me on different points in bee culture. This suggestion was adopted, and I answered all the questions put to me to the satisfaction of every one present. Now I was thinking at meetings like this associations might be formed and members enrolled. The energies of people will get more aroused when a stranger visits a place, therefore I hold that an experienced beekeeper should be employed to take a trip through the colonies, deliver lectures, form associations, and take down names of those who are willing to become subscribers for the journal. If a plan similar to this were adopted I think there is reason to believe it would progress. If this proposal meets with your approval, please give it publicity. There is just one question, however, in regard to travelling expenses for a lecturer or agent, how those might be met? If the people in one or two districts could be got to invite a lecturer, promising to pay his expenses, and if the meetings proved to be a success, and a report furnished to the *Leader* or this journal, other districts might follow afterwards. Will you kindly think about these suggestions.

I am, yours, etc.,

H. NAVEAU.

Victoria, August, 1887.

[The scheme you suggest, that is, a travelling lecturer, would not be practicable unless he was prepared to do the work at a great loss to himself. Beekeepers' Associations in the centres of beekeeping districts would accomplish all the good that a lecturer could do, and the best way to start these that we know, is, for the leading beekeepers to take the initiatory steps and so induce others to take a part in the movement.—Ed.]

### TREATMENT OF FOUL-BROOD.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—A singular coincidence occurred in the matter of foul-brood as mentioned by you in the second number of the *Journal*. In the *Melbourne Leader* I read a few weeks ago that Mr. T. Lloyd Hood, of Hobart, had a serious loss of bees through foul-brood, and since I had also lost some with the same complaint, yet had been successful in curing others, I thought I would write a letter to the said gentleman, and give him some advice in regard to the treatment of the disease, and I was just writing the letter when the *Journals* arrived.

In the season of 1885 I had one hive bad with foul-brood, the first case with me in sixteen years. I tried Cheshire's method, and succeeded perfectly in curing those I treated, and did not get another hive affected that season. But in 1886 my one hive was bad again. I had just then received information concerning the new remedy from Germany, viz., chloride of mercury (*corrosive sublimate*). I tried this, and was successful in some measure, and would have been perhaps more so had I known at that time what I know now. Of course I knew that it was proved by German scientists that foul-brood was a fungoid growth, and that corrosive sublimate would totally destroy the fungi, but this did not satisfy me. I thought the matter over carefully and read every book I could get hold of upon the subject, and in Mr. Quinby's *New Beekeeping* I found that this gentleman believed that the first cause of the disease is parasites which feed upon the larvæ, then life becomes extinct, and the fungi begin to grow; therefore I arrived at the conclusion that when I cured a colony with absolute phenol it was not the drug that did the most good but changing the bees into clean hives, which is a part of the operation recommended. Unscrupulous cleanliness must be the order of the day; and if the hives were as clean inside as outside, and, as Mr. Root well observes, painted too, there would be very little chance, if any, of parasites harbouring in crevices. Therefore, I hold that we

should as often as possible change our bees into clean hives, and have the old ones thoroughly scraped and disinfected. As a disinfectant and destroyer of parasites I use now the corrosive sublimate, and give it the preference to carbolic acid, because it leaves no smell behind. After the disease is arrested it is very requisite to feed the bees with strengthening food which contains lime, salt, carbon, and albumen; and if the colony is weak it is well to build it up with brood from a healthy one. But as the disease is contagious, one may say, What then? To this I would reply, that if our hives are clean it will not likely become at once so bad as when they are not. Further, I have found the spare brood-frames which have been disinfected before storing away in autumn have remained good during winter, whilst others which have been neglected have become a putrid mass, unfit for further use. Of course this applies to frames from foul-broody hives sprayed with corrosive sublimate lotion, one part to 2,000. I do not think it would make much difference if it was used a little stronger, as it is not in the food. I use one grain to one quart of water. I may further state that there is not nearly so much foul-brood in Germany now as there was in days gone by. There are several reasons to account for it: one is that people are liable to a penalty if they are careless in this respect, and on that account dirty hives are regularly disinfected with a lotion of carbolic acid. The reason why the disease was not easily overcome before was that the first cause was not known. For many years fire was counted the only remedy, but this being rather an expensive one, others have been tried. Many beekeepers state that they still cure it with salicylic acid. But to my mind this cannot be correct, for as the disease is not in the bee but in the undeveloped brood, it must be either the parasites or the fungi, or both together, which start the mischief. If the fungi were the primary cause I should think all the brood-cells in a hive would be affected alike. But such is not the case; at first only one cell here and there. This leads me to think that parasites are at work. If at the first stages these cells are opened and the lotion applied, the mucus dries up, and the bees soon remove it. If left too long, however, it is difficult to apply the corrosive sublimate. For strengthening food, after a colony has been weakened, candy which contains either rye-meal or flour, and the white of eggs, is given to the bees. In regard to the white of eggs as food, I should also like to make a few remarks. The Germans dry the eggs on a stove and then reduce them to powder, and as such stir it into the candy before granulation takes place. I pondered much about this in my mind. I thought if eggs are good for bees why not give them some in the natural state, and to solve the problem how this will answer I have to-day been beating up an egg which I put on bits of empty comb and gave to several of my colonies and they seemed to be delighted with it. Why not? The first food young ducklings and canaries require is an egg, and why should it not be the very best food for bees? I shall let you know in my next how my bees will do on their new kind of tucker.

