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CALENDAR—NOVEMBER.

THE weather during the greater part of the last month was of unusual severity; in fact, such as we do not remember ever having experienced so late in the spring before; it was nothing but a succession of bleak wind, hail, and rain storms; reminding one of the depth of winter, rather than of the second month in spring. We gather from various reports that the late stormy weather has been general throughout New Zealand and a part of Australia. The honey season in consequence has been retarded to a considerable extent; we believe it will be fully a month late. During the month of October an extra quantity of food is consumed in each hive in the rearing of brood, and in an ordinary season bees are able to gather sufficient to supply their wants and start them comb building early in the month; but up to the time of writing ours have been using their old stores, and comb building has scarcely commenced yet; luckily they had a good supply of food from last season. Feeding should be attended to where stocks are short of stores; for under no circumstances must bee-keepers lose sight of the golden rule of bee-keeping—"Keep your stocks strong," and this cannot be done unless they are well supplied with food. Those who keep their bees well up to the mark will be amply repaid as soon as the season sets in, for we have found that the yield of honey in late seasons is, as a rule, very heavy when the harvest commences.

Owing to the late severe weather our queen rearing, swarming, and other operations are rather backward; we had our first batch of queen-cells—a splendid lot—ready for transferring to nuclei on the 9th of last month, but for over a week we could not open a hive, and the consequence was they were all destroyed, so that we had our trouble for nothing. We have only just been able to start another lot, and we hope those of our customers who have ordered queens and nucleus hives will be pleased to exercise a little patience until we can send them, being assured that we will forward them as soon as possible.

Some of the directions given in last month's calendar will apply to this month. Where natural swarming is

allowed after-swarming should be prevented by cutting out all queen-cells but one, and giving more room by putting on a top box. The spare queen-cells may be made use of to form nucleus colonies, and thus keep a supply of queens on hand.

SURPLUS BOXES.—In our October calendar we gave directions as to the time for putting on top boxes; we will now give a few hints with regard to the same. Of course we can only give in each monthly calendar a general idea of the time for performing the various operations; a great deal must, of necessity, be left to the judgment of each individual bee-keeper. There are many things that will tend to vary the time, such as the weather, difference of locality, strength of colonies, etc., so that he or she is likely to be most successful who works according to circumstances; for, as has been often remarked, "there can be no hard-and-fast rule laid down in bee-keeping." To return to our subject. As before stated, top boxes should be put on when the lower hives are getting pretty full of bees and brood, and honey is being gathered in fair quantities. Previously, however, to putting them on, the lower hives should be examined and if the combs therein contain much honey it should be extracted to give the queen plenty of room to deposit eggs in the brood nest proper. Care should be taken when extracting honey from combs containing brood not to turn the extractor too fast, as this would throw out or injure the brood. The above with regard to extracting from lower box will apply in either case whether running for comb or extracted honey.

EXTRACTED HONEY.—When working for this the top box should be a full storey with the ordinary brood frames filled either with comb or comb-foundation. When about to put it on, one or both of the outside combs of the lower hive, if containing honey only, may be put into the top box, supplying their place with empty combs or frames of comb-foundation which may be put near the centre of the brood nest. The combs and adhering bees being taken from the lower and placed toward the centre of the upper box induces the bees to take to it more readily. If the weather is cool the mat should be covered down snug, the cover put on, the date noted, and the hive left undisturbed for a few days. If honey is coming in pretty rapidly the top box will soon be taken possession of, and as the combs are filled the extractor may be brought into use. With regard to ripening the honey, most bee-keepers are of opinion that it can be ripened outside as well as inside the hive; after experimenting in this direction we are amongst those who think so. But there are some experienced apiarists who do not believe the honey is so good as when allowed to remain in the hive until it is capped over. Where it is required to remain on the hive until it is capped or sealed, a second top storey may be needed if there is a good flow of honey, as the combs would probably be nearly all filled before any was completely capped. In this case the bees would be getting short of room, and would make preparations to swarm, thus curtailing their season's yield. To guard against this, as soon as the top box is about three-parts full it should be lifted up and the second box placed underneath. This arrangement not only places the partly finished combs where they can be easily taken away when capped, but assists to keep the brood nest cool by giving the extra room immediately above it. As soon as there

is a force of bees to spare from the upper top box they will commence to work in the lower one. The combs when capped may be extracted, and the box will then be ready to take its former place if necessary. When honey is coming in slowly go slow with the extractor so as to make sure of leaving the bees plenty of food, in case the flow stops suddenly.

