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THE NEW ZEALAND AND AUSTRALIAN

# BEE JOURNAL

Devoted exclusively to Advanced Bee Culture.

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CALENDAR—JUNE.

WINTER appears to have set in unusually early this season; to experience heavy frosts in the month of April is very uncommon indeed. On three occasions in the early part of last month the thermometer here registered 12 degrees of frost and several times 6 degrees. The extraordinary and sudden fall in the temperature had the effect of at once cutting off all sources of honey and putting a stop to breeding. Weak colonies, unless the bees are crowded by division boards into a small space and supplied with plenty of food, will suffer very much. A supply of division boards should always be kept on hand ready for use when required.

All colonies should, ere now, have been fixed up for winter, but if any have been neglected they should be attended to at once as directed in last month's calendar. Where chaff cushions are used for covering the frames a snugly fitting mat should first be placed on them, as the cushions are liable to leave the corners uncovered. A very good substitute for a chaff cushion, that will be sure to fit nice and snug, may be made by tacking a piece of stout coarse scrim across the lower part of the inside of the cover and filling the space above loosely with chaff; or a half storey may be fixed up in the same manner. Feeding where still required ought to be got through as speedily as possible, and syrup for feeding should now contain much less water.

During the wet weather that may soon be expected, when outside work cannot be done, preparations should be made as opportunities offer for next season's work, by getting all the material in readiness. Timber for hives, frames, &c., should now be getting well seasoned and ready for making up. Those who obtain material from the manufacturers ought to send in their orders early and get it on hand. Combs stowed away should be occasionally examined for the bee moth larvæ, and as soon as detected the combs fumigated with sulphur. We would strongly advise the use of the salicylic acid solution given in our April number, for painting the insides of hives, &c., before being stowed away, as a preventative of foul brood.

## END OF VOL. 1.

WITH this number will close the first volume of the *NEW ZEALAND AND AUSTRALIAN BEE JOURNAL*, and it is extremely gratifying to us to know that—as an exponent of advanced bee-culture—it has been so thoroughly appreciated. Since our first number we have been continually receiving communications from our readers, scattered over various parts of the world, testifying to the appreciation of our efforts to promote scientific bee-culture. The encouragement received from our correspondents has considerably lightened our task—which to us is a labour of love—and enabled us to overcome many difficulties inseparable from the establishment of a journal devoted to a special occupation. To those who so kindly and willingly came forward and assisted us with their valuable contributions, we cannot sufficiently express our gratitude; for whatever position the *JOURNAL* has attained is largely due to them. To our subscribers and friends we tender our sincere thanks, and promise on our own part to try to do even better in the future than we have done in the past.

On glancing through the contents of the present volume it will be seen that the information conveyed through its pages embraces all branches of advanced bee-culture suitable both to the beginner and the advanced apiarist. Our calendars and editorials contain the most useful and timely instructions, while our special articles have been contributed by careful and experienced writers, the subjects chosen being both highly instructive and interesting. The general correspondence, with Editorial foot-notes, embracing as it does the experience of many individuals, conveys facts which will enable the reader to determine how best to proceed in his own particular case. The matter gleaned “From Our Contemporaries” is of the most valuable kind, being chosen with the view to give our readers the ideas and practice of the most learned and practical apiarists of the age. And last, though not least, our answers through the “Query and Reply” department have, we hope, been the means of preventing many from falling into the errors of management that have been the cause of our correspondents asking for advice.

It is scarcely necessary to say that in the coming volume we shall do our best to make the *JOURNAL* even more useful and interesting than hitherto. We shall devote all our energy to the advancement of the honey industry generally, but more particularly in Australasia; nor shall we rest contented until we have raised it to that standard which, as dealing with a healthful and God-given product, it so richly deserves.

To aid us in this work, we would ask all whose subscriptions expire with the present issue to renew them *at once*, as we cannot afford to lose a single one. Not only do we ask this, but we earnestly request that they will do all in their power to obtain new subscribers, bearing in mind that the more readers we have the more rapidly will the industry develop. It is not much to ask that each obtain one new subscriber, and if this were done it would be of material assistance to themselves and the *JOURNAL*.

New subscribers can obtain, if they wish, all the back numbers of the *JOURNAL* from its commencement.

## APIARY ASSISTANTS.

WITH the development of apiculture in the Australasian colonies will come the need of skilled assistance in the apiary; in fact, this want has already been felt. We know of two or three persons who were, some little time ago, quite prepared to go into bee-culture on a large scale could they have depended upon getting assistance when required. We also know of several apiarists who are likely to require trained help next season, and if this is not to be obtained it will probably result in a serious loss to them. At present we do not know of any one person in the colonies having a knowledge of bee-culture, that is open for hire, nor do we think there is likely to be any under the present circumstances for some time to come. This being the case, it behoves us to take the matter into consideration without further loss of time, and find out how we may best supply the want.

In some countries on the continent of Europe—we have been informed—bee-culture is taught at the public schools, and therefore forms part of the national education, so that every boy on leaving school has at least some knowledge of it. In America, apiculture forms a part of the course of studies at the various agricultural colleges, and in addition to this several of the leading apiarists take respectable young men, termed “student apprentices,” for the season, teaching them all branches of bee-culture; but upon what terms we are not aware. Certainly, some system for turning out young men proficient in the business should be inaugurated here, and of the two given, the American would best answer our purpose in the meantime. No doubt if the matter were properly represented in the right quarter by an influential body of bee-keepers like, we may suppose, the proposed Association will be, apiculture would be introduced, and form part of the studies at our agricultural colleges. Then again, with regard to taking “student apprentices,” we believe that several apiarists might be found who would be willing to take one or more if suitable terms could be arranged. Mr James Heddon, one of America’s foremost apiarists, was, we believe, the first to introduce this system, and it has worked remarkably well. At the commencement of the season he takes on several respectable youths or young men, and after putting them through the various branches of the business under his own superintendence, as they become capable gives them charge of a small apiary. Mr Heddon considers that with his plan an intelligent youth, after a season’s apprenticeship, should be competent to perform any part of the work of an ordinary apiary, or even to take entire charge of a small one.

We do not know of any occupation more healthy, profitable, or elevating, than apiculture. Under a proficient tutor, the business can soon be learnt; there is no laborious work attached to it, requiring only smartness and attention. No confinement or crouching behind a desk, but open air, health giving work of the most interesting nature. Apiculture, as an occupation, is growing in importance rapidly. The estimation in which it is now held may be gathered from the statements of Professor Cook, in his essay given in our last issue, to the effect that he had students in his college from England and Texas, who came specially to study bee-culture. If the student

system can be satisfactorily introduced here it will supply a want that will otherwise soon be seriously felt, and be the means of training some of our youth in a business that will enable them either on their own account or in the employment of others, to earn a respectable livelihood.

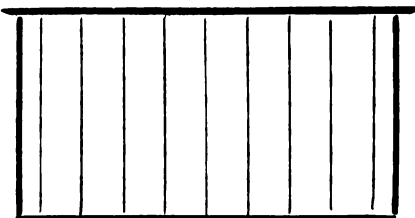
Since writing the above, Mr J. Barkley, of Westport, enquires whether we know of any person we can recommend to take charge of an apiary. These inquiries are becoming more frequent every season, thus showing the necessity of doing what we have proposed, *i.e.*, taking steps to provide skilled assistants.