H. NAVEAU.

August 6th, 1887.

[According to the investigations of Mr. F. Cheshire foul-brood is a germ disease, alike destructive to mature bees as well as when in the larval stage. A full account of his recent discoveries is given in the *Australasian Bee Manual* together with illustrations representing the juices of healthy and diseased bees. Mr. Cheshire even found the bacilli (germs) in the eggs laid by a diseased queen, so that it seems clear that the disease must be attacked inwardly as well outwardly.—Ed.]

### PARKER'S COMB LEVER.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—The following may be a wrinkle worth knowing even to some of the old colonials:—To make the Parker comb lever self-damping, carefully take off the stop, and wrap a piece of flannel round it several times; now replace

and wet the flannel well with a mixture of honey and water. Every time a sheet of foundation is fastened, the under edge of the lever passes over the padded stop, and is moistened ready for the next. You will rattle off section boxes in less than a quarter of the time taken by the old sloppy method. One damping is sufficient for a hundred boxes. Try it.

C. J. N.

Lake Taupo, September 7, 1887.

[A very good idea. In our comb lever, we made a V-shaped trough just at the back of the stop, lined it with tin, and fixed a bit of sponge in it which was kept slightly moist with honey. Each time the lever was drawn back the end of it came in contact with the sponge.—ED.]

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## Reports.

### WAIPAWA.

FOUL brood is prevalent in this district. I have managed, however, with great care, to keep a few colonies, and have generally done pretty well with them. My average of extracted honey last season was 80lbs. per hive, and the most from one colony was 150lbs.

I took your first bee journal and the *Farmer*, and I hope to be a regular subscriber to the *Australasian Bee Journal*.—I am, etc.,

H. T. A.

[Many thanks. A very good average indeed for a season like the last.—ED.]

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## Queries and Replies.

QUERY.—Does the pain arising from a bee's sting depend on the temper of the bee, time inflicted (night or day), or on the condition or temperament of the stung, or person stung?—CORBERRY.

REPLY.—The after effects of a sting depend in a very great measure on the condition of the blood of the person stung at the time the sting is inflicted. If the blood is in a very poor state, and already contains poisonous matter, the effect of a sting may be very serious, and result in death, but under the same circumstances the scratch of a pin would probably have the same effect. People of a nervous temperament usually suffer more than others, but an ordinary healthy person's flesh will swell around the wound for a while until his system becomes inured to the sting poison—which does not take long—when beyond a little smarting pain for a couple of seconds after a sting, no further inconvenience is experienced. Certain parts of the body are more susceptible to the pain arising from a sting than others, for instance, the cartilage of the nose, the temples, the soft flesh at the base of and between the fingers, the palms of the hands, the skull, and the armpits are very tender places. The only difference in the pain that can arise connected with the action of the bee itself is when it strikes you during swift flight. The sting then seems to be forced to its full depth, and the whole contents of the poison bag emptied in the wound instantly.

QUERY.—Kindly inform us if the following fact has a precedent:—On June 14th of the present year we had a colony of Italian bees throw off a swarm which went away into the bush, and on August 1st last the said swarm came back to their old hive, seeming to have had enough of the bush.—PALMER AND SON, Cooktown, North Queensland, August 8, 1887.

REPLY.—Such a circumstance we believe to be very unusual, though ordinarily it would be very difficult to say, when a stray swarm came to an apiary, whether any of the bees or queen had previously been located in it or not. We presume yours were the only Italian bees in the district, and the said swarm was the first that got away, otherwise you could not be certain that it had any connection with the one that came to your apiary. From June 14th to August 1st is seven weeks, which would be ample time in an average honey season for a swarm to build a nest of comb, a good deal of brood to

emerge, and the conditions favourable for throwing off another swarm. Consequently you will have the old queen back again with a large stock of young bees, and a colony is located in the bush presided over by one of her daughters.

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## TO CORRESPONDENTS.

*We have been compelled to hold over letters from several correspondents and the second part of "Beekeeping for Beginners," which has been in type for some time past, till our next issue.*

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## Special Notices.

As the JOURNAL will go to press about the 23rd of each month, correspondence for publication in the next issue should reach the Editor not later than the 15th.

CORRESPONDENTS will oblige by writing on one side of the sheet only anything sent for publication, and apart from business communications.

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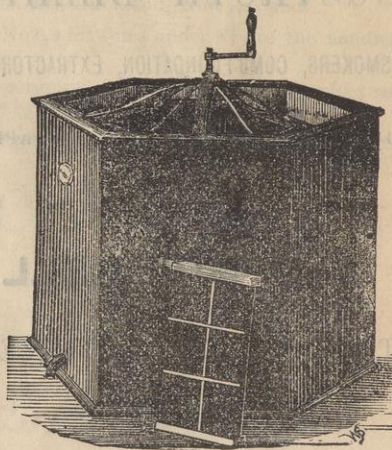
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