RIPENING HONEY.—If it is intended to ripen the honey after extracting, the combs may be emptied at any time; in this case one top box would be sufficient. For ripening honey, the most simple way is to let it stand in wide mouth tins, waxed barrels, or any other suitable receptacle in a very warm room. The vessels should be covered closely with some open material like cheese-cloth to keep out the dust and allow of the evaporation of any watery particles the honey may contain. In the space of a short time—depending, of course, on the state of the honey when extracted, and the weather,—the honey will become quite thick and ripe, when it may be marketed. Every care must be taken to see that it is perfectly ripe before tinning, or it will ferment.

COMB HONEY.—We have found in raising comb honey that two half-storeys are preferable to a full one as a top box. When a full storey is used the lower tier of sections are usually filled first. This, owing to the force of bees working immediately above the brood nest tends to make it extra warm, and unless the partly filled sections are exchanged with those in the upper tier swarming is likely to result. Our method in working the two half-storeys is to put on one half-storey first, after seeing that there is plenty of vacant cells for use of the queen below. If we have any partly worked sections on hand we put them in one or two of the central frames of the half-storey to entice the bees to take possession. We occasionally leave out one frame and spread the others out a little until the bees have started to work in the sections, when we close them together and put in the frame. When work has got fairly started in the first half storey we lift it up and put on the second *underneath*. If honey is coming in very rapidly a third half storey may be required before the upper one is ready to remove, as every cell will require to be sealed before the sections are ready for market. Each section, as it is finished, should be removed from the hive, cleaned from propolis, and stowed away in a crate ready for market.

VENTILATION.—Considered in connection with swarming, ventilation is a very important matter. When surplus boxes are on swarming *must* be kept down by all possible means if we desire to get the best results in honey from the bees. By never allowing the bees to get over-crowded for want of room, nor the interior of the hive too hot, we have generally been able to keep the swarming fever down within reasonable limits. We have already stated how to guard against the former, and will now point out how we accomplish the latter. As the warm weather sets in and bees commence fanning at the entrances we push the hives forward on the bottom boards a little occasionally, until we have the entrances enlarged to their full extent. Then in the very hottest weather we raise the hives off the bottom boards a quarter of an inch or so all round with wedges, and, if necessary, raise the cover a little, but still keeping the mat on the frames. Raising the hives not only allows of more ventilation, but gives better facilities for the bees to get in and out of them at their busiest

time. Of course, as soon as honey is getting scarce we lower the hives and gradually contract the entrances so as to keep out robbers. There need be no fear of robbing while there is plenty of honey to be gathered in a legitimate manner.

LEANDRI'S SOLAR WAX EXTRACTOR.

We notice in the June number of the *British Bee Journal* for this year the description of a very ingenious, simple, and economical wax extractor; the invention of an Italian, Mr Giuseppe Leandri. This will prove a great boon to bee-keepers should it come into general use, which, no doubt, it will.

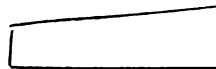
It is generally admitted that a very large quantity of wax is wasted annually amongst bee-keepers, especially amongst those who keep but a few hives. This is due in a great measure to the want of a ready means of melting old combs and pieces of wax that accumulate about the apiary. For there is no question that with the ordinary means at the command of small apiarists, the melting and cleaning of wax is one of the most untidy and unpleasant operations connected with bee-keeping. Although the Gerster wax extractor answers the purpose very well, it is best adapted for melting large quantities of comb. Besides, it would scarcely pay the small bee-keeper, who has only a pound or two of comb occasionally to melt, to get one of these. And this is where the chief waste has been; for rather than clean small quantities in the usual manner they have thrown it away as not worth bothering with. Yet if all the pieces of old comb were saved and melted into wax bee-keepers would find that in time a considerable addition to the income from the apiary would be obtained from this source. Consequently every apiarist will hail with satisfaction the introduction of a simple and inexpensive machine that will answer the purposes of all, and do its work effectually and economically. The solar wax extractor is so simple in construction that any bee-keeper will be able to make one for his own use; and it may be set to work in less than a minute by merely placing it in a sheltered position where the rays of the sun will fall directly upon it. The following is Mr John Iamaschella's—an apiarist of note—description of Mr Leandri's invention:—

"The basis from which the power for melting wax in these machines is derived are the rays of the sun descending upon a pane of glass placed at a certain distance from a metallic sheet, between which the finely-broken up combs intended to be operated upon by exposing the extractor in a direct line with the sun are placed.

