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# THE NEW ZEALAND AND AUSTRALIAN BEE JOURNAL.

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**CALENDAR—MARCH.**

In ordinary seasons the main honey harvest closes about the first or second week in Feb., and very little nectar is gathered until the autumn rains set in, usually near the latter part of the present month. We might almost say that the order of things has this season been reversed, for in most districts the bulk of the honey obtained was not secured till immediately before and after the season should have closed. The result of the extraordinary weather we had in the early and middle part of the season has had the effect of prolonging it beyond its usual limits, as we had anticipated. Bees have done fairly well during the past month, and should the weather prove favourable, we may expect them to gather a considerable amount of honey for the next two or three weeks. In districts where there is a variety of pasturage, including the native bush, we have no doubt that sufficient could be gathered from the present time to more than give the bees a good winter supply; but, in places where clover is the main dependence, bee-keepers should now make sure of having enough honey on hand for winter food. The amount required for this purpose will depend upon the length of time between the seasons in which no honey can be gathered, and this varies in different districts; we have found that from 25lbs. to 35lbs. is the amount usually consumed by ordinary strong colonies, but still it is safe to have a pound or two more in reserve.

As soon as honey is getting scarce, robbing should be carefully guarded against by the methods already given. No pieces of comb containing honey should be left about where bees have access to them, and all honey rooms or receptacles should be kept closed against them. Those who make their own hives, &c., should now get in a stock of timber for next season's use, and stack it in such a manner that it may get thoroughly seasoned and ready for making up during the winter. This is a very important matter, for hives, frames, &c., made of unseasoned timber will always be a source of annoyance to the bee-keeper—by either shrinking, twisting, or the joints becoming loose. Where a large number of hives are kept especially, it is all important that frames and everything should fit

perfectly, even after years of use; but this will not be the case if unseasoned timber has been used; for, although they may be made to do so at first, after they have been in use a short time it will be found that either the frames are too short, the hive too shallow, or they are not interchangeable with others. Timber to be used for hives, if cut to the order of the apiarist, should not be less than eleven inches wide, to allow for shrinking, and then be reduced to the proper size after seasoning.

### MARKETING HONEY.

NEXT in importance to the production of honey is the style and manner of marketing it. There is nothing that will give the bee-keeper more solid satisfaction, after having raised a crop of honey, than being able to dispose of it to the best advantage. To do this, care and attention is required in preparing it for market; more especially is this the case in the Australasian Colonies, where, generally speaking, markets have to be created for local honey. Formerly the locally-produced article—owing to the manner in which it was secured—was usually in such a filthy state, and so unlike pure honey in flavour and appearance, that it had a strong tendency to destroy what demand there was, and most people came to look upon honey as something not fit to eat, although in its pure state it is one of the most delicious and health-giving articles of food it is possible to obtain. Happily the time has now come when people have the opportunity to obtain pure honey and compare it with the stuff formerly sold under that name; and as we endeavoured to show in our last issue, with that opportunity has come a very large and increasing demand. The old fashion bee-keeper, *i.e.*, he who does not want any of the new-fangled notions, such as movable comb hives, comb-foundation, &c., &c., and who knows enough already (?) without reading bee books or journals, will soon have to stand aside and let his more advanced neighbour come to the front, for the time is rapidly approaching when people of this class will find their produce unsaleable. We know of two or three large apiaries owned by persons of this description, who take every opportunity to ridicule beginners who have adopted at the outset all the modern apiarian appliances. These people can, and will, only be reached through their pockets; they must either keep up with the times or go to the wall. On the contrary, the progressive apiarist will take advantage of every occasion to increase his knowledge in all departments of his business, and so reap the best results from his outlay and labour.

**EXTRACTED HONEY.**—In preparing this kind for market, whether it is capped or not before being extracted, it should always stand in open vessels for some time, to allow all particles of wax and foreign matter to rise to the surface, when it may either be skimmed or the clear honey drawn off from the bottom. Uncapped honey will, of course, require to be exposed longer than capped honey in order to ripen. The longer it is exposed in a warm, dry temperature, the thicker it becomes, till at last it will scarcely run; now, as there is no necessity to let it be exposed so long as this, the bee-keeper would necessarily require some test to

ascertain when it is sufficiently ripe to prevent fermentation. The only way we are aware of to do this is to find out its specific gravity, and compare it with some known standard. There are several instruments which may be used for this purpose, but one we have seen mentioned as used for honey is Baum's hydrometer; this, when immersed, will show on a scale the specific gravity of any liquid. The specific gravity for ripe honey—recognised as a standard in England—is 1.261; any honey showing a greater density will be thicker, and we suppose better, but the specific gravity should not be less than the figures given. Now, with an instrument and a recognised standard, the testing of honey becomes a very simple matter indeed, and one that no bee-keeper of any pretensions should neglect.

The next consideration after preparing the honey is to place it upon the market. It will greatly depend upon the situation and means of the bee-keeper who has a large crop of honey to market, as to the best method to adopt for disposing of it. There are two ways open to him, *i.e.*, either to sell it in bulk to dealers, or to tin it at the apiary and dispose of it afterwards through agents or direct to the merchant. By the former plan it is got rid of at once, and the bee-keeper can get immediate return; but by the latter method a much better price can be obtained. Although we would prefer that the honey should be tinned before leaving the apiary; still, it may be a consideration to the bee-keeper to get returns as early as possible, and in the present unsettled state of the local honey markets, we believe in most cases it would be advisable to sell in bulk; but to those who can afford to lie out of the money for a while, or where the crop is not very large, we would say tin your own honey. One advantage to be gained by this is in not allowing any opportunity for manipulation after it leaves the apiary; we do not mean to say that it is likely to be done here, but we do know that dealers in bulk honey in America have adulterated it to a very large extent before tinning, and so been the means of doing a very great deal of injury to the honey trade.

Those who intend to tin their honey will find it the cheaper way—especially if the tins have to be procured from a distance—to have them sent in the flat, that is, in pieces already cut, and solder them at the apiary. The bodies of the tins could be rolled but not soldered, and still pack one in the other pretty snug, so that nothing but soldering would require to be done on arrival. This could either be done by the apiarist himself, or a tinsmith would do it by contract. The tank from which the honey is to be tinned must, of course, be furnished with a tap, and the best one we know of for the purpose is what is termed a measuring faucet. This has a dial and pointer attached to it, and can be set to run out each time the quantity required in each tin, thus saving all trouble of weighing or measuring.

(To be continued.)

WE wish to call the attention of the editor of the *British Bee Journal*, on behalf of subscribers in Australasia, to the necessity of his giving the English market quotations for honey in each month's issue. At present we have no reliable source from which to obtain them, and naturally look to a representative journal for them.