#### WIRED FOUNDATION AND WIRED FRAMES.

It appears to be the opinion of those who have given wired foundation a fair test that the advantages gained by its use more than compensate for the extra expense and trouble in making it. We have watched the progress of it in America, where, of late, it has come largely into use; and from the many expressions of approval of those who have adopted it, we are led to believe that it will, in time, come into general use.

As soon as a demand sprang up for wired foundation in America, a Mr Given invented a machine by which sheets of wax are pressed into frames already wired for the purpose, and at the same time giving the sheets the ordinary impressions of the base of the cells. Several manufacturers at once commenced making and selling frames of wired foundation, but it was soon discovered by purchasers that this method of obtaining it was too expensive, as in packing, one frame of comb would occupy nearly as much space as 1½ lbs. of ordinary foundation, consequently the freight on a few sheets of the wired article came very heavy. It was also found that many of the sheets broke away from the wires in transit through rough handling. The method now generally adopted by bee-keepers is to purchase the ordinary foundation and wire it themselves. This is by far the cheapest and best plan, and the one we would advise those who desire to use wired foundation to adopt.

**WIRING FRAMES.**—To accomplish this with the least trouble the tops and bottom bars should be bored before putting the frames together. The holes should be exactly in the centre of the bars, and two inches apart, commencing one-half inch from the end bar of the frame. They may be very small, as the wire used is of a very slight gage. The number of holes required in each bar is nine, and these can be all pierced at one time by using a set of small, sharp steel awls set firmly into a lever press. The wiring must be done after the frames are put together, using No. 30 tinned wire. A small tack driven in near the end of the top bar will do to fasten one end of the wire, the other end must then be rove through the holes, as shown in the fig., in one continuous length, and



WIRED FRAME.

the other end fastened in the same manner. Care should be taken when tightening the wire that the frame is not bowed or drawn out of shape. After the length of the first wire is ascertained the remainder may be cut ready for use. For putting the foundation in the frames, a board is required a little larger than the frame. On to this screw a second board just slightly smaller than the inside dimensions of the frame, and three-eighths of an inch thick. The grain of the two boards should cross each other to prevent warping. The board if properly made will not reach the wires when a frame is placed over it by a sixteenth of an inch. The sheets of comb should nearly fill the frame, within (say) an eighth of an inch all round, and be slightly warmed. Lay a sheet of foundation on the board, and place a frame over it; now embed the wires by hand—a handy little instrument for this purpose is a small button-hook, having a groove cut in the under part of it with a file. If this is placed on the wire and moved backward and forward a couple of times it will embed the wire in the centre of the sheet. Some embed wires in the foundation without using the wired frames, but we can see very little advantage in this over the ordinary foundation; to reap the full benefit the frames should be wired.

#### PREMIUMS FOR NEW SUBSCRIBERS.

In order to encourage the obtaining of new subscribers, we offer the following inducements:—To any person sending us the names of four new subscribers, together with their own and subscriptions (30s.), we will send them a copy of the second edition of the "N.Z. Bee Manual" post free. For eight, and their own (54s.), a copy of the "Apiary Register" for 50 colonies, post free. For twelve, and 72s., a copy of the JOURNAL free.

We have received a copy of Messrs Bagnall Bros. and Co.'s new Circular and Price List. It is a very neatly got up pamphlet of 24 pages, and contains besides the prices of all the articles supplied by the Messrs Bagnall, a number of practical suggestions by Mr L. J. Bagnall, one of our valued contributors, and an enthusiastic and experienced beekeeper. The price list will be sent to all the firm's customers and to any other person making application, free of charge.

**NAUTICAL BEES.**—The *Westport Times*, of March 25th, 1884, states that, "Some weeks ago, while the schooner Dunedin was on one of the slips in Lyttelton a small colony of bees established themselves in her stern frame. She has since been on a voyage to Stewart's Island, but the bees may still be seen in their most unusual dwelling-place, though, of course, in somewhat diminished numbers. In habits these nautical bees conduct themselves as do their shore-going brethren—'improving each shining hour' by day, and at night returning to the vessel."

It is known that there are times in some seasons when the flowers will secrete honey in abundance, at other times very little or none at all. It would be interesting to understand the conditions that produce it; whether the elements are in the earth or atmosphere? Who knows but that some day we may control this, as the farmer increases his crops by the use of proper fertilizers?

### A HOME MARKET FOR HONEY.

BY T. J. M.

NEARLY all writers on the subject of marketing honey lay down the maxim, "See that your home market is fully supplied before looking for a more distant one." The principle is undoubtedly quite correct. As yet, however, there can scarcely be said to be such a thing as a home market for honey in New Zealand, and it is a question requiring prompt attention and the best consideration of bee-keepers how can such a market be created and developed?

Honey has not heretofore been produced in the colony in such quantities, and brought within reach of the public at such prices, as would make it possible that it should become an article of general consumption; and until that is the case we cannot look for the operation of the economic laws of supply and demand, which tend to fix market rates. Comb honey has always been prized as an article of luxury for the breakfast table, and those who can afford luxuries have always been willing to buy it in small quantities, when offered for sale in good condition, even at a high price. The enterprising bee-keepers of California made us first acquainted with extracted honey made up in an attractive form, in glass jars or in tins, but still at prices which were sufficiently high to make it retain its character as an article of luxury. Fortunately the modern system of improved apiculture has now been introduced amongst us, has taken root in a soil and climate so highly favourable to its success, and there can be no doubt that it must soon become a very important branch of industry. The New Zealand bee-keepers will soon find themselves in a position to produce honey of prime quality in any quantities that are likely to be required for home consumption, and at a cost which will admit of its general use as an article of food. It will take some time before the public can become thoroughly alive to this fact, and before the people shall have accustomed themselves to look upon honey as one of the ordinary wants of every household, and to apply it to all the uses for which it is peculiarly fitted. Whenever this takes place the quantity of honey required for consumption must be, as I hope to be able to show, very large—so large indeed that there should be little necessity for seeking an outlet by means of export, no matter how great and how rapid the increase of production may become. It rests mainly with the bee-keepers themselves to facilitate the advent of this satisfactory state of affairs by taking the proper measures for placing their products in the best condition, *within easy reach* of the consumers, and at such prices as will insure their use by people of all classes. With this object in view, a spirit of intelligent co-operation between all bee-keepers—for their mutual benefit as well as for that of the public—is most desirable; and it is to be hoped that an energetic action in this direction will be amongst the first fruits of the formation of the New Zealand Bee-keepers' Association.

Comb-honey will probably always be preferred for table use. Although the honey when freed from the wax is undoubtedly purer as an article of food, still there is an attraction for the eye about virgin comb which will secure the preference of those who can afford to pay a higher price for it, as they must always expect to do. It is more expensive to produce, because hives

worked for section honey can never yield as much as those worked for the extractor; more expensive to pack and place on the market: and as it must, as a rule, be retailed in small quantities, the price must include a fair remuneration for the retail seller. It is, therefore, in the shape of extracted honey that we must look to supply the general consumer. Making use of all the modern improvements in the working of his apiary, the bee-keeper can now produce honey in greater quantities, and consequently at a cheaper rate, as above-mentioned, by working with a view to extracting only, while the honey so produced and prepared is in a perfectly pure state, free from any particle of wax, bee-bread, dead bees, or larvæ, and in the best form for transport, for keeping, and for application to all the purposes for which it is suited. In this form it is possible to bring it into consumption at a price which will recommend its use on grounds of economy as well as taste. We all know the many virtues of pure honey in a sanitary point of view, and in how many ways it can be used with advantage instead of sugar, treacle, syrups, butter, &c.; but it is idle to expect that it will be used for these purposes in such quantities as it might be, unless it can be procured as easily, and at the same or nearly the same cost, everthing considered, as those other articles whose place it is to take.