"In the case of one seen at Palermo by Professor Puglia, instead of being furnished with only one pane of glass as in Leandri's, it was constructed with two, slightly convex, thus forming, it is believed, a more powerful lens. The comparative advantage or disadvantage of this arrangement is one which our scientific friends will undoubtedly hasten to settle satisfactorily. In the meantime, suffice it to record that the main basis of a new and sound principal for extracting wax by means of the sun has been, thanks to the above-named inventor, added to our scientific knowledge. Time and experience will soon determine what the most convenient shape of the new apparatus is to be. At present,

however, the one adopted forcibly reminds me of a small garden frame with glass on."

Our own idea for making a cheap one is to take a small box, such as a gin case, and take out one side, cut the ends diagonally from upper part of back to say 4in from bottom of front, thus—



End of box.

Nail a thin 2in batten across the upper part of front to strengthen it, and two 1in battens on the bottom of the box to raise it off the ground. Line the ends and sides of the box with tin, perforating the strip for the front with small holes to allow the molten wax to run through, and place a stout sheet of zinc or galvanized iron on the bottom. A clean kerosene tin cut to fit would do for lining the box. Now get a sheet of stout glass and make a small frame to put it in the size of the sloping top of the box; hinge the frame to the back and the solar wax extractor is made. When in operation the machine might be given a slight incline to the front to facilitate the melted wax running through the perforations. The invention of the solar wax extractor marks another step in advance in apiculture.

OUR REVERSIBLE BASKET SIX-COMB HONEY EXTRACTOR.

We have now received our new extractor and according to promise give our readers a description of it.

The case or cylinder inside of which the framework supporting the comb baskets revolves, is made of 1½in. timber, lined with stout tin. It is hexagonal in shape, 44in. in diameter at its widest parts; each of its six sides measuring 22in., making its circumference 132in.; height, 33in.; the above are outside measurements. Wood is the most suitable material for the case, as it keeps the machine firm while at work.

The outer part of the framework upon which the baskets hang is cast metal; cast in pieces to form each of the six sides. These pieces are shaped thus II, the top and bottom bars being 16½in. long, and the depth of the frame 19½in. The bars are 1in. in width, by 3-16in. thick. At the corners where the sides join each other, socket-pieces are riveted in the angles at top and bottom. These pieces, as well as securing all the sides together, answer as parts of the hinges for the comb baskets.

The comb baskets are made of tinned wire cloth 2in. wide by 19in. deep, secured at top and bottom by two bands of metal like the bars of the framework. At one end of each of the bands arms project 2in.; each being furnished with a pintle which is made to fit in the socket-pieces and so form hinges like those of a field gate. These hinges allow of the baskets being turned so as to take each other's place, and thus bring the opposite side of the comb to the front, after one side has been extracted; the baskets turn towards the centre.

The spindle, or journal, is a ½in. round iron bar 37in. long. A short distance from the top and bottom ends are two six-sided nuts. From each of the six sides of each nut the supporting arms of the framework project;

these are made of $\frac{3}{4}$ in. round iron, their ends being screwed on to the framework. The lower part of the spindle works in a socket fastened on to the bottom of the case while the top passes through a curved bar of iron which is screwed on to opposite sides of the case. A handle 10 in. long fits on to the spindle above the bar of iron and is made secure by a screw-nut. At one side of the bottom a honey-tap is fastened in, and the extractor is complete.

Our extractor has been made much heavier than was necessary, and than we would have had it, had we been able to have superintended the making of it. We consider that a six-comb extractor like the above made of less costly material should be made for about £10.

The advantage of having such an extractor in a large apiary must be at once apparent, as six combs can be extracted at one time without the necessity of lifting them out until all the honey has been extracted from both sides.

BEE GLOVES.

In answer to several enquiries respecting India-rubber bee-gloves, we may state that we do not think they are at present obtainable in these colonies. Messrs. Bagnall Bros. having had their attention called to this matter, will, no doubt, include bee-gloves among their apiarian appliances in future.