**ARRIVAL OF HUMBLE BEES AT MATAMATA.**

By the s.s. 'Doric,' which arrived in Auckland on the 4th inst., there came a consignment of humble bees shipped by the firm of Neighbour and Sons, Regent-street, London, to the order of J. C. Firth, Esq. These bees, we believe, were procured in Scotland, and were shipped on or about the 13th of December, 1883, reaching Matamata on the 7th of February, 1884. Out of the 100 ordered by Mr Firth, 27 only have as yet been sent. These were packed in various ways in order to test different methods for future guidance. Twenty-four were placed in a shallow tray, which was divided into 24 compartments, each compartment (4in. square) containing one bee, some damp earth and moss, and a little loaf sugar. Over the tray some wire cloth had been tacked, and the tray placed in a double-walled box, the space between the walls being filled with sawdust. Two more bees were placed in earthenware jars amidst damp earth and moss; the jars, although not hermetically sealed, were pretty well air-tight. The other had been put in a small box containing moss, &c. When received on board the vessel at London the packages were at once placed in the cool-room, under charge of one of the officers, where they remained until their arrival in Auckland. With regard to the packing, everything had been done to prevent as far as possible any fluctuation of the temperature of the atmosphere immediately surrounding the bees. Notwithstanding all the precautions that had been taken to ensure their safe arrival, only two out of the twenty-seven were found to be alive when we unpacked them. These, we are glad to say, were in splendid condition, and could fly quite strong a few minutes after they were unpacked. We fed them with a little honey and water, and gave them a fly in our office until next day to recruit their strength, when we liberated them. One we let fly, and the other we placed in a small box in which we put a little earth and moss, and also some honey. This we buried in a sod-bank after boring a hole in the box, leaving an opening in the bank for the exit of the bee. We were advised to try this latter plan by a Scottish friend of ours, who, when a boy, made lots of similar nests for these bees, with which they appeared to be perfectly satisfied, as they continued to occupy them.

Great credit is due to Mr Firth for his perseverance in trying to introduce humble bees into this country, and we are sorry that he has not been rewarded with a greater amount of success; still, if no harm should befall the two now liberated, he will have the pleasure of seeing a large increase of these insects in the course of a few years.

The principal cause of the death of so many of the bees we believe to have been due to the earth and moss in which they were placed being too wet, as everything, including the bees, were quite mouldy when we unpacked the case. The moss in which the live bees were found, although moist, was not nearly so damp as the rest, and the compartments were in a part of the box where there was the most ventilation. The contents of the two jars, including the bees, were (if possible) more mouldy than the others. There was no mould about the small box, as this appeared to have been packed with dry material, and the bee had a fresh appearance as though it had been dead but a very short time. We have been thus particular in giving all details of the packing, &c., so that others, who may

contemplate sending for these bees, can take advantage of the experience gained; for we believe that as soon as the best conditions for packing them are known there will not be the slightest difficulty in their reaching New Zealand safely.

Having now gained some experience from this and the former shipment, we believe that the best method for packing would be to place the bees in separate compartments similar to the tray described, surrounded with slightly-dampened moss and covered with wire cloth; the tray to be placed in a double case, the space between the inner and outer case (say 1½ inches) to be packed with sawdust and ventilated just sufficient to prevent the damp moss causing mould; the ventilating holes to be arranged in such a way as to exclude all light from the bees. Probably it would be better to procure the bees from America if possible, as they would reach here in a much shorter time than from England.

We trust that the two bees liberated may live and propagate. Should they become established, there will be a number of queens reared before winter, and these in turn will form nests and breed next summer.

We noticed, in a late issue of the *British Bee Journal*, an advertisement calling for 200 humble bees for New Zealand. We are not aware who they were for, but if sent, we shall be glad to hear in what condition they arrived.

**GEOGRAPHICAL DISTRIBUTION OF THE HONEY BEE.**

BY T. J. M.

*Continued.*

WITH reference to these countries of the "new world" (North and South America and Australia), Dr. Gerstaecker asserts that in none of them were any species of the genus *apis* to be found until they had been imported from Europe. In North America, where the German bee spread itself with such enormous rapidity when once introduced, some American writers—amongst the rest Von Belknap—in 1792 sought to prove that the insect was a native of that continent; but this has been satisfactorily answered, especially by the American writers, Jefferson and Benj. Smith Barton. The latter, writing in 1793, pointed out the two facts: first, that John Elliot, when translating the Bible into the language of the aborigines, could find no expression in that tongue for either wax or honey; and, secondly, that since the colonization by Europeans the natives always called the bee "the white man's fly." It appears that the German, or black bee, was first imported into Florida in 1763, whence stocks were sent to Kentucky in 1780, and thence to New York in 1793.\* In every locality where stocks were transplanted, a rapid increase took place, and a spontaneous spreading of the bees in a wild state in advance of the stream of colonization towards the west. In 1797 the bee showed itself for the first time west of the Mississippi, from which

\* Dr. J. P. H. Brown, an eminent American apiculturist, in a paper read by him at the National Convention in 1881, says: "The black or German bee was introduced, it is believed, into Pennsylvania from Germany about the year 1627." It certainly appears very probable that Wm. Penn's followers would have endeavoured to introduce bees from England if not from Germany as soon as they began themselves to settle down in their new homes. Nevertheless it is very likely that in the severe winter climate of Pennsylvania and New York the bees would not spontaneously wander far from the human settlements, and that it was only when they got fairly established in the favourable climate of Florida (mean winter temperature above 50 degrees), as mentioned by Dr. Gerstaecker, that they began to spread themselves westwards in advance of civilization.

point it spread, according to Bradbury, within 14 years to the upper Missouri, 600 miles to the west. The results in the islands of Cuba, where the bee was introduced from Florida in 1764, were very remarkable. Already in 1779 the island exported, accorded to A. Von Humboldt, 81,000 lbs, and in 1803, 1,281,000 lbs. of bees-wax, and in the thirtieth year of the present century the export had increased, according to Ramon de la Sagra, to two million pounds wax and two and a half million pounds of honey.

Into Mexico and Central America generally the bee appears to have been imported at an early period by the Spaniards, and probably spread itself thence to the districts of Venezuela, Peru, and Chili in South America. Direct importation of bees from Europe took place also, but at much later periods, at various places in South America. According to Rheinhardt, the first introduction into Brazil took place in 1845 from Portugal direct, and within five years they were being reared in most parts of Central Brazil, and in 1849 were transported in stocks from Rio Janeiro as far as Rio Grande del Sul. In 1853 a German, Hanneman, imported two stocks of bees direct from Germany to Rio Grande. These two stocks increased in the first year to twenty-eight, and twenty-three of these, which were retained at that place, increased in the second year (between 12th September and 25th March) to 377 swarms.

To Buenos Ayres some stocks are said to have been brought from Chili in 1852; according to Münster, however, a direct importation from Europe to Buenos Ayres took place first in 1858. An experienced farmer and apiarist, Ed. Olivera, living near Buenos Ayres, states that in that year a certain Vinc. Cesares, conveyed several stocks of the northern or German bee in a sailing vessel from the Spanish province of Biscay to Buenos Ayres, and succeeded so well with them that already in the year 1863 there were numerous apiaries in the neighbourhood working with bees derived from that source, one of them with the large number of 400 hives.

In all the cases above mentioned, the bees introduced were of the black or German race, and Dr. Gerstaecker, having examined specimens of the bees then working in Pennsylvania, Mexico, Cuba, and Porto Rico, pronounces them to have retained all their characteristics unaltered. Since the Italian variety, however, came into such favour in Germany, various importations of them into the States have taken place; already, in the year 1855, two stocks of Italian bees were sent to America by Dzierzon, and in 1859 J. Mahan, of Philadelphia, successfully transported five stocks out of Thüringen. In Australia the Italian bee (according to Dr. G.) took the lead of the German one, and was the first to collect honey in that quarter of the globe (?). In September, 1862, four stocks of the *Apis Ligustria* were shipped in England by J. W. Woodbury, and after a voyage of 79 days, arrived safely in Australia. Three of these stocks were kept together after their arrival, and one of them soon bred both queens and drones, so that the race could be extended.