There need be no hesitation in asserting that the honey can be produced now at a price which will admit of its being brought into general consumption on such conditions, provided proper arrangements be made which will prevent the consumer having to pay more than is absolutely necessary for the packages containing the honey, and for the profits of the dealer or dealers through whose hands it has to pass. The producers will have to consider how such arrangements can best be made; in what sort and sizes of packages the honey, carefully graded as to quality, can be most conveniently put on the market for wholesale and for household use; how the wholesale market can best be supplied, direct from the apiaries or through some well-known agent in each town or district; and how the retailers, who deal at present in such articles as sugar, treacle, syrups, &c., can be convinced that it is in their own interest to deal in the same manner in honey, without increasing the cost to the consumer by more than such a moderate amount as will afford them a fair and reasonable profit upon considerable quantities and quick sales.

If all this could be accomplished there can be little doubt that the home demand for honey would be very large indeed. The consumption of sugar in New Zealand is stated to be more than 50 lbs. per annum per head of the population. When we consider how much of this must be used for purposes which would be better served by honey, as the preparation of various sorts of puddings, cakes, and other sweetmeats, the making of some sorts of jams and preserves, the cooking of fresh fruits for table use, &c., it is not too much to assume that for, say one-tenth of the quantity, or 5 lbs. per head per annum, honey might be substituted. An equal quantity might easily be substituted for the use of butter (in some cases), of treacle, syrups, and jams, so that an average consumption of 10 lbs. of honey per annum per head of the population would appear to be a moderate calculation. An ordinary family of five persons could surely, with advantage to their health and comfort, consume as much as *one pound* of



honey per week, or 50 lbs. per annum. Yet to produce the necessary quantity for such a consumption would put the energy of the bee-keepers to the test for a long time to come. The city of Auckland (with its suburbs) contained 47,000 inhabitants last year, has now probably over 50,000, and is rapidly increasing. To supply it would require 500,000 lbs. of honey; and if we take an average apiary to consist of 100 hives, producing 100 lbs. of honey per hive per annum, it would take 50 such apiaries to supply Auckland alone if the consumption were brought up to the rate assumed.

Bay View Apiary, Katikati.

(To be continued).

### THE BENEFITS OF ASSOCIATIONS.

L. J. BAGNALL.

IN apiculture as in almost every other occupation, there is much to be gained by union and legitimate co-operation on the part of those engaged in it. All that we know on this subject is the sum of the experience and investigation of the individuals who have worked with and studied the habits of bees. How little we would now know, and how slow would be our progress, did each individual keep secret to himself his discoveries and experiences. Had Huber, Langstroth, Dzierzon, Quinby, Cook, Newman, Cowan, and many others acted on this principle, what would have been the position of the bee-keeping industry to-day compared with what it now is?

In New Zealand, although we have the advantage of the writings and experiences of these men, still there are so many circumstances of climate, flora, and locality differing so widely from anything treated of by them, that we have very much to learn before we can ensure that measure of success which will crown intelligent and well-directed efforts.

The BEE JOURNAL affords one of the best means possible for disseminating the experience and research of those engaged in apiculture, and in this way constitutes its readers and contributors into a "mutual improvement association." To supplement the JOURNAL, an institution which will afford opportunities for personal interchange of ideas and exhibitions of skill in manipulating, and many other matters of peculiar interest is needed. The formation of associations has supplied this want in Great Britain and America, and will doubtless do so in New Zealand.

Already a number of questions of importance are agitating the minds of many bee-keepers, but probably the finding of a market for honey is just now in the front rank. Notwithstanding that the crop this year is small, there are some who complain that a market is not easily found for what is on hand. This is not surprising in the case of a new article intended for daily use. The British Bee-keepers' Association provides facilities for obtaining a market for the honey produced by members, but I do not think it would be advisable for the New Zealand Association to attempt this at present at least. It could do good work, however, in showing how the wide margin which exists between the amount received by the producer and that paid by the consumer can be reduced. Bee pasturage is probably the most important of all the questions which can interest the bee-keeper. It has so many points which require attention, such as plants to yield continuous pasturage; plants that produce honey as well as profitable fruit; trees that afford shelter and ornament as well

as honey. To ascertain these and the best way to cultivate them, is a very interesting study—full of importance to all. Another work that occupies the attention of the British Association is the sending of experts through the rural districts, giving practical instruction in the use of modern appliances, queen-rearing, manipulating, and the general work of the apiary. A few of these would be very useful in this country. The holding of shows of bees, honey, etc., necessitates one very important item, viz., competent and impartial judges. It is imperative that this matter should have attention before another show is held. Unless exhibitors have confidence that the award will be made by men acquainted with the subject and thoroughly disinterested, great dissatisfaction will prevail, and but few will be found to submit their goods to the judgment of incompetent or prejudiced judges. In exhibitions of every kind it is always difficult to obtain competent judges in a show of bee-keepers' productions. New Zealand is no exception in this respect, and probably the Bee-keepers' Association will have no more difficult duty to perform than to provide such. I trust that the importance of these questions and many others, which must engage the attention of the New Zealand Bee-keepers' Association, will be sufficient to induce a very large number of bee-keepers of the colony to enroll themselves amongst its members.

[The subject touched upon by our correspondent, Mr L. J. Bagnall, viz., the reduction of the wide margin now existing between the amount received by the producer for his honey and that paid by the consumer, is of vital importance to the industry. There is no reason why the shopkeeper or merchant should expect such immensely large profits on honey as those pointed out by "Dunoon" in this issue. It is a saleable article and one that will, with ordinary care, keep for any length of time without deteriorating in value; why, then, should the retailer look for more than the ordinary profits of his business on this particular commodity? We are still of the opinion that one of the best means of rectifying this evil will be by the establishment of respectable agencies as soon as required in all the large centres of population. We shall be prepared to explain our views on this matter when the proposed Association is formed.—Ed.]

### AUCKLAND PROVINCIAL BEE-KEEPERS' ASSOCIATION.

THE first annual meeting of this Association was held on Saturday, 26th April, in Mr Buchanan's Hall, Pukekohe. There was a very fair muster of members, and the chair was occupied by Vice-President Capt. Jackson, who explained that the special business before the meeting was, according to rule 18 of the Articles of Association, the election of the President and other members of the Executive Committee. The Secretary reported that the Association, considering the short time that it had been in existence, was in a very satisfactory condition, there being nearly forty members besides others of whose intention to join he had received intimation. The Treasurer reported that he had funds in hand amounting to £5 5s. The following gentlemen were then elected to office for the ensuing twelve months:—President: Capt. Jackson, R.M.; Vice-Presidents: Messrs R. Hobbs, M.H.R., and J. Brown, Puriri Park; Executive Committee: Messrs Bevan, Kemp, Mayo, Morgan, Shadwell, and Smallfield.