In September, 1881, Mr Abbott, the then proprietor of the *British Bee Journal*, introduced a very useful bee-glove that was said to completely protect the wearer from stings when manipulating the bees. The following is the paragraph introducing the gloves, which also explains how they are made:—

"The discussion on the relative merits of India-rubber, as compared with other gloves, induced us to recommend that knitted cotton or worsted gloves, covered with gauntleted 'Berlins,' be used, and having been tried and approved, we have had a quantity of the latter made of extra length, to come about half way up the arm, and effectually prevent bees getting 'up the sleeve.' In dealing with our Syrians the other day we found them specially useful; the bees had punished one of our juniors considerably, and driven him away to pick out the stings about his wrists, but covered with gloves, which we had dipped in water when on, not a bee touched them except in two instances—to suck up the moisture. The gloves are little more than half the price (per double pair) of the India-rubbers, and there is the advantage that any needle-woman can repair them. In warm weather, when wetted with water, they are a real luxury as compared with those in which the hands are bathed in their own perspiration. They are the best protection we know of, the bees do not try to sting them. If they did they could scarcely sting through them, and supposing that to have happened, the poison would be diluted considerably by the water in the gloves. If they were wetted with an alkaline solution, there would be perfect immunity, for the attempt to sting would bring acid and alkali in contact, and the bee would get a serious 'blowing up' from the explosion of the generated gas. What fun it would be if the attempt to sting should thus recoil on the stinging end of the bee."

The above kind of gloves should be easily procurable. We would suggest that an ordinary pair of cotton

gloves be covered with a thin pair of woollen ones, having a pair of stocking legs sewn on to them for gauntlets. We should, however, have thought that the cotton pair would have been better outside, knowing the antipathy the bee has to any woollen or hairy material. Evidently the above gloves answer very well, for a correspondent, after a trial of them, writes as follows:—

"I write in the first flush of a brilliant success with your new gloves received by post this morning. I tried them in examining three hives during a half hour of sunshine. Some bees were very irritable. I just soaked the outer pair in a solution of washing soda. The success was brilliant.—JOHN MARTIN, Ensinge, Sept. 3rd, 1881. P.S.—You can use this as you like. To show there is facility of manipulation with the gloves, I afterwards caught a queen by her wings and caged her.—J. M."

TO AUSTRALIAN BEE KEEPERS.

ARTIFICIAL comb-foundation of our make in three, five, and ten lbs. boxes, can now be obtained from the New Zealand Loan and Mercantile Agency Company, Sydney, New South Wales, and Melbourne, Victoria, at 3s. 6d. per lb.

The above comb is in sheets cut to fit the Langstroth frame $16\frac{1}{4}$ inches by $8\frac{1}{4}$ inches, and suitable for brood and extracting frames.

We publish in this issue the first part of a very interesting paper from our correspondent "T.J.M.," entitled "Climate and Bee Culture."

The subject to which "T.J.M." has called attention is of great importance to bee-keepers in all parts of the world. Hitherto, little attention appears to have been paid to the influence of climate on bees and bee-culture; but this is not strange when we take into consideration that until quite recently bee-culture as an occupation was looked upon as of very little importance, but now that it is becoming an extensive and widespread industry, no doubt this, and every other matter in connection with it, will be carefully studied. Our correspondent has evidently given the subject of his paper considerable thought, and drawn attention to some very interesting facts; we, therefore, commend it to the notice of our readers.

NOTICES TO CORRESPONDENTS.

H. NAVEAU, Hamilton, Victoria.—The subject of your paper being entirely upon the management of box-hives, and as we are striving to get every bee-keeper in the Australasian colonies to discard them and adopt something better, we cannot publish it. Did we do so, instead of following out our motto, "Forward," we should be retrograding. Anything that will tend to *advance* the knowledge of bee-culture we shall be glad to publish.

There are bee-keepers in Egypt who make it a practice of putting their hives on boats at the commencement of each season, and floating them down the Nile. These boats are occasionally brought to an anchor in districts where bee pasturage is abundant. When honey is getting scarce the boats are shifted to a new locality where the season is just commencing, thus prolonging the honey season to a considerable extent. Sometimes they are absent for three months or more, and return with the hives heavily laden with honey.

CLIMATE AND BEE CULTURE.

BY T.J.M.