So far I have merely given a condensed translation of the principal points in Dr. Gerstaecker's paper. It may, I think, be taken to be a tolerably accurate statement of all that was known upon the subject treated of up to the period of which it was written. The author,

it is to be remembered, wrote as a naturalist, not as a practical apiarist. The results of his investigations in the former capacity are likely to be quite reliable. On the question of the distribution of the bee there is evidently a deficiency of information as regards India and the East Indian islands; and concerning the introduction of the insect into new countries, it is not surprising that twenty years ago there should have been a want of clear information about what was then taking place, or had shortly before occurred in Australia and New Zealand. I shall now endeavour to fill up some of these gaps, at least partially, by means of information obtained from other sources.

(To be continued).

## APICULTURE IN QUEENSLAND.

BY. C. FULLWOOD.

I HAVE been much interested with the thoughtful and suggestive papers by T.J.M., and from my experience in a semi-tropical climate, as well as some little experience in England, endorse the ideas he gives us. It is exactly the difficulty we have to contend with, who do not require increase of stocks, but desire rather to secure a good return of surplus honey from a limited number, how to keep down the swarming fever, yet have the stocks strong enough in bees to ensure their storing a sufficient quantity of honey to meet their own and their master's requirements.

I do not think there is any less inclination on the part of the bees here to lay up stores, but there certainly is greater inclination to swarm on the slightest pretext.

The present season has been so far somewhat exceptional. There has been a good ingathering of honey, sheets of foundation have been built out and filled with it in a short time. Queens have been thus confined to comparatively small areas, hence the stocks have not been, as a rule, overflowing with bees, but the rather with honey; the extractor has had to be kept going pretty freely. This continued till the middle of December, when the incoming became less. A larger amount is being gathered now, but there is not at any time that tremendous flow that we read of in some parts of the world, that sends the bees into the sections and supers with a rush that gladdens the bee-keeper's heart.

The early part of the season was exceptionally cold, dry and windy, with an occasional very hot day. During the summer there has been a remarkable absence of thunder storms and rain; we have not had any for months; all round us is parched, hot, and dry. We have had quite a number of excessively hot days, with occasionally a day or two exceptionally cold; high winds have prevailed, more or less. I attribute the manifest indisposition to swarm this season to these facts: drought, extreme changes in the state of the atmosphere, the high winds, and the flow of honey early in the season.

I observed this season that a few of my stocks dwindled considerably—a thing I have never noticed previously in Queensland. My attention was first called to it by a person who has hybrids and blacks informing me his bees were dying off from no perceptible cause whatever. I attempted to discover the cause of such and the small amount of brood-rearing,



but was unable to do so. My imported queens, once they got a start, have done as well as any.

I have had considerable difficulty in getting queens purely mated, more so than before, and have lost a larger number of young queens than at any previous season; they appear to have been lost away from home.

[Are your nucleus or fertilizing hives a sufficient distance apart to prevent the young queens mistaking them when returning from their wedding trip? as we have always found a greater percentage of losses amongst hives near to each other. Where it is convenient, we believe it is better to have the hives twenty or thirty feet apart. Have you any enemies amongst the feathered tribe?—Ed.]

### THE HORTICULTURAL SHOW AND BEES AND HONEY.

L. J. BAGNALL.

THE committee of the above Show have intimated their intention to afford an opportunity for showing honey, hives, bees, and such other articles as may be of interest in connection with bee-culture. I am sorry, however, that steps were not taken in sufficient time to have had the list of premiums published with their first list. By this means intending exhibitors would have had more time to prepare. The committee, probably, did not consider that much time was necessary, and intend to issue a supplementary list in which the premiums for bee matters will be announced. I hope bee-keepers will make an effort to have a good display. It is as necessary to educate the public into using honey as it is to produce it, and few ways are so effectual in bringing any article under the notice of the public as shows.

I should like to see the various modes of preparing both comb and extracted honey for market well represented. It is in this department that much has to be learned; it is here that useful, practical knowledge is wanted. What we want to know is how we can best reach the consumer? In many articles of general consumption there is a wide margin between the price received by the producer and that paid by the consumer. This is true of honey to an extent which few are aware of. I notice in the quotations that the producer in some cases gets 4d for what the consumer pays 10d to 1s. The necessity to bring these amounts nearer to each other requires no argument. There is no reason that I can see why the consumer should not get his honey very much cheaper than these figures show, if the producer can get no more for it. The less the consumer pays the more he will be induced to buy.

I do not know whether there will be any convenience to explain and show the manipulating of bees, as is done at American shows. I should like to see something done in this direction, and would not be unwilling to take part in this part of the work. In a previous communication I referred to the suitability of the occasion for starting a bee-keepers' association. I hope this idea will not be lost sight of, and that as many will attend at the Show on the 21st and 22nd March as possible.

Hape Apiary, Thames, 13th Feb., 1884.

[We are also very sorry that so short a notice has been given to bee-keepers of the intention of the

Society to include in their schedule a class for bee exhibits, for we are quite certain that had they known this a month or six weeks earlier they would have done their utmost to have made their class the most interesting to the general public of any in the Show. As it is, sufficient time has not been given for the bee-keepers to do justice to themselves, consequently a great number will not exhibit that otherwise would have been glad to have done so. We regret that the secretary of the Society did not answer our letter of enquiry concerning their Autumn Show sent him last November; for had he informed us at that time of their intention we would at once have called the attention of bee-keepers to the same through the JOURNAL, and thus given them plenty of time to prepare. However, we are extremely glad that—though the beginning be small—a commencement has been made, and we believe at the next Autumn Show of the Society—if the arrangements are properly carried out—the exhibits in this class will astonish everybody not immediately connected with the bee industry. A number of special prizes will be given, and we hope that as many exhibits as possible will be sent, also that as many bee-keepers will be present as can make it convenient, and the opportunity embraced to form a bee-keepers' association.—Ed.]

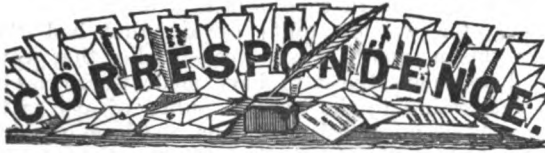
### LIGURIAN BEES.

WE notice in a late issue of the *Adelaide Express and Telegraph* that the Chamber of Manufactures of the above city have procured a hive of Ligurian bees and handed them over to the care of a subscriber of ours, Mr A. E. Bonney, "an accomplished and experienced apiarian." Mr Bonney is a gentleman well up in modern apiculture, and we feel sure the bees could not have been placed in better hands. We are very glad to observe that the yellow race of bees are gradually getting distributed throughout all parts of the Australasian Colonies, as we take this to be a sure sign of the progress of bee-culture in this part of the world.

Messrs. Bagnall Bros. & Co. inform us that their 1883-84 circular and price lists have been all disposed of. They also announce in their advertisement that their new season's list is in course of preparation. It will be much larger than the old one, and will contain useful information in making up hives and other matters of interest to bee-keepers and beginners. They have devoted great attention to the manufacture of hives, etc., and inform us that their next season's supplies will, if possible, be better and cheaper than heretofore.

The Baron of Berlepsch notes it as a singular fact, that young queens just beginning to lay, and old queens just recommencing to lay in the spring, not unfrequently deposit drone eggs in worker cells, without subsequently showing any evidence of practical derangement. This exceptional drone-egg laying seems to be merely the result of some transient irregularity.