Authority was given to the Secretary to purchase the necessary books and stationery, and members who had not paid their subscriptions were requested to do so without delay. The Secretary then read the following paper by Mr Mayo, Drury, upon—

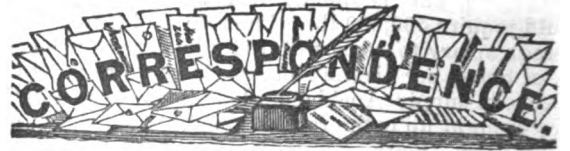
#### HONEY-PRODUCING TREES.

Mr Chairmen and Gentlemen:—It has occurred to my mind several times lately that Government might, at very little if any cost, do a great deal for New Zealand bee-keepers were they in their official capacity to obtain from the other Australasian Colonies information regarding their most useful and hardy honey-producing shrubs and trees. I say trees because I consider that in many respects they are valuable in our country for bee-pasturage. Once established, they require no further trouble from the cultivator, and, if of evergreen tribes, would serve a treble purpose, *i.e.*, produce honey, give shelter, and be ornamental. I would direct your attention to the easy manner in which the Government can obtain seeds—generally from the botanical departments of other Governments for the asking. O.P.S.O. is the “open sesame” *re* carriage, &c., and were the secretary to any Bee-keepers' Association in New Zealand supplied with the seeds of such trees as I have mentioned, I know of no better plan for their dissemination, in order to insure proper care and treatment for their acclimatisation, than giving them to a bee-keeper. The best sign of a thriving, industrious, careful person is, in my opinion, a row of bee hives in his garden; in my travels through life—and I have travelled pretty extensively,—I have always noticed that a well-kept apiary has ever denoted comfort and industry in that home. It is impossible to keep and care for bees in a favourable place and not copy their diligence and patience in gathering up stores for “the rainy days to come.” The next step for Government in the right direction would be to appoint a person or persons to travel the country annually at the proper times to sow clover and such like seeds on Government lands wherever fires had run through them in March or April, any settler's written information being sufficient notice that such fire had occurred. This system would not only give A1 bee-food, but would also so enhance the value of the land that Government would reap cent. per cent. or more on the outlay incurred; it would also tend to the destruction of those abominations to bees and bee-keepers, *viz.*, non-flowering plants—particularly ferns—more than anything else I know of, by attracting cattle to eat and tread them down. When I think of the liberality of our Government in fostering other industries by giving bonuses to them—for example, the iron, cheese, tobacco, fish-curing industries, and many others,—I do think that if we were to ask them to carry out such a programme as the above we would not be asking for more than has already been granted to others. Gentlemen, the choicest exotics which grow in your neighbour's garden yield up their sweets to the bee as readily as the wild flowers, and it is no robbery to send your bees over the fence to gather honey from every opening flower. Keep bees where there are plenty of people to keep flowers, and persuade everybody to grow flowers.

A vote of thanks was accorded to Mr Mayo for his paper, and it was agreed that, in order that the subject be fully ventilated, the members decided to take “Bee Pasturage” as the subject for next meeting, the discussion to be opened by a paper from Mr Beloe. Messrs Shadwell and Robinson, of Northcote Apiary, exhibited and explained a Woodbury Combination Hive of their manufacture. Its points were well examined and discussed, several members deciding to give it a trial next season alongside the Langstroth, as they were not convinced that the latter is verily the *ne plus ultra* hive. A vote of thanks to the Chairman terminated the meeting.

Members at a distance unable to attend are invited to

express their views on “Bee Pasturage” on paper and forward them to the Secretary in time to be read at the next meeting of the Association, which will be held at Pukekohe on Saturday, 28th June.



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.

#### REMOVING BEES.

SIR,—On the 3rd inst. I found that robbers were at work in my No. 4 hive. On the 6th inst. I examined it, and found the bees had left; and as there was pretty well of honey in five or six frames I closed the entrance with perforated zinc. Last Thursday a neighbour told me that she intended to brimstone some bees, so I agreed to take the honey if she would let me have the bees. On Good Friday I went in the afternoon, armed with a goose wing, a smoker, presented to me by Messrs Shadwell and Robinson, Northcote Apiary, near Auckland, (brown paper was the fuel) and, I must say, it did its work better and is stronger made than my “Bingham,” from America,—a bee-veil, a knife, (formerly used for cutting comb out of straw skeps, which cuts sideways or up and down), I was able to get the comb out nearly whole, and one of my swarm-boxes to bring the bees home in. I found the bee-boxes were placed on the side of a hill at an angle of 85 to 40°, with no attempt at a level foundation; two of them had been brimstoned, but not effectually. I shook out the few bees in these boxes, and put my swarm-box over them, which they soon entered. I then took No. 1 stock and drove the bees into an empty box; then shook out the bees and placed the swarm-box over them. I cut out the comb, putting it into a milk-pan and covering with a cloth. Now for No. 2 stock: I drove the bees into the empty box, then shook them out and placed the swarm-box over as before. I never previously saw combs in a hive like these, for they must either have been softened by heat and fallen about, or the box had been shaken and the comb twisted in such a manner that the bees must have felt ashamed of their labyrinth of comb which I cut out and put in the milk-pan. I had purposely left No. 3 stock for the last, as there seemed so many boxes attached to it. I laid hold of the top board, three to four feet long; the centre box came with it, leaving two collateral boxes, with some bees in each. The top board was nailed down. Off it came, and there were two entrances, one at the front and another at the back, close under the top board. Evidently this box had one day been the other side up; the comb was fastened to the bottom. This box rested on another, but not connected. One piece of comb, full half size of the box, lay flat on the tops of the others. That I removed, but had great difficulty in driving these bees into the empty box. Eventually they were added to the swarm-box now full. I cut out of this a mass of comb; it was all sizes and shapes. It was now six

o'clock. I put a cloth on the ground, and placed my box of bees on it, brought up the corners, tied a string round the cloth, and started for home, near a mile and a half, with a long, steep hill before me. I was warm when I got here, but at once cut the string and laid the cloth up to the entrance of my No. 4 hive; then shook out the bees close up, but could not get them in to my satisfaction. On Saturday morning there were as many bees under the hive as in it. I brushed them out, and caught sight of a queen, too late to catch. Soon after the sight of a ball of bees, near the size of a walnut, told me she was there. I put it into the hive, and soon heard a buzz of joy, and the bees began to enter. On Sunday morning again there was a mass of bees under the bottom board. I moved the hive and bottom board carefully, put a clean bottom board where the hive had been, replaced the hive on it, took off the cover, rolled the mat to one side, "as I do when putting in a swarm," turned up the old bottom board, and swept the bees on to the top of the frames, replaced the mat, then the cover. To-day (Monday) the bees are in full work and carrying in pollen. I expect this is now my strongest stock. I cannot conclude without telling you how a girl about twelve years old, dressed in an old bee-veil, and a pair of her brother's breeches under her usual dress, with a pair of old woollen gloves on, helped me in driving and attended to my wants. She was as brave and fearless as any man I ever saw doing the same work.—Yours respectfully.

J. NEWLAND.

Ngarota, April, 1884.

[We are very pleased to think that you have been the means of saving the bees and preventing an act of cruelty.—ED.]

#### TWIN BEES IN QUEEN CELLS.

SIR,—It may not be new to you or your readers, but I have never seen the fact recorded, such as I noted during the past season: In opening some queen cells nearly ready for hatching, I found in one of them two worker bees quite perfect to all appearance, but dead. I have opened a great many queen cells, but never saw the same thing before. I decided at the time to inform you of it, and now do so as a matter of some interest to yourself and the readers of the JOURNAL. Has anyone else seen the same.—I am, &c.,

L. J. BAGNALL.

Hape Apiary, Thames, May 8th, 1884.