No one can doubt that difference of climate must exert an influence upon the health, habits and working powers of the honey bee, as well as upon the vegetation which furnishes the raw material for the industry of the insect, but I am not aware that it has as yet been made a matter of strict enquiry what the amount and practical value of that influence may be; what the limits of tropical heat on one side and of polar cold on the other, within which bee-keeping may be successfully followed; and what the conditions of climate under which the greatest effect may be obtained in the way of honey produce, by any given mode of treatment, and with any special race of bees. And yet it appears very desirable that we should have clear views on these matters so that those who live under skies the most favourable for this branch of industry may be fully aware of the advantages which they possess, and be led to take the proper measures for turning them to the best account; while those who are less favourably situated may know exactly what difficulties they have to encounter, and see their way to adopt the most effective means towards neutralising or overcoming them. As the *NEW ZEALAND AND AUSTRALIAN BEE JOURNAL* is intended to represent a section of the globe which includes so great a variety of climate—from that of tropical heat to one such as prevails in the most northern countries of Europe—it would seem to be particularly expedient to invite the attention of its readers to the consideration and discussion of this subject, with a view to eliciting information from those who may already have any particular experience bearing upon it, and in the hope of inducing others who are engaged in the introduction of the modern system of bee-keeping into new districts, to observe carefully the effects of climate upon their operations and to communicate the results of their experience from time to time.

There are some general points of view in which it may be well to consider the subject in the first instance, and which may help to indicate those details which it is practically desirable to subject to a more minute examination.

The influence of climate upon the operations of the bee-keeper may be considered to be of a two-fold nature—first, as it affects the bee itself, especially the condition of the insect during the winter season; and, secondly, as it is favorable or otherwise to that class of vegetation which furnishes fodder for the bee and a rich and choice harvest during the honey season. In the first case it may be supposed to operate chiefly by its temperature, especially the average temperature of the winter months; in the second instance there are other factors to be taken into account besides mere heat, such as rainfall, prevalent winds, and relative position of land and sea, all affecting the question of moisture and drought, and probably in both cases, the position as to latitude, in so far as that affects the length of the day and duration of sunshine in the summer time.

If we seek for the original habitat of the bee in order to see what degree of winter temperature is most natural to the insect, we must look to Assyria, Egypt, Palestine, and Asia Minor, as all the early records of the human race, including the oldest and most venerable of all, prove that the bee was at home in these countries from time immemorial. We may naturally suppose that bee-culture was introduced into Greece and the islands and

shores of the Mediterranean generally by the early Greek colonies which had sprung up along the coasts of Asia Minor and Phœnicia, and afterwards carried by the Romans into all their northern conquests as far as Britian. Whether the present Italian or Ligurian bee is the descendant of the original Asiatic bee, and the Northern German or black bee the descendant of the Ligurian—the differences at present existing having been caused by acclimatisation only—or whether they are separate species indigenous to the countries where they are now found, is a question I am not prepared to discuss; but we have sufficient experience to show that bees of whatever class have a great facility for accommodating themselves to very considerable differences of climate. What we have now to consider is, in how far, when once acclimatised, their working powers may be affected by such difference of circumstances.

Upon consulting a good modern Physical Atlas, where the charts relating to "temperature" are divided into sets showing the isothermal lines of mean temperature for the different seasons of the year, we shall find that all those countries above referred to as the original home of the bee, as well as all those at present most noted for the production of honey, lie between the lines of 41deg. and 59deg. mean winter temperature, the medium line of 50deg. passing through Bagdad (ancient Nineveh) North of Palestine and Cyprus, South of Asia Minor, Greece and Italy, through the islands of Sicily, Sardinia and Minorca to the boundary between Spain and France—thus passing through or close to all the localities most celebrated both in ancient and modern times for the quality of their honey. We may, therefore, not unreasonably assume an average winter temperature of 50deg. to be about the normal one for bee-culture. Passing over to North America we shall find the same isothermal line traversing the Southern States in rather a low latitude, and the Western States in a much higher one, passing through California just north of San Francisco. Here we find additional reason to assume the suitability of this winter temperature, California being, as far as I am aware, the most important of the honey-producing States of the Union. Leaving the Northern Hemisphere, and looking to South America, we find the 50deg. winter isothermal passing through the La Plata territory and through the centre of Chili at its capital, Valparaiso. And here again it will be found that the introduction of bee-culture in the neighbourhood of Buenos Ayres, which took place about twenty-five years ago, has been attended with unusual success; and, also, that Chili exports at present large quantities of honey to England. It is true that the quality does not rank high in the London market where this honey is only bought for manufacturing purposes, and priced very much lower than the Californian honey; but that is no doubt merely owing to the fact that the improved system of bee keeping is not followed in Chili, the honey being all pressed out of the combs instead of being extracted, and being probably for the most part wild or bush honey. The 50deg. winter isothermal followed Eastward leaves the Cape of Good Hope altogether to the North, but passes through the Southern part of Australia, about midway between Adelaide and Sydney on the North and Melbourne on the South, and then through the centre of the Province of Auckland, about the latitude of the East Cape. The *whole* of the New Zealand Islands, and all the Australian Colonies South of Queensland lie between the lines of 41deg. and 59deg. mean winter temperature, exactly as in the case of the most favoured