It is a remarkable fact, that the indentations like those with which royal cells containing female larvæ are decked, as if for ornament, are never found on royal cells which contain drone larvæ.



For the N.Z. and A. Bee Journal.

All correspondence must bear the name and address of the writer, not necessarily for publication, but as a guarantee of good faith.

### TEMPORARY WINTER ADDITION TO THE LANGSTROTH HIVE.

SIR,—In the January number of the JOURNAL "T.J.M." expresses the opinion that the German or British system of hanging the frames across the hive, or from side to side, may be better adapted for the colder climate of South New Zealand than the Langstroth system of hanging them from front to rear. I think the latter system is so much the better of the two, that bee-keepers ought to be quite sure that the disadvantage of its being colder cannot be remedied for winter before they make up their minds to adopt the German system, and I would suggest the following method of improving the Langstroth hive for winter by means of a second front: Fix the alighting-board at least two inches below the level of the entrance to the hive. Make of ordinary seven-eighths, or so-called inch stuff, two side walls, the width of one end to be one inch, the width of the other end two inches; the length of the rectangular or square side to be the same as the height from the alighting-board to the under side of the cover at the front end of the hive side; the wide end to be cut at such an angle as will fit upon the alighting-board, if the alighting-board is made longer than the width of the hive. Cut a front-wall one, and three-quarter inches wider than the front of the hive, shaped at one end to fit under the hive cover, the other end cut to fit upon the alighting-board one inch from the front batten of the bottom-board; cut in centre of this end an entrance three inches long by three-eighths. Nail the front wall to the slanting edges of the two above-described side-pieces, and connect the side-pieces by a batten nailed inside two and a half inches from the bottom end, the batten to be of such a size that it will just touch the front of the hive above the entrance, and act as a roof to the lobby formed when the whole piece is placed upon the front of the hive. The additional or second front is fixed upon the hive by two or three well-greased screws at each side. Greasing the screws enables them to be easily turned when the front is wanted off in the spring. The inner entrance to the hive being two inches higher than the outer entrance, no rain can be driven in, and there is no obstruction to ventilation, whilst the draught of the in-going air is much lessened. If the alighting-board is the same length as the width of the hive, then the side pieces should be an inch longer than above described, and project that distance below the front piece.

DUNOON.

January, 1884.

Sample copies of this Journal sent free to any address on receipt of sixpence in stamps.

### EARLY DRONES—EARLY SWARMS.

SIR,—Well, this season I had early drones, but now two of my strongest stocks are killing off the drones. Is not this unusual in New Zealand, Mr Editor? Only one hive out of eight have swarmed up to this date. This brings to mind that with many bee-keepers the prevention of unnecessary swarming is not very easy, except they are old hands at the work, and up to cutting out queen-cells or capturing the old queen, &c.; but if some of your readers will try the plan described below it may prevent their being troubled, "as a rule," with more than one swarm from each hive, and it is well known that every swarm after the first, from any one hive, is much weaker than the first, and often not worth hiving unless two or three more of such swarms are united, and I have always found that strong stocks of bees are the key to success. The plan I would suggest is as follows:—Soon after a swarm has issued from the hive, and are freely entering into the box used for the purpose of hiving it, then remove the *parent hive to a new stand*, and in the place where it stood put the hive that the swarm is to occupy. It is very little trouble, and very rarely will the parent hive send off a second swarm; if it should occur, repeat the process.

J. NEWLAND.

Ngaroto, Nov., 1883.

[We regret that the above letter has been overlooked—it should have appeared in our December issue. The killing of drones in November in this country is certainly very unusual—in fact, we never knew it to occur before during our eleven year's experience. The season has been a most remarkable one throughout, and if we may judge by the past, it is likely to be many years before we again have such another.—Ed.]

### BEE-KEEPING IN NEW SOUTH WALES.

SIR,—I have not myself paid any active attention to the pursuit of bee-keeping, having other occupation, but as the natural conditions here appeared so favourable to its development, I thought it might prove a useful auxiliary to persons of small means, and one which, requiring small outlay, they would readily accept. In this latter opinion I confess that I have been considerably disappointed. Wages are so high here, six to eight shillings per day being the lowest price paid for any sort of unskilled labour, that those who are sometimes spoken of as poor men are not under any necessity to trouble themselves very much about how to get their living; their labour is more often unobtainable at those prices. I do not suppose, therefore, that we shall, for some time at least, hear of any one in these parts making bee-keeping his exclusive pursuit; but I feel certain that a more suitable place for the industry could hardly be found. In some parts where the country has been cleared, planting for bee pasture may have to be resorted to; but where the natural vegetation remains as it does in the scrubby, sandy country along the sea coast, there is a succession of bloom quite all the year through. The varieties of eucalyptus alone are all wonderful honey-producers; even in August, our severest winter month, there are at least two kinds of it in full bloom, besides the ti-tree growing in swampy places, which, I should suppose, could hardly be beaten by anything, not excepting bass-wood.

To provide, however, for a supply of bloom around my own neighbourhood, I have imported from America, among other seeds, those of a white sage, horsemint, sweet clover, figwort, spider-plant, cleome, borage, aslyke and catnip. They have all done well—white sage being seven feet high—except spider-plant and cleome, which I cannot get to germinate.

I am much obliged to you for your answer to my query in the American *Bee Journal*, and also for your offer to receive correspondence from me for the N.Z. AND A. BEE JOURNAL. Whenever I may be able to get together anything worth sending to you concerning the industry I will do so.—I am, &c.,

AUSTRAL VERGE.

East Kempsey, Macleay River, New South Wales.

**THE VIRULENT CHARACTER OF THE STINGS OF INDIAN BEES.**

SIR,—I send you an account which I received last November from India, which corroborates the statement you gave of the stinging bee of India in the December number of the BEE JOURNAL:—

Coonoor, Madras, Oct., 1883.

I have had a time of great anxiety about my dear husband, who narrowly escaped with his life from bee stings. He appeared at the gate on his pony, almost falling off, and as soon as he reached me he could only gasp out: "Hold my pony—bees," and tottered to the bed. In a moment we saw that he was awfully covered with stings, like pin heads thickly inserted over his entire face, ears, and neck. His face became terribly swollen, he could scarcely see out of his eyes, and was continually violently sick and very faint. The danger from erysipelas was great, and if it once attacked the brain it would be fatal. The sufferer could only lie still, hour after hour, and day after day, without saying a word unless absolutely necessary, and I had to feed him every hour. Gradually, I am most thankful to say, he got better, and is now up and about again, but very weak. We have heard of so many deaths from bee stings. The bees were annoyed by his riding close by (not intending to disturb them) and at once attacked him by thousands, and so virulent is their poison that he began to be sick at once and to have diarrhoea all the way home, the bees pursuing him for a mile on his pony.

ERNEST VOS.

Taupaki, Kaipara Line, Jan., 1884.

**THE PRICE OF HONEY.**

SIR,—I see you value your honey this year at about the same price as last year. Is this wise policy, seeing that you yourself acknowledge that you could dispose of very much more than you have? If the honey is sold at the price you say, viz., £40 per ton, will there not be next year a temptation to the merchants to offer considerably less on the ground that there is then a glut of honey? It is certainly probable that next year's supply will be much larger than this year's.—Yours, &c.,

UNCLE TOOK.

12th January, 1884.