[We have come across many apparently unhatched queen cells containing dead worker bees during our queen rearing experience, though we do not remember having seen two in one cell. Strange as it may appear to a person on first making the discovery, we believe it can easily be accounted for in the following manner: Some queens when emerging from the cell do not gnaw the cap far enough round to allow it to hang down, the consequence is that after pushing their way out the cap flies back into its place or nearly so; before it quite closes a worker makes its way in and cannot get out again—the cap in the meantime having closed. The worker is now entombed and dies. We were many times deceived at first through the caps flying back, as we thought the young queens had not hatched, but we always look for this now.—ED.]

#### THE PRICE OF HONEY.

SIR,—Your note of explanation as to your valuation and your expression of opinion on the above subject are so thoroughly in accordance with my own views that it is now unnecessary to forward the communication promised in the May number of the JOURNAL, but I would like to direct the attention of your readers to one little item in connection with it which deserves consideration. Mr Hayr, in his quotation (1st of May) gives 10d. as the wholesale price and 1s. as the retail price of 1lb sections, but an enquiry at one of the leading grocery establishments in Queen-street elicits the information that the price of a 1lb section is 1s. 3d. Now, Sir, I am informed by a member of the Auckland Provincial Bee-keepers' Association, who is pretty well posted on the subject, that these identical sections were bought from Mr Hayr for 10d., price stated in Mr Hayr's report. It will thus be seen that 50 per cent. is the remuneration which a Queen-street grocer thinks reasonable for wrapping in paper a 1lb section and handing it over the counter. I think 25 per cent. would be more like reasonable, and as the section is evidently worth 1s. 3d retail at the present time, the bee-keeper ought to receive 1s., less of course the commission to Mr Hayr, and I would urge upon every bee-keeper who has sections to sell (there are unfortunately not many of them) to hold on and stick up for the shilling. Let us during the next six months consider seriously the idea of starting a retail honey depôt either in connection with a Bee-keepers' Association or not; the above shews that it is needed.

UNCLE TOOK.



#### BAY VIEW APIARY, KATIKATI.

SEASON 1883-84.

A REFERENCE to the Meteorological Observations published in the late numbers of the BEE JOURNAL, will show clearly the exceptional character of the past spring and summer, which we have all found so unfavourable for the production of surplus honey, and will give a good illustration of the influence of climate upon the working of an apiary, and the importance to the bee-keeper of recording and comparing such observations. A cold and wet spring and early summer (the monthly mean temperature showing a deficiency, varying from 1½ degs. in October to 3½ degs. in December, while the rainfall in October and November was one-fourth, and in December one-half in excess of the average), was followed by a still greater deficiency of temperature (over 5 degrees) in January and February, with only one-half the usual amount of rainfall. The commencement of the swarming season and of the honey harvest, fell at much later periods than usual, and the latter was of shorter duration and less productive than might have been expected. In this neighbourhood we extracted for the first time on the 15th December, and for the last time on the 18th March, four-fifths of the season's surplus honey being taken in January and February; while in the preceding season we took more or less honey from October to April, both months inclusive, four-fifths

of the whole being taken in December and January. On the other hand, the season just passed has been favourable for increase of stocks. The swarming period lasted three months, our first swarm being taken on 1st November, and the last on 31st January. A good deal of the honey crop was taken this year from thistles and dandelion, as well as white clover. The two former flowered profusely, and the last one moderately, in January and February. There was a second bloom of all three in March, but although the bees were busy on the blossoms in that month, they did not lay by much surplus honey.

We passed through the winter of 1883 with 28 stocks without any loss, but during the spring six of them showed to be so weak that it was thought necessary to unite them with others, and we commenced the season with 22 stocks.

The total quantity of surplus honey taken was 1656 lbs., of which only 59lbs. were comb honey. This gives an average of 75lbs. for each of the 22 stocks, with an increase from 22 to 40. Five of the best stocks gave an average of 131lbs each, with increase from 5 to 13. Four of the worst gave only 24lbs each, without any increase. One of the five gave 147lbs, and increased to three; another 140lbs., and increased to 4. These are all black or German bees. We have recently received from Mr Hopkins a colony of Ligurian bees which, thanks to the admirable mode of packing adopted, arrived in excellent condition; and we hope to be able next season to compare the results obtained from each of the two races.

T.J.M.

#### FROM WESTPORT APIARY.

SIR,—The nucleus colony of Ligurian bees arrived about two weeks since; it is a very strong one. There was brood in all stages, and the queen has commenced laying since. I intend to unite them to a colony of blacks today. They (the Ligurians) were twelve days on the passage from Onehunga, owing to missing the steamer. Had they have come by the Hawea, as Mr Hayr thought they would, I would have had them in five days.

The full colony you first sent me is now very strong. I have raised four queens from it; two are fertilised and two are about ten days old. I suppose there is very little chance of them getting fertilised, as I have no drones or drone brood in my hives. The Ligurian queen you sent with the full colony has ceased laying, and she appears to be much shorter and smaller than when she was laying. This colony seems to be much more inclined to be cross than my blacks. I always put on the bee-veil, but sometimes get a few stings on the hands. I have been feeding the Ligurians with the acidulated syrup, as recommended in the April JOURNAL. I notice they have sealed some of it over already. One of the Ligurian nuclei I made worked away very well, but could not be induced to raise a queen for themselves out of the ordinary eggs. I gave them at different times four frames of eggs in all stages, each time removing the centre frame and putting the others in their place. At last I gave them a queen-cell, which they soon got a queen from. Some of my black queens are still laying. Does it not seem strange that the Ligurian queens should have stopped so early?

I find I shall have to feed most of my bees to make them strong enough for spring. We have had about

six weeks of dry weather; the bees are busy, but the colonies do not seem to be getting any stronger. There is no doubt about the Ligurians being much better as honey gatherers than our old friends the blacks. In feeding them I put the food in a feeder over the entrance at night, and in the morning it is all cleaned out.

Since writing the foregoing I have gone over my stock of bees and cleaned out the hives, spraying a good deal of the acid solution over the combs and into the cells. I find they have begun to eat some of their stores. You must not think because I have not written of late that I have forgotten you. I look out anxiously for the JOURNAL every month, and am sorry there are not more subscribers in this neighbourhood. My reason for not communicating to the JOURNAL more often is because I am not so far advanced in bee culture as some of your friends up north; nor have I the opportunity of seeing any of the new appliances that are constantly coming out, but I do all I can to help any of the bee-keepers in this district, and try to get them to use the new appliances.

Thanking you for your kindness,—I am, yours truly,  
J. BARKLEY.

Westport Apiary, April 29th, 1884.

[Queens always appear smaller at the end of the breeding season; this is easily accounted for by the non-development of eggs in their ovaries. Italian queens generally cease laying earlier in the autumn than black queens; this is characteristic of them. You should always raise your queen-cells in full colonies. We have often found that very small colonies refuse to raise them. We are glad to hear that you have had proof of the superiority of Italians as honey-gatherers. Many thanks for your good wishes. We shall be glad to have a report of bee-keeping in your district as often as convenient. It is only by each contributing their mite that we can learn the progress of our industry, and so profit by the knowledge.—Ed.]