honey countries in the Northern Hemisphere. As regards that point, therefore, and as far as we can judge from analogy, we have every reason to conclude that these colonies are all favourably, and the districts of Victoria in Australia, and of Auckland Province in New Zealand, especially well situated with respect to winter temperature. This conclusion, however satisfactory in itself, does not, however, by any means exhaust the subject, as we have still to see what is our condition relatively to other countries in other respects, particularly as regards the summer temperature of our climate.

(To be continued.)

THE STANDARD FRAME FOR AUSTRALASIA.

BY L. J. BAGNALL.

THIS subject is attracting attention amongst bee-keepers in this country, and it is advisable that it should be considered well before much capital has been expended in purchasing hives suitable for a particular frame, which might afterwards have to be discarded, causing heavy loss to the owners. Much has been said and written both in England and America on this subject, and I have thought while reading the opinions of different writers that much of their arguments arose from the fact that the frame they were advocating was the one they used, and therefore better than the frame anyone else used. I confess that, so far as the size of the hive or frame is concerned, I think the bees care little whether it be an inch shorter or an inch deeper than my own or my neighbours; but I do think it is very important that bee-keepers in any country, and, if possible, in every country, should have and keep to a "standard" frame. I will instance one circumstance alone which will serve to demonstrate this. Supposing my neighbour has a number of hives and bees for sale and that I want to buy them. I use the Langstroth hive and frame. He uses some other—the Abbott, say. They would not be worth nearly so much to me as if they were in hives and frames which I could use interchangeably with mine. So that while I believe that my neighbours bees will do as well on an Abbot frame as mine in a Langstroth, yet there can be little doubt but that it would be much better for both of us if we both had the same sized frame and hive. The advantages accruing from having all the hives and frames in an apiary interchangeable are so manifest that there is no bee-keeper of any experience but must be aware of it. It is equally important that the frames and hives of every apiary in the country should also be interchangeable. The length of time which the Langstroth frame has been in use, and the fact that in America there are more used now than there are of all the other sizes put together, proves that it is as good at least as any other, while there are many circumstances which make its adoption in these colonies both convenient and expedient. It is a very convenient length and depth for handling, and also for the extractor; it just takes in eight 1lb. section boxes; it can be used for side storing or for top storing, and it is now more extensively used in Australia and New Zealand than any other. These seem to me to be more than sufficient reasons for adopting it as the "Standard for Australasia." I do not think it will be necessary to pass an Act of Parliament to compel its adoption under pain

of imprisonment or fine; the utility and convenience of it will certainly secure its voluntary use by every progressive bee-keeper, especially as the importance of it has been so early brought under the notice of the public.

I know there are some in this country who think the Langstroth too long, and a hive which takes 10 frames too wide for wintering in, unless the colonies are very strong. I have wintered both strong and weak colonies in them, and feel sure that there is no room for objection on these grounds. The use of division boards, and warm covers, will insure the safe wintering of any moderate-sized colony in any part of Australasia, while strong ones only require to be kept dry, and given plenty of food.

I have already persuaded several bee-keepers to give up the irregular-sized hives and frames, and take to the Langstroth. In my own apiary the first hives I made were not the right size. They gave me a lot of trouble until I finally superseded the whole of them.

Hape Apiary, Thames, Sept., 1888.

[We cannot altogether agree with that part of our correspondent's paper wherein he intimates that "bees will do as well,"—i.e., be as profitable to the owner on one sized frame as another. We do not mean to say that any particular sized frame will put more honey in the flowers for the bees to collect; nor that it will enable each individual bee to carry a heavier load; but we do believe that there are frames and hives the size and form of which will give better facilities for manipulation, storing of honey, &c., and raising brood than others, which would make them more profitable, just as there are some dwellings more convenient to the inmates than others. It was by carefully studying these points—and not by any haphazard process—that made us adopt the Langstroth frame in preference to any other.—Ed.]