[We are not aware of having made any statement as to the value of our honey last year. When at the Thames we never sold any wholesale for less than 8d and 9d per lb., but cannot expect to get this price for very large quantities. Honey is usually sold by the ton of 2000 lbs., and £40 per ton would be at the rate of a trifle less than 5d per lb.; now this we consider a very fair price at the apiary for bulk honey in large parcels, and one that will pay exceedingly well in large

apiaries. There is nothing to be gained by stating that an article is worth more than what is likely to be obtained for it; like everything else, the price of honey will be regulated by the supply and demand, a fact which our correspondent appears to have overlooked.—Ed.]

**SWARMING BOX.—A CORRECTION.**

SIR,—Honour to whom honour is due. In your reply to Mr Wm. Chas. Brown, *re* swarming-box, you say that his box is similar to "T.J.M." without the movable lid. So far as I can see, it is similar to Mr W. T. Beloe's, with the exception that Mr Brown's has a calico bag attached and no brush, whilst Mr Beloe's has the brush and no calico bag. It is also evident from Mr Brown's letter that he looks upon his box as being similar to Mr Beloe's.—Yours, &c.,

DUNOON.

January, 1884.

[With regard to size, Mr W. C. Brown's box comes nearest to Mr W. T. Beloe's, but in other particulars we think it is more like "T.J.M.'s" To convert Mr Beloe's box into one similar to Mr Brown's, the brush would have to be removed and the calico tacked on, whereas "T.J.M.'s" would only require a movable cover instead of a fixed one. We have not the slightest wish to deprive Mr Beloe of any credit due him for his idea.—Ed.]

**SCRAPING COMBS.**

SIR,—I see by the December number that Mr Karl found he could not extract flax honey. I cannot speak of flax honey, as I have no flax, at least none to speak of, within three miles of my apiary, but I find I cannot extract before the middle of December, the principal flowers the bees work on being the ordinary bush of the country. If Mr Karl, instead of breaking the combs that are built on foundation, will take a sharp-edged spoon and carefully scrape all the cells containing honey off both sides of the foundation and then put it back in the hive, he will find that the bees will work it out again quicker than ever.

F.D.N.

Great Barrier, Feb., 1884.

**FROM WESTPORT APIARY.**

SIR,—I think there will be very little honey in this district this season. I increased my stock to double the number I started with in the spring, raising my queens in nucleus hives. Had I waited for natural swarming I don't think I would have had many swarms, as the season has been so wet—scarcely a fine day for the past month.

I received a double-comb extractor a few days since, and extracted three combs with it; it does its work in fine style. The January number of JOURNAL came to hand yesterday.

Yours, &c.,  
JOSEPH BARKLEY.

Westport, January, 1884.

Mr Rosenman suggests that the disease called foul-brood, may be caused by nitrogen gas generated during the winter in a hive not properly ventilated, and insufficiently protected against cold.



FROM TARAHERU APIARY.

SIR,—Since my last report, a month ago, the weather has completely changed. It is now something like New Zealand summer weather and very hot. If the bees are to do any good, now is their time, and I must say my strong colonies are doing their best to make up for lost time. Yesterday I extracted 54lbs., and took fifteen 1lb. sections from two swarms hived on 23rd December. Many of the hives are doing equally well, but, on the whole, I am not satisfied with the state of my apiary. When, early in the season, acting on your advice, I doubled up my colonies, reducing them from 75 to 55, it was done in the expectation of an immediate yield from white clover. But as clover yielded no honey, I was practically deprived of 20 hives, which later on would have given a return. Very late and excessive swarming has also done us much harm here. Generally we look for our swarms during October and early in November. When swarming takes place at that time, the parent hive, however much it may be weakened for the time, recovers itself by January, and is in prime condition for the thistle harvest. This was my experience last year with old colonies transferred from box-hives. This season most of the swarming took place in December, and the result is that many hives are weakened, so that little or no surplus will be got from them. This you pointed out to us in the December JOURNAL, and your remedy was to cut out all queen cells and to return any that persisted in swarming. I have practised returning swarms, and in many cases with very good results, but am very doubtful of the wisdom of indiscriminately cutting out cells. I had several cases where cells, if not removed, would have hatched in a day or two. I cut them out, expecting to deter the queen from leaving, but it had no such effect, they swarmed within two days, and I found they had built new cells. Now, if this were a strong colony and able to endure the loss of a swarm, a fortnight or three weeks is lost to them by the removal of a cell that was on the point of hatching. More than this, I find there is a great risk of leaving colonies queenless, and I think it is better to try some other way. Here is what James Hedden says on the subject:—"Some, to prevent after-swarming, cut out the queen cells. I object to this. There is something in nature that hatches the best queens first. Now I will tell you how I manage second swarms. I hive them upon frames of wired foundation, and place the hive containing them by the side of the old colony. As soon as the queen is fertilized and laying, I shake the whole swarm down in front of the old hive and put away the drawn-out foundation for future use. All the bees being the offspring of one queen, they do not quarrel."

I find many hives very reluctant to work in the section boxes. One swarm hived on 30th November filled the lower hive with honey, leaving the queen little or no room to lay, and then swarmed. Some one asked in the *American Bee Journal* which way most honey could be produced by using sections or extracting, and the answer was that if he takes a ripe article out he will get but little more extracted than comb-honey, *provided he thoroughly under-*

*stands the law governing the production of comb-honey.* This sounds very grand, but does not throw much light on the subject. How do you manage to give your queen room enough to lay and keep them at work in the sections? I settled the business with one swarm that declined to work and swarmed out by throwing them all back on top of the sections? They went to work at once, and are busy on three tiers now; but others I tried on this plan swarmed again next day.

You ask me to explain how I managed to move my bees over a rough road without fastening the frames or killing all the bees. The fact is that my frames fitted the hives so tightly that there was no danger of slipping, and not a single frame moved from its place, nor did I lose a single bee.

My hive of Italians arrived safely on Monday. I removed them from the nucleus to a Langstroth hive, and am gradually building them up by adding hatching brood. It is late in the season to expect to do much in the way of queen-rearing, but I hope to hatch a few before it closes. Are the worker bees accompanying the queen hybrids or pure Italians?

I have not yet seen the January JOURNAL, as my copy is always sent to Ormond instead of Waerengaahike, but from a short paragraph in the *Weekly News* of 5th January, in which it states that Karl Bros. were feeding their bees  $2\frac{1}{2}$  bags of sugar a week, I think you have been worse off than us. My bees have at least been able to keep themselves since the middle of October, and I have stored away about 50 well-filled frames of bush honey made in November and December, which I will use for winter stores.

I visited Mr T. U'Renn's apiary the other afternoon and found he had not taken any honey, but by hiving all his swarms he had an immense crush of bees, and expected a good yield in January and February. I rather think that in our district, where our best honey is produced in the late summer, it is advisable to have as much increase as possible in spring. Even second swarms in November with a young queen give good results two months after. If, as apparently is the case with you, your main crop is gathered from white clover in spring, then clearly your plan is to concentrate your forces then and make the most of it; but if, on the other hand, you can depend on a later crop, then it is reasonable to expect that you will get more honey from a hive and its increase—each of the queens having had ample time to hatch a strong force of workers—than if you allowed no increase, but destroyed your young queens and had only the progeny of one queen to gather the honey.

I should like to see some friendly controversy started in the JOURNAL on these points and other details in the management of our bees. And while we look to such contributors as Mr Wilkin and T.J.M. to supply us with scientific articles and practical advice, we, who have not had their experience, would do well to make known our troubles and difficulties, that we may obtain advice and prevent others from falling into the same mistakes.