#### FROM KARL BROS. APIARY.

SIR,—I herewith send our report for the season of 1883-84. We started in the Spring with 120 colonies, but as the weather at that time continued so wet and cold it kept back breeding, so that when the honey season (which only lasted about a fortnight with us) set in, a number of our colonies were not strong enough to receive the second story; as we always look to have 9 or 10 frames of brood in the lower hive before putting on surplus boxes. We then took frames of broods from 55 hives to strengthen the remainder, leaving only one or two combs of bees, brood, and the queens in the hives, filling up with frames with starters only, leaving the bees to build their own comb. As the brood increased we occasionally took out a frame to make artificial swarms with, so that the 55 hives were kept entirely for increase, and the 65 were run for honey. From these we took 4,200lbs., mostly extracted, some flax honey we had to strain; we have also stored away 1,500lbs. in the combs for spring feeding. We sold most of our honey in bulk at 4½d per lb., and small parcels at 6d. Our colonies now number 148 generally in good condition for winter.—Yours, &c.,

KARL BROS.

Ohaupo, May, 1884.

## FROM OUR CONTEMPORARIES

### CARNIOLANS.

(Written for the Michigan Bee-keepers' Association)

BEFORE plunging directly into the prominent characteristics of this new race of bees, permit me to dwell for a few minutes on the distinctness with which the characteristics of the several races show forth, and endeavour to draw some well marked, and distinct line, between the race under consideration, and those with whom we are all more or less familiar.

We must, however, in a discussion bearing upon the characteristics of a bee race, take some well-known one, whose good characteristics are plainly visible and accept it as the standard from which we must judge the good and bad points of the others.

In forming this judgment, however, we must not be biased by the idea that our standard is entirely perfect, for each race of bees possesses some desirable characteristic not found, to the same extent in any other race.

Considering these facts, I will take the well-known race, Italians, as the standard, and judge the Carniolans by them.

You know well enough what an improvement the Italians are over the blacks. The difference here is plainly marked. The blacks are small in body, have no golden bands, have not the snap, do not get up so early, or go to bed so late, do not defend their hives against the inroads of the spider and the moth, nor stick to the combs, &c., &c. These differences in character and form are almost as marked as between the white man and the negro.

But when we compare the Cyprians and Holy Lands with the Italians, we find very little difference in color or shape, but, on the other hand, quite a large one when we consider the gentleness of the two races, and the prolificness of the queens.

You all know well, dear brethren, that we are in search of the "coming bee." I do not claim that honour for the Carniolans. No. I declare that throughout my experience, both the Cyprians and the Holy Lands, have proved themselves the coming bee, so far as I was concerned; particularly when I attempted to manipulate them—they too were always the coming ones—and I was generally going.

The Cyprians and Holy Lands may have longer tongues than the Italians, but as I have said in a former paper, "save me from a bee with a big proboscis at one end and a bigger one behind, for they seem to develop both ends at once."

As before stated, the difference between the Italians, Cyprians, and Holy Lands, is not as well defined as in the case of the Italians, blacks, and browns.

But when we come to the Carniolans we see much difference in form, colour, and characteristics, as compared with any of the other races.

Of course, my observations have not been so extended with the Carniolans as with the Italians,—but sufficient to give you, I hope, some ideas as to what they are.

Having given a general glance over the several races, let us centre down on the Carniolan and look at him individually.

We will first take up the outward appearance. It is

a trifle longer in body than the Italians, and quite a little plumper—in other words—a larger bee.

Instead of the golden rings, the whole body is of a deep, dark brown, which, however, is relieved by the many lemon-coloured hairs situated on the back and the distinctness with which each ring of the abdomen is marked by a heavy row of the same, along its edge. These hairs are longer than on the Italian and are much brighter, and give the whole bee a greyish appearance, so marked, that in a hive full of Italians, hybrids and blacks, Carniolans can be pointed out as easily as pure Italians.

The queen looks like a grey, dark Italian, that is to say, she is of a lighter brown than her bees, especially on the first three rings of her abdomen. This may indicate, that way back, some remote period, Carniolans may have sprung from the Italians. We must not look upon the difference in colour between the queen and her workers as strange, for we must consider the fact that there is a greater difference in the case of the Italians themselves.

The queens do not appear quite so pointed in body as the Italians, but broader across the hips, if I may be allowed the expression. However, we shall probably find just as much difference in queens, as to size and colour among the Carniolans as among the other races.

I do not believe this will extend to such a degree that we shall ever find Carniolan queens with yellow bands, producing grey bees having no bands of colour.

We now come to the all important point—their honey-gathering qualities. On this I can vouch that they are in all things equal to the Italians. They get up as early, go to bed as late, and work just as hard at noon day. Whether they will prove as good, or better than the Italians, when it comes to box honey, I am at present unable to state.

They stick to the combs when withdrawn from the hive just as well as the Italians and are more quiet, I think, never running over them. They are also more easily shaken off the frames, which is a great thing when we are working for extracted honey. Their flight is also more direct, they never dandle in front of the entrance as do the Italians sometimes, but enter and leave in direct flight.

As to prolificness, I can vouch again that they are not only equal, but superior to the Italians in this respect. By confining the queen to a few frames by perforated division-boards, we can utilize this prolificness to good advantage.

The best brood chambers to be found on our roof this summer were those of the Carniolan queens. They lay regularly, and shape their brood chamber to suit the frame, as do the other races.

When very young, Carniolans have a silvery appearance, owing to the hairs on the body, which at that time are of a shiny white.

If we can call Italians "nuggets of gold," we can with equal propriety speak of the Carniolans as "Drops of Silver."—JOHN ASPINWALL.

We would remind all those wishing to enroll themselves as members of the proposed New Zealand Bee-keepers' Association, to send in their names and subscriptions at once to the acting secretary, Mr. H. H. Hayr, High-street, Auckland.

We would advise all new subscribers to obtain the back numbers of the JOURNAL while they are in print. They will be found invaluable for reference.

**ADULTERATION OF SWEETS BY GLUCOSE.**

THE following communication from the able pen of L. L. Langstroth on this subject will be read with more than ordinary interest :

My friend, Mr D. A. McCord, wishing to test the value of grape sugar, as a bee feed, wrote to a glucose manufactory asking their prices. This reply came :

—Feb. 21, 1883.

DEAR SIR,—Yours of the 13th to hand. We will quote you glucose at 4½ cts. per 100 lbs.—in 100 pound kegs. You will find it fine food for producing honey, as pure honey analyzes 76 per cent. pure glucose.—Yours truly,

THE GRAPE SUGAR Co.

Mr McCord wrote again, stating that he wanted grape sugar for a spring bee feed, and not glucose, and received the following :

—Feb. 26, 1883.

DEAR SIR,—Yours of the 24th received, and shall have attention. We think if you will try it, you will find that you can produce honey very fast, and of fine quality. They feed it very largely in California, and make money out of it. Would like to hear from you after you try it.—Yours respectfully,

THE GRAPE SUGAR Co.

Following this letter came glucose instead of the grape sugar ordered. It was about as thick as good honey, and almost as clear as water. As the bees stuck fast to it and died, no use was made of it as a bee feed. Its taste was sweetish and decidedly bitter. No name was given in the above letters but that of the Company, called after the place where their establishment is located.

Prof. Marsh, of the Miami University Training School, furnishes the following analysis of that glucose :

OXFORD, O., July 5, 1883.