APICULTURE IN QUEENSLAND.

BY C. FULLWOOD.

SIR,—I just want to let you know of the successful importation of another parcel of queens from Italy *direct*.

Twelve queens were despatched from Bologna about 21st June, Naples 23rd (by the Orient liner 'Iberia'), arriving at Sydney 2nd August, Brisbane 9th August. I obtained them on the 10th.

Of course I was anxious to ascertain how they did, so that as soon as possible I separated the wee boxes, and found life in ten of them. I at once estimated I had ten queens, for as a rule queens survive when workers all succumb. I at once prepared nine nuclei, and made one weak stock queenless; then, with cages made of wire cloth bent up at all sides and partly unravelled so as to press into the comb, I proceeded to open and examine the boxes containing the little travellers. Some of them contained quite a number of lively bees; some had diminished considerably, but few being left. One had just two live workers, and the queen she appeared lively.

As I opened them I secured the queen, clipped a wing, and caged her alone on a comb of unsealed honey—inserting the comb in the nuclei—prepared by dividing strong stocks having plenty of young bees, taking care not to have the queen with them, and placing them so that most of the old bees would get back to the old

stock. Thus I dealt with nine queens. One I introduced to a weak stock without dividing. The second day after introduction I released the queens. In one case only the bees had worked through the comb into the cage. Quite a number were thus inside, and fraternising with their new queen. *All the ten queens* were received, and in a few days were all depositing eggs in vacant cells.

I think I have now quite sufficiently demonstrated the practicability of obtaining with very little risk queens direct from Italy, and that the passage of the Red Sea and tropics can be made quite successfully; and as to the matter of introducing queens on arrival by adopting a method such as stated, where *young bees* are used, the losses need be very few.

Brisbane, August 27th, 1883.



(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.

HIVING TRAY.—A CORRECTION.

SIR,—In the description of my hiving tray in the August number of the BEE JOURNAL, an error has crept in which, in my opinion, will make the tray less useful than if it is made as I use it. The error occurs in the central paragraph, it reads thus: "Four fillets 1½ in square by 3 in." It ought to have been four fillets 1½ in square by ¾ in thick. The latter height places the lower bars of the frames 1½ in above the floor of the tray, not pressing injuriously on the bees that have been shaken into it, enabling them to rise quickly and easily up amongst the frames into their new home, a matter of some importance, especially when the bees of an apiary are in a swarming mood. I have no doubt if the tray were used in some of the extensive apiaries in New Zealand it would be found useful, for the process of hiving a swarm with the tray is a short one. When the swarm has settled on a bush or other object a foot or more above the ground, place the tray above it, or where it can be done, hold it up with the left hand by the strap on the back of the tray below the swarm, and with the right one shake or brush the bees into it. Set it immediately on the ground, and place the framed hive into the tray over the bees resting on the fillets at the corners; cover with a cloth, except in front. Generally, in a short time, all the bees will be up and settled amongst the frames of the hive. The tray and hive can then be carried to the permanent stand. If there are still a few bees on the tray the hive can be lifted on the permanent board. If the bees are not all up, or nearly so, let the hive and tray remain united until sun down, when they are easily adjusted. I have frequently had a new swarm in its hive, also the hive placed on its permanent board and stand, within half an hour of the time it left the parent hive.

In a note to my former article you say if I had followed

the instructions in the *N.Z. Bee Manual* I would have found no difficulty in hiving swarms. With all due deference to your extensive practise as an apiarian, I reply that if you will give the tray system a trial you will have less trouble than by the method described in the *Manual*, and do it in less time. These intelligent insects do not waste time; neither must the bee-master do so, as their interests are his; they always repay prompt attention to their interests. By the tray system the bees, in swarming and hiving, receive only one shaking into the tray to get into the frame hive. By the *Manual* system they receive two shakings to get into a frame hive—first into a box, and some hours afterwards a second one from the box on to a cloth before they get into the hive. Last spring and summer I hived some seventy swarms with my two trays, putting some into frame hives and others temporarily into boxes. Those in the latter were added to weak hives to strengthen them.

My practise before I hit on the tray system was very much like that described in the *Bee Manual*. After some eight years experience with the trays I have no desire to return to my former practise. I do not say this with any intention of disparaging the *N.Z. Bee Manual*, for although I may differ from it in some of its methods of practise I consider it a cheap and valuable book of reference for these colonies—one that ought to be the hands of every man who keeps either five or fifty hives. Either of these will benefit by an attentive perusal of it.