With the compliments of the season.

GEORGE STEVENSON.

Taraheru Apiary, Poverty Bay, Jan., 1884.

[Our advice, with regard to doubling up the weakest of your colonies, was undoubtedly correct. The probability is that you would have lost most of them if you had not

done so, as little or no breeding could have taken place during the cold weather that prevailed after you united them from the want of bees to cover the brood. The doubling process should have enabled you to increase your stock more rapidly as soon as there was sufficient honey being gathered to warrant it, and so have more than made up for the loss in uniting.

With regard to cutting out queen cells and returning the swarm, as before stated, no hard and fast rule can be laid down in the management of bees; what will answer one time will, perhaps, not another, under apparently precisely similar conditions. We have practised the method we gave to prevent increase, and found it to answer in the majority of cases. We do not believe in preventing swarming altogether, but there are times when it is advisable to keep it down as much as possible. It is likely you overlooked a queen cell, and in that case it would account for the bees swarming again so quickly. If you refer to the back numbers of your JOURNAL you will there see how we manage to give our queens room for laying while the sections are on. The bees accompanying your queen are principally her own, but there may be a few others.

We are rather surprised to hear that your main honey harvest commences so late in the season. We always thought it came from clover in your district. You have rather an advantage in this, as you have the whole of the spring to get your bees in order and the swarming done; this should enable you to take the full benefit of your main honey harvest while it lasts. We certainly would not like our frames to fit so tight as yours; we like to have them free everywhere, so that we can lift them out of the hive easily when manipulating. As it is, we get a few stings, but with tight frames—well, we would be ready to hand over the job to somebody we didn't care about.—Ed.]

#### FROM KARL BROS.' APIARY.

SIR,—It is nearly 21 years since we arrived in New Zealand, during most of which time we have kept bees, and the present is the worst honey season we have yet experienced.

The only fine honey weather we have had was one week at the commencement of the new year, and unfortunately the flax was in full blossom at the time. The bees stored honey from it in great quantities; we tried our best to extract it, but found it impossible owing to it's being so thick. We then gave them boxes with full sheets of foundation, and as fast as they filled them added others, till now we have a number of colonies filling their fourth and fifth stories. It is quite possible that we may yet be able to extract some honey after the flax is over, as there is plenty of white clover, dandelion, and thistles in blossom, but, of course, it will depend entirely upon the weather. We have seven acres of buckwheat coming into blossom, and five acres sown with mustard, which will be in flower in four or five weeks. We are in hopes of better success during the autumn than we have had through the spring, but at present the weather is very unsettled again.

Ohaupo, January, 1884. KARL BROTHERS.

[On the contrary, we think you are rather fortunate in being able to get an abundance of flax honey in a season like the present one, when the secretion of nectar in other flowers is so very limited.—Ed.]

## FROM OUR CONTEMPORARIES.

### HONEY AS A MEDICINE.

THE *Herald of Health* is high medical sanction. In its issue for Nov., 1872, in answer to a question "Is Honey Wholesome?" it says—"Yes; used in moderation, it is." It then adds: "A German teacher has lately written a work on the subject of honey and its healing properties. While he may over-estimate its value, what he says is interesting. We quote: 'A strong influence for publishing this book was the fact that I, a sufferer from hemorrhages, already given up to despair, and at the verge of the grave, was saved by the wonderful curative powers of honey; and now, thank God, I am freed, not only from weakness of my lungs, but rejoice in the possession of perfect health.'

'At my first attack, upwards of thirty years ago, powders and tea were ordered for me, which benefited me but little. I then placed but little confidence in honey, which I had used occasionally, and in small quantities. Judging from my present knowledge, I believe that the honey was the only remedy that was doing me any good, and it is this that I have to thank for the gradual but sure restoration of my health.

'As my disease increased I began to use cod liver oil, which weakened and injured my stomach so that I could hardly digest anything more, and my condition became worse and worse. Again I returned to honey, when my suffering immediately began to decrease and disappear. Besides the use of honey, I took care to preserve my breast and lungs from injury, which, in my trying situation as public teacher, was almost impossible. My disease being caused by my constant teaching during so many years, I gave up my profession, and honey was my only medicine whereby I, by the simplest, safest, quickest, and pleasantest manner (for I was fond of honey), relieved the disease in my throat; and out of thankfulness I now write this book for the use and benefit of many, especially for the use of those suffering from diseases of the throat and lungs.'

This German teacher is none other than Karl Gatter, from whom we quote still further on the same subject. He says:

"In medicine, and especially in the healing of wounds, was honey, already in early times, used as a universal remedy, it yet constitutes the principal ingredient of many medical preparations, is used with the best results in many internal and external diseases; serves as a means for taking powders, for the preparation of salves and the sweetening of medicine.

"Honey mollifies; promotes festering; causes gentle purging, divides and dissolves, warms, nourishes, stops pains, strengthens the tone of the stomach, carries away all superfluous moisture, aids digestion, thins and purifies the blood, and animates and strengthens the breast, nerves, and lungs. Honey is, therefore, to be used when suffering from a cough, hoarseness, stoppage of the lungs, shortness of breath, and especially with the best results, in all affections of the chest.

"Many persons afflicted with various species of consumption, thank the use of good honey, either for their entire restoration to health, or for the mitigation of their often painful condition of body and mind.

"Honey is also an excellent remedy for the occasional inactivity of the abdominal organs, and a means of

strengthening weak nerves. For severe coughing, barley-water mixed with honey and the juice of lemons, drank warm, is a pleasant relief. It appeases and mitigates fevers, and owing to its taste and its soothing qualities, it is used as a gargle.

"Honey can also be used with advantage in asthma, in constipation, in sore throat; promotes perspiration, lessens phlegm, and is very healing to the chest, sore from coughing.

"With old persons, the use of honey is very useful, since it produces warmth and a certain activity of the skin. For persons leading a sedentary life, and suffering from costiveness, and especially from piles, pure unadulterated honey, either mixed in their drink, used alone, or on bread, is the best and healthiest means of relief.

"Honey has also great value as a medicine for children, and is readily partaken of by them as a choice dainty dish. It is especially useful to children afflicted with scrofula or rickets. In difficult teething, rub the gums with a mixture of honey and an emulsion of quinces. For the removing of worms, honey has often been beneficially used, and it is often used in diseases of the mouth and throat.

"Honey mixed with flour, and spread on linen or leather is a simple remedy for bringing to head, or to maturity, boils, &c. Also, honey mixed with flour or fried onions, serves an excellent purpose as a covering for any hard swelling or callosity or abscess; and for ulcers it is often mixed with turpentine, tar, and tincture of myrrh. A plaster made of unslacked lime and honey has sometimes relieved most obstinate sciatica.

"If good honey is applied to inflamed wounds or boils, it lessens the drawing, quiets the pain and produces a good festering or suppuration. Undoubtedly, for all wounds, pustulous inflammations, bruises, and bad festerings, honey is the best and most reliable remedy, and affords quicker and safer help than all other known plasters; all that is needed is to spread it rather thick on a piece of linen, place it upon the fresh wound, bind it fast, and renew the plaster every four or five hours. Of course, if bones are broken, surgical aid must be had.

"Honey-dough—*arto mele*—a plaster made out of honey and rye flour or rye bread, into which henbane or other narcotic substances is mixed, is an excellent means of irritation; which should be used in festering and bringing the sore to a head, and assuage the drawing and pain. It should be warmed, spread on a piece of linen, and placed upon the sore part.