DEAR SIR,—I have tested the sample of glucose syrup which you handed me for analysis, and find that it contains large quantities of sulphuric acid and sulphate of lime. The sample of pure honey was found to have a slightly acid reaction.—Very respectfully,

E. F. MACSH.

*Lime and free sulphuric acid!* no wonder it has a bit-terish taste. In order to "see what would come of it," Mrs McCord used it in the baking of some gingerbread. The product was poor stuff indeed—not having the sweetness of ordinary corn bread. It *puffed up* remarkably—a thing easily accounted for when the analysis showed how rich the glucose was in sulphuric acid. Syrups, etc., increased in volume by glucose mixtures, are no more to be commended than this expanded gingerbread.

"Pure honey analyzes 76 per cent. pure glucose." It has never yet been made to appear that glucose as pure as that contained in honey or fruits can be *cheaply* produced. If the time shall ever come when it can be, it would still be a fraud to use what has so low a sweetening power (only about one-third that of cane sugar), for adulterating molasses, maple syrup, sugars, candies, etc.

A friend of mine was told by the captain of a boat on which he was travelling, that he carried many barrels South to be used in adulterating their sweets.

Another friend informs me that he saw 40 barrels of glucose at one railroad station, all of which was to be used in adulterating maple syrup.

Mr Chas. F. Muth, of Cincinnati, O., perhaps the largest dealer in honey in the West, and who has done so much, both by precept and example, to discourage the sale of adulterated honey, has had glucose recommended to him by large dealers in it, as a good thing to mix with honey,

so as to "make money out of it." But one time he said to me, that in his opinion, most of the so-called maple syrup in the Cincinnati market was largely glucose.

L. L. LANGSTROTH,  
Oxford, O.

July 3, 1883.

The "original" letters sent to us by Mr Langstroth have been scrutinized and returned to him. They are correctly printed at the beginning of the above article. Just think of the villainy of the assertion that "they feed it largely in California," to deceive bee men in Ohio, and get them to engage in the nefarious business of adulteration.

No matter if the large trade in California honey is ruined by this false report, long as "they (the glucose manufacturers) make money at it.

It is high time that stringent laws were enacted and rigidly enforced against this hydra-headed monster adulterator.—*American Bee Journal*.

**HOME MARKET FOR HONEY.**

THERE are some who have no trouble in disposing of all the honey they can produce; but many cannot sell their honey, especially extracted. When I produced only from 700 to 1000 lbs of honey, I could scarcely find enough customers to consume it; but now, with but little exertion, I can dispose of all the honey I can produce, which was 8,000 lbs in 1882, and 21,000 lbs in 1883. This was nearly all extracted honey, and nearly all taken at my door by customers, who came with crocks, pails, jugs, and large milk cans in which to carry it away. They come every season in the same way, for I have never sold them honey that will get thin and sour, if not kept in damp cellars; nor have I ever sold them honey that was extracted and ripened after extracting (as some tell about). I never allow a pound to be taken away that is not first-class in every respect. We are careful not to put a pound of comb-honey on the market unless it is perfect, so far as ripeness and being sealed up is concerned; we will not offer honey with the top-half of comb sealed and the rest unsealed; it shows for itself, deception cannot be practiced with comb-honey. When a comb is extracted, like the section I have described, it is trying to deceive the customer who buys such honey, and I admit he is deceived, but in most cases not more than once or twice, for a large majority of customers will say: "It makes my throat smart. I do not like it, and will not buy any more." Some will say it is adulterated. Now, such work as this is uncalled for, and I believe anyone can build up an immense home trade for extracted honey. All that is required is to have as good an article *out* of the comb as is sold *in* the comb. My price for extracted has always been 9 lbs for a dollar, or 10 cts. a lb, for 50 lbs or more.—D. White, in *American Bee Journal*, March 5th, 1884.

**SWITZERLAND.**

A NEW METHOD OF CURING FOUL BROOD.—So far I had managed to steer clear of foul brood, but at last I brought it into my apiary by the purchase of a stock near Versioix. I was unable to bring away with me the one I had selected in particular, and the man sent me the wrong one. I may mention, by way of explanation, that this hive was not one of the movable frame principle, and it afforded, consequently, no facilities for examination. However, the stock declined very rapidly, and in the end

it was robbed by the others. But when I at last discovered the disease, three out of the eleven stocks of which my apiary consisted had already perished. I then took away from all the others which showed signs of infection, two or three of the worst combs, and then poured repeatedly into the corners of the hives where there were no bees a few drops of pure essence of *Eucalyptus Globulus*, which I receive direct from Grasse, Alpes Maritimes, France. I may say, in passing, that previous to my making the experiment I had made great use of this essence for curing inflammation of the gums and for other operations of a surgical nature. Old combs were all carefully cleaned and dipped into water mixed or perfumed with this essence before being again used. The result was that all my hives revived, and in the course of this year no signs of foul brood have manifested themselves in my apiary.

Acting upon the principle that prevention is better than cure, last autumn I perfumed with the same essence all the syrup I supplied to my bees, and it is to this precaution that I attribute the increased energy and vitality which have distinguished my bees until the end of the season. The perfume thus imparted to the syrup is a most agreeable one. As you probably know, this essence is anti-febrile, anti-scorbutic and anti-inflammatory; it possesses, moreover, the advantage of being neither acid nor poisonous like all the salicylic acids.

I am so pleased with the discovery as an efficient and simple remedy for foul brood that I should like to see it carefully tested by those who have more time than I at their disposal.

The *Eucalyptus* is used in many surgical operations in place of salicylic acids. I have myself used it for the last six years as a disinfectant for the mouth, in fact it was just in using it in this way that I was led to try it as a remedy against foul brood.—H. BAUVERD. (*Translated from the Bulletin d'Apiculture pour la Suisse Romande.*)

## 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.—Ligurian Bees.**—The two colonies of bees I received from you have each done very differently to the other, though both are apparently in very good health. One of them has increased to a very strong swarm, and I have taken from them some 20lbs of honey, while the other has not sensibly increased in numbers, and has scarcely made as much honey as will answer for winter stores. The queen of this last is very much smaller than that of the other. I would be glad if you could give me any explanation of this difference through the columns of the BEE JOURNAL.—Yours, &c. H. ROOPE, Ohineroa.

**REPLY.**—We cannot account for the difference in the working of the two colonies unless on the supposition that the one you find the weakest now threw off one or more swarms. The queen being smaller than the other would appear to point to this as being the case. Probably it was a young queen you saw with but few eggs developed in her ovaries; in this case she would be small as compared with an older and more matured one.

**QUERY.—Wired Frames—Extracting—Comb Lever.**—Sir,—I notice in a late number of your JOURNAL a quotation from the *American Agriculturist* advising the use of wired frames. This is, I imagine, to strengthen the combs for extracting, and I should be glad if you could give directions for wiring frames, together with the size of wire used, as I suppose it is not the ordinary transferring wire?

I find that my extractor (single comb) will not extract the honey from worker comb without breaking them, though it clears what little drone comb there is easily enough without injury. My combs are, of course, new. I have adopted your correspondent F.D.N.'s plan of scraping, which is a messy process, involving straining with all its objections, but far better than crushing up the combs. Would heat enough to make the honey more liquid not make the combs still more fragile? My honey is exceedingly thick, being principally obtained from gums and wattles, though there is plenty of white clover, dandelions, and cabbage palm, with manuka, a little flax, and much gorse.