"For persons who are weakened through fast living, honey is, of all helps, the best nourishment, since it not only removes the poisons in the system, but also through its virtues strengthens the system; hence it has made itself so necessary to the inhabitants of the Orient."

Honey is beneficial in pectoral diseases, acts as an excellent detergent, and as a gentle laxative. In ancient times the free and regular use of it as an article of diet, was regarded as a means of securing long life; and it thus came to be popularly considered as a specific against disease. Honey is a sedative of no ordinary power. A friend, who is a practising physician, mentions one of his patients, whose habits of observation were seldom equalled, having by the kick of a horse one of his knee-joints badly broken, the pain and anguish being very severe, his daughter offered him some wine or tea. He declined, but said she might give him some honey. Dr. A. remarks:

"My own observations justifies the wisdom of his selection. Try it."

Honey is nutritive and laxative, and is employed largely in the preparation of medicine.

In diseases of the bladder and kidneys, honey is an excellent remedy.

An excellent preparation for coughs, especially during feverish or inflammatory attacks, is composed of honey, olive oil, lemon juice and sweet spirits of nitre—each, one fluid ounce—to be taken several times a day, in half fluid-drachm doses.

For Asthma.—Honey is an excellent remedy. Mix 1 oz. of castor oil with four ozs. of honey. Take one tablespoonful, night and morning. A simple and beneficial remedy.

Honey of Squills.—Clarified honey 3 lbs.; tincture of squills 2 lb.; mix well.

Honey Cough Syrup.—This is an excellent remedy for a common cough. One dose will often give relief. Stew half pint of sliced onions and one gill of sweet oil in a covered dish. Then strain and add one gill of good honey; stir it well and cork it up in a bottle. Take a teaspoonful at night before going to bed, or at anytime when the cough is troublesome.

Honey Hellebore.—One pound bruised Hellebore root, four pints water; digest three days; boil, strain, and add two pounds of honey; boil to a syrup.

Balsam of Honey.—Take fine pale honey four ounces; glycerine one ounce; mix by a gentle heat, and when cold add alcohol one ounce; essence of ambergris six drops; citric acid three drachms. This is intended to remove discolorations and freckles, as well as to improve the general appearance of the skin.

Honey of Borax.—Powdered borax, one ounce; clarified honey, one drachm; mix. Astringent, detersive, and cooling; employed in aphthæ of the mouth and excessive salivation.

Honey of Mercury.—Quicksilver, three ounces; honey, one drachm; triturate till the globules disappear. Properties similar to mercurial pill.

Honey of Roses.—Dried petals of red rose, four drachms; boiling water, two and half pints; macerate for 6 hours, strain and add honey, five pounds; evaporate in a water-bath to a due consistency. Used to make astringent gargles. Not boil in a copper or iron vessel; they will spoil the colour.

Eye Wash, for sore or inflamed eyes.—One part of honey to five parts of water. Mix, and bathe the lids, putting a few drops into the eye, two or three times a day until well.

Honey Paste.—One cup honey, three-fourths cup white, or yellow wax, one cup lard; melt together, then take it off the fire stir till cool; perfume with rose or violet, and keep in cups, well protected from the air. There is nothing superior to this paste for keeping the hands from chapping; rubbing on a little, after dipping your hands lightly in water. Also softens the hands after hard work.

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**DO BEES OR MOTHS FERTILISE THE CLOVER ?**

As to the fertilisation of the red clover, we were told by Mr Firth's overseer that he believed that part of the fertilisation was due to the action of a brown moth. At our request, he was kind enough to find one of these moths, which we examined very carefully. It is rather a large brown moth, with a peculiar dog-shaped head, from which protrude two very large pea-green eyes, between which is a very pretty feathery crest, whilst a little behind the prominent eyes were two very pretty feathery, fan-like plumes. But the thing which most attracted our notice was a very long ligula or tongue with which the moth was furnished. Under a powerful glass, we observed that the point of the ligula was furnished with a number of very fine hairs—the point, in fact, having the appearance of a small circular brush. After making this examination, the results of which it was impossible to see with the naked eye, we had no doubt whatever that this moth has had something to do with causing the two crops of clover seed which had been previously gathered at Matamata. We were informed that on these two occasions a moth similar to the one referred to was observed to be very abundant, but we do not think that the numerous seed heads we discovered in various directions on the second crop of clover could be wholly due to this moth. A considerable number of these moths were certainly seen flitting about, but an immensely larger number of bees, common and Ligurian, were seen "from early morn to dewy eve," industriously searching petal after petal on the clover blossoms. A careful examination showed that the bees were not visiting the clover blossoms in a perfunctory manner. They stayed on each flower a considerable time, and made vigorous and apparently successful efforts to reach the bottom of the petals. It would be an interesting question, however, to ascertain the exact share of the work of fertilizing the red clover, which is due to the bees and to the moth. We brought two specimens of the moth with us, which have been handed over to Mr Cheeseman, at the Museum.—Auckland *Weekly News*, Feb. 3rd, 1883.

**HONEY OVER 100 YEARS OLD.**

Among the many curious and interesting relics of the State Historical Society of Iowa, at Iowa City, is an old fashioned bottle containing honey, yet in liquid form, which was brought to this country from France, in 1777, in the medical chest of Dr. Brunot, private physician to Gen. La Fayette, on his first arrival in this country to assist in our revolutionary struggle.

In 1814 Dr. Brunot presented the bottle to Dr. James S. Hepburn, father of Miss Fannie Hepburn, sister of Hon. W. F. Hepburn, who was a candidate for congress at the late election in Iowa. Miss H. presented this interesting relic to the Historical Society in 1874.

"How do you pronounce s-t-i-n-g-y?" Prof. Stearns asked the young gentleman nearest the foot of the class. And the smart boy stood up and said it depended a great deal whether the word applied to a man or a bee.

One pound of honey contains about twenty cubic inches.

**HOW TO MAKE HONEY VINEGAR.**

Mr. W. J. Hutchinson writes as follows in the *American Bee Journal* :—

At the Michigan State Convention at Kalamazoo, Mr. Bingham had on exhibition an excellent sample of honey vinegar; and, as he told us how many pounds of bees-wax was obtained from a certain amount of washed cappings, it occurred to me that the vinegar was made from the honey that was washed from the cappings. Upon addressing a letter of inquiry to Mr. Bingham, he wrote me a long, kind and instructive letter upon the subject, which, with his permission, I now give to the readers of the *Bee Journal*. It is as follows :

"The cappings should be put into a dripper and allowed to remain about twenty-four hours, then put into as much water as you may reasonably expect to sweeten a little sweeter than good new cider, with the cappings that you expect to have. I fill an ordinary whisky-barrel with water, and the honey from the cappings, in extracting one thousand pounds of honey, usually makes it sweet enough. The cappings are left in the water an hour or two, then skimmed out and put into a strainer to drip dry, which they do in ten or twelve hours. The drippings are, of course, saved and put into the barrel.

"This slightly-sweetened water soon begins to 'work' and the scum may be taken off with a wire cloth, or other skimmer, as often as necessary, until nothing rises. The sweetened water passes through all the stages of fermentation, the same as cider, until it reaches the point called vinegar. One year, perhaps less, makes it such vinegar as you saw at Kalamazoo. We have used no other vinegar in our family for twenty years, except a year or two when we first came to Michigan, fourteen years ago, when I had no bees.

"There is probably no profit in making honey vinegar from good saleable honey, but in keeping bees there is often waste honey that is of little value. I know of no manner of getting cappings ready for making into wax that is so convenient and profitable, and the vinegar is known to be pure.

"I keep the barrel covered with cotton-cloth, and there is not much danger of getting the water too sweet. If very sweet, it takes longer to get it to vinegar; but it is better when it does get there.

"T. F. BINGHAM."

A barrel of excellent vinegar for every one thousand pounds of honey extracted is certainly worth saving. I know of one bee-keeper who will save that barrel of vinegar during the coming season.

**COMB FOUNDATION.**—No discovery, if we except the movable frame hive and the extractor, has done so much to advance apiculture as that of comb-foundation. No one should think of doing without foundation in the brood chamber. We advise the use of wired frames. The cells will not be enlarged by sagging, the foundation will not fall from the frames, it will not warp and bend, and the frames of comb will be secure and safe to ship. Good foundation must have very thin bases to the cells, and high walls, the wax of which shall not be much compressed. Such foundation is made by the roller machines. Foundation is also very valuable for sections, for which we would use seven feet to the pound, and only worker size. If one has less than one hundred colonies of bees it will hardly pay him to purchase a mill unless he desires to manufacture foundation to sell.—*Am. Agriculturist*.

Bees think there is no place like comb.

## QUERIES AND REPLIES.

*We shall from time to time give replies through this department to questions pertaining to bee-culture, propounded by our subscribers. We would ask our correspondents to be as concise as possible, and to number their questions 1, 2, 3, and so on.*

**QUERY.—Stocking Observatory Hive**—The other day I made an observatory hive like the one I saw at the A.A. and P. Association's Show, and following your directions as given in your "Bee Manual," I took one frame of honey and bees out of an ordinary hive and placed it in the observatory, which I put in the window. The first day after it was raining, and the second fine, when I noticed the number of bees getting less; on the third day there were so few left in the hive that I put the remainder with the frame back to its original place. I also noticed a few dead bees, and the glass very much discoloured with their own mess. Should the queen accompany the bees when stocking the observatory hive? An answer through the JOURNAL will oblige.

Kaipara.

E. L. Vos

**REPLY.**—When stocking an observatory hive the queen should always accompany the bees. The proper plan is to look through the hive from which you are going to take the frame, until you find the queen, and if she happens to be on a frame containing sealed brood and plenty of adhering bees, place it at once in the observatory hive, and close the entrance. Should she be on a frame with little or no brood, you could catch her and place her on a suitable one. The entrance to the hive should remain closed for at least 48 hours; by this time the bees have got reconciled to their new quarters, and being accompanied by their queen very few will return to the old home. In a week or so you could remove the queen if you wish to observe the process of queen rearing.—Ed ]

### AUCKLAND GARDENERS' HORTICULTURAL SOCIETY.

WE have to acknowledge receipt of the schedule of prizes of the above Society's Autumn Show, 1884, to be held in the Drill-shed, Auckland, on Friday and Saturday, March 21st and 22nd, 1884. The schedule is divided into three classes, viz.: all-comers, amateurs, and cottagers, and a host of prizes are published for each class, to be given for pot plants, cut flowers, fruits, and vegetables. In addition to the above, there will also be a class devoted to bee-keepers for the exhibition of bees, honey, and apiarian appliances, the prizes and particulars of which will be published one month before the Show. We hope to see as many exhibits as possible in this class, and as many bee-keepers present as can make it convenient to attend. A number of special prizes for all classes will be added to the published list, due notice of which will be given. We should say, judging by the long list of names of influential Auckland citizens, published in the schedule as patrons of the Show, that it will be a great success. A copy of the schedule of prizes may be obtained from the Committee, Mr H. H. Hayr, or the hon. sec. to the Society, Mr O. Smallfield.

**NOTICE.**—A Meeting of Bee-keepers will be held at the office of Mr HAYR, High-street, Auckland, on FRIDAY, 21st March, at 8 p.m. Business—To form a Bee-keepers' Association.

## METEOROLOGICAL OBSERVATIONS FOR THE MONTH ENDING 31st JANUARY, 1884.

(SUPPLIED BY T. F. CHEESEMAN, ESQ., AUCKLAND.)

| Month. | Barom. corrected (inches.) | Max. Temp. in Shade. | Min. Temp. in Shade. | Mean Temperature. | Solar Radiation. | Minimum Temp. Exposed. | Rainfall in Inches |
|--------|----------------------------|----------------------|----------------------|-------------------|------------------|------------------------|--------------------|
| JAN. { | 29.88                      | 68.0                 | 55.9                 | 61.9              | 135.2            | 49.6                   | 1.64               |
|        | 29.96                      |                      |                      | 67.5              |                  |                        | 3.03               |

Remarks.—From 1st to 6th, strong S.W. winds, with occasional slight showers, chiefly at night; 7th to 12th, fine, with variable winds, mostly from W. to S.; 13th to 18th, unsettled and squally, heavy westerly gale on the 16th; 19th and 20th, fine; 21st and 22nd, S.W. breeze, with slight showers; 23rd to 27th, fine, with variable winds; 28th to end of month, unsettled, showers on 28th and 30th, and morning of 29th. Weather on the whole singularly cold and variable. Barometer pressure below the average; mean temperature considerably under the average, and the lowest yet recorded for the month of January; rainfall comparatively small, although spread over more than the usual number of days.

## HONEY MARKETS.

AUCKLAND, March 1st, 1884.

The demand for good honey remains about the same as last month, very little as yet having come into the market. The prices are as follows: Wholesale, 1lb tins, 8s to 8s 3d per doz.; retail, 1lb tins, 11s to 12s per dozen. Bulk honey, wholesale, 4d per lb; retail, 5d per lb. Extra fine, 6d per lb; in 1lb sections, from 7d to 9d per lb.

AUCKLAND AGRICULTURAL AND MERCANTILE Co., Limited.

### ENGLAND.

There appears to be no alteration in prices since our last quotations; our latest advices are dated 15th December, 1883.

### AMERICA.

NEW YORK, January 4th, 1884.

**HONEY.**—White clover and basswood in 1lb and 2lb sections, 17@22c; dark, and second quality, 14@15c; extracted white clover, in kegs and barrels, 9½@10c; dark 8@9c.

**BEEWAX.**—Prime yellow, 27@29c.

H. K. & F. B. THURBER & Co.

SAN FRANCISCO, January 4th, 1884.

**HONEY.**—Fancy comb is scarce, and prices for the same are firm, but offerings of other descriptions receive little or no attention. White to extra white comb, 15@20c; dark to good, 9@11c; extracted, choice to extra white, 6@7½c; dark and candid, 5c.

**BEEWAX.**—Wholesale, 27½@30c.

STEARNS & SMITH, 423, Front-street.

—American Bee Journal.

## SPECIAL NOTICES.

**QUERY AND REPLY DEPARTMENT.**—Correspondence for this department should reach the editor not later than the 15th of each month, when replies are required in the next issue.

**ADVERTISING DEPARTMENT.**—Advertisements for the next issue should reach the publisher by the 24th of each month.

Correspondence for publication may be sent at local post rates i.e., one penny for every two ounces, providing the local post regulations are complied with, and the words "Press Manuscript" are written on outside of cover.

P.O. Orders for Subscriptions, Advertisements, &c., to be made payable to J. C. Firth, Chief P.O., Auckland, and sent under cover to H. H. Hayr, High-street, Auckland, or P.O. Box 186.

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