I have increased this year from 7 to 28, but owing to the bad season have not taken much comb-honey from the top boxes, but the lower ones are full, and have been deprived of several combs, which the bees filled again. How do you fix the whole sheets of foundation in the section boxes? There is no groove in them as there is in the English boxes, and the comb-lever will not work on the whole, nor, so far as I am concerned with the starters either. I have, therefore, adopted the plan of softening the edge of the sheets by touching them lightly on a hot plate, and then pressing them into the sections, but many fall down.—Yours, &c.

THOMAS AWDRY, Taderoft, Rangatikei.

**REPLY.**—An article on wired frames and foundation will be found in another column. There will always be more or less difficulty in extracting honey gathered from our native flora while combs containing it are new. We would advise you to remove the tougher combs from the lower hives as they are emptied during the winter, and substitute others, using those you remove for extracting purposes. If the weather is cool it would be advisable to warm the combs before putting them in the extractor—the temperature of the extracting house should be about 90 deg. when extracting thick honey. We fasten all our comb foundation in the section boxes with the lever. No groove is required with the lever, it is one of the most simple and useful appliances we have. Fasten your lever firmly to a bench, place the section box against the stop and push the lever forward, lay the edge of the foundation on the bottom of the section so that about an eighth of an inch of it will be under the lever; now lift the handle so that the lower end presses on the comb, and draw the lever back with a sliding movement first bending the comb up against end of lever that it may hang perpendicular when in position. A little honey should be put on the end of the lever to prevent it sticking, and the comb should not be brittle.

**QUERY.—Spraying Combs—Feeding with Salicylic Acid Solution and Syrup—Dead Brood—Apiary Assistant.**

No. 1.—Is there any danger of spraying too much salicylic acid solution over the combs?

2. If I have to feed my bees, would it be enough to give them the food as recommended in April number of BEE JOURNAL without spraying the combs previously?

3. In a healthy colony is there usually any dead brood in the combs, say, for example, five or six in each of the combs?

4. What method do you adopt to keep queens laying late in the season?

5. Is there any lad or man in your neighbourhood you could recommend to take charge of a large apiary?

Westport. J. BARKLEY.

REPLY.—1st. We think not, but there is no necessity to do more than send a fine spray into all the cells and round the edges of the combs and frames. 2nd. If there are any signs of foul brood about we would recommend you to spray the combs, as it is not likely that the acidulated food would be deposited in all the cells. 3rd. No, not usually; we should be very suspicious of dead brood; there may not be anything very serious in it, but we would take the precaution to spray the combs. 4th. By covering the bees up snug and seeing that there is plenty of food in the hive. The late severe frosts effectually put a stop to all breeding with us. 5th. None that we know of. Previous to receipt of your queries we had prepared an article for this number on "Apiary assistants," which please see.

#### CIRCULARS RECEIVED.

FROM Messrs Bagnall Bros. & Co., Turua, Thames, their Circular and Price List for 1884-85 of hives, artificial comb-foundation, and general supplies for bee-keepers. It is a very neatly got up, profusely illustrated pamphlet of 24 pages and cover, enumerating all the modern appliances a bee-keeper requires. We notice a considerable reduction on former prices for several of the articles and some very useful hints given on making up hives, &c. It is sent free on application, and will well repay the trouble of sending for it.

FROM Messrs Shadwell and Robinson, Northcote Apiary, near Auckland, their Leaflet Price List of Apiarian Appliances, including hives, section boxes, flat-bottomed comb-foundation, wooden based ditto, safety smokers, feeders, bee veils, candy, queen cages, &c., &c. Their prices for the above are very reasonable, and can be ascertained by sending for their price list—free on application. Messrs Shadwell and Robinson's advertisement appears in another column.

#### NOTICE TO CORRESPONDENTS.

COMMUNICATIONS from Messrs J. Newland and T. G. Brickell will appear in our next. We shall be obliged if the latter gentleman will send a description with measurements and method of making the chaff hive of which he has sent us a photo.

#### BEESWAX.

PARTIES sending us beeswax will oblige by putting their name on the packages, as omitting to do so is apt to cause confusion and delay in forwarding cash. Amongst the number of parcels we receive at one shipment here it is difficult to say where each has come from unless there is some distinguishing mark on them.

#### HONEY PLANT SEEDS.

WE have a limited quantity of the following Seeds FOR SALE, at One Shilling per packet, post free—Spider plant (*Cleome punicea*), Figwort (*Scorfularia nodosa*), Giant Mignonette (*reseda gigantea*), Catnip (*nepeta cataria*).

The above seeds are of this year's growth, and our own saving. A packet of each of the four kinds will be sent to any address in the Australian Colonies on receipt of 3s 6d.

I. HOPKINS,  
Matamata Apiary.

#### METEOROLOGICAL OBSERVATIONS FOR THE MONTH ENDING APRIL, 1884.

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

Month.	Barom. corrected (inches.)	Max. Temp. in Shade.	Min. Temp. in Shade.	Mean Temperature.	Solar Radiation.	Minimum Temp. Exposed.	Rainfall in Inches.
APRIL	30.40	65.4	53.1	59.3	124.1	45.5	1.21
	30.06			62.1			3.77

Remarks.—From 1st to 4th fine, clear, calm weather, with light N.E. airs; from 5th to 9th, unsettled and showery, strong breeze from N.E. on 8th and 9th; from 10th to end of month, remarkably fine settled weather, with light variable winds. Barometric pressure unusually high throughout month; mean temperature under the average; rainfall very small, not one-third of the average for the previous seventeen years.

#### HONEY MARKETS.

AUCKLAND, June 1st, 1884.

HONEY.—The demand for first-class honey remains about the same as last month. Sales effected as follows:—Comb in 11b sections, wholesale, 9d to 10d; retail, 1s. Extracted, in 11b tins, wholesale, 7½ to 8d; retail, 11d to 1s; glassed, in 2lb jars, 8d per lb; retail, 1s; 60lb tins, wholesale, 6d.

BEESWAX.—Scarce; buyers for clean yellow, 1s per lb; dark, 10d to 11d.

H. H. HAYR, High-street.

The demand for good honey remains about the same as last month. The prices are as follows: Wholesale, 11b tins, 7s 6d to 8s per dozen; retail, 11b tins, 11s to 12s per dozen.

AUCKLAND AGRICULTURAL AND MERCANTILE Co., Limited.

#### ENGLAND.

No quotations for March in *British Bee Journal*. The value of honey imported into the United Kingdom during the month of January, 1884, amounted to £2034. Total value of imported honey for the twelve months ending December, 1883, £33,778.—*British Bee Journal*, March, 1884.

#### AMERICA.

NEW YORK, April 7th, 1884.

HONEY.—White clover and basswood, in 11b and 21b sections 17@18c.; dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX.—30@37c.

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

SAN FRANCISCO.

HONEY.—There is not enough doing to enable us to give much more than nominal quotations. The demand is very light, and present stocks are of small proportions. Holders are anxious to close out all offerings before the new crop begins to arrive. White to extra white comb, 15@18c.; dark to good, 10@13c.; extracted, choice, 7@8c.; dark and candied, 5c.

BEESWAX.—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.

Correspondence for publication may be sent at book post rates *i.e.*, one penny for every two ounces, providing the book 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.

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