C. H. J. SMITH.

Kyneton, Victoria, September 1, 1883.

[We are obliged to our correspondent for the correction, but we certainly understood it to mean 3 in. instead of ¾ in.]

With regard to the method of hiving swarms given in our *Manual*, it must be understood that we have written as well for the novice as those with some experience in bee matters; and as it is impossible—without making a work of this kind expensive—to give more than one method for each manipulation, we have chosen those best adapted to the beginner. We adopt almost the same method now to hive a swarm as that given in the *Manual*; the only difference is, instead of allowing the swarm to remain in the box near where it was taken till evening, we take it at once to the hive and knock it out on the cloth, &c.—ED.]

THE FLIGHT OF BEES.

SIR,—How far do bees at times wander from their hives? About the year 1852 I read in the *Glasgow Herald* a paragraph respecting a bee which made me wonder. It was as near as I can remember as follows:—"Some ladies and gentlemen went to one top of Ben Lomond to stay there all night in the tents that they had erected for the purpose of seeing the sun rise next morning. The company went roaming about on the mountain searching for something to employ their attention. One of the party discovered a honey bee hovering round some wild thyme. In a few minutes the lone bee was surrounded and captured, everyone wondering where its home could be, as there were no houses or trees for many miles. At length a suggestion was made, and at once carried into practice. A tiny bit of silk thread was taken from a lady's dress, and

certain little knots made on it so as to identify it if ever it appeared again. The silk was then fixed to the bee in such a manner as not to impede its flight; then set at liberty, it darted off in a straight line, humming as it went east-south-east, and was soon lost to sight. After the company got home to the city they remembered the bee, and were desirous to satisfy their curiosity. They advertised in several newspapers requesting bee-keepers to watch their bees working, and at the same time offering a liberal prize to any one finding the bit of silk and sending it to the address named. In a very short space of time the very identical thread of silk was received by the parties enclosed in a letter from a bee-keeper at St. Ninians, who got it on a bee's thigh working out-and-in at a hive in his apiary at St. Ninians." St. Ninians is about 3½ miles from Stirling, and from my measurement on the map of Scotland I find it to be eighteen miles from the top of Ben Lomond to St. Ninians, but I think from my knowledge of the place it must be at least twenty-five miles, the locality of which can be easily seen from the top of the mountain along the valley of the river Forth; no hills or any heights whatever intervening, so that the bee would have an easy descent all the way.—Yours, &c.,

JAMES M. CLARK.

Woodside, Pollock, 5th Sept., 1883.

[The distance a bee may travel in search of food depends, we believe, entirely upon circumstances. If a good bee pasturage surrounds the apiary, we think it would not go more than two miles to the outside; but if pasturage near at hand was scarce, we believe bees would travel several miles in search of food. The greatest distance that bees have travelled from their hives that has come under our own knowledge is four miles in a direct line. These bees were Italians, and only kept by one person in the neighbourhood, so that there was not likely to be any mistake. If our memory serves us correctly, Mr D. A. Jones, when in Syria in search of bees, came across them flying at a distance of, he supposed, fifteen miles from the nearest hive, either wild or domestic.—Ed.]

RECEIVING AND HIVING BOX.

SIR,—I am a subscriber to your *Bee Journal*, and have received the third copy. I am simply delighted with it. I may mention I am no novice in bee-keeping in the old style, but I now throw that overboard since I see the great advantages to be derived from the use of the Langstroth hive, &c. I have 16 strong colonies working vigorously and carrying large quantities of pollen. I am making 40 Langstroth hives to transfer them, and put their swarms into. I have been thinking much about the best method of introducing a natural swarm into a Langstroth hive filled with frames, as I think there is some want in this respect, and have contrived a receiving box which I will try to explain: Take a single Langstroth hive, make a groove along each side to meet shoulder where frames rest upon. Cut a slit in one end to admit a sliding roof, which will run in aforesaid grooves. Nail a long narrow brush permanently to the back of hive under slit with hairs long enough to cover the space. Have a low stand made suitable to place a Langstroth

bottom board upon; place stand and board near where swarm is hanging. If hanging upon a small branch, by holding branch with left hand you can sever it with a pair of nippers (which appliance will cut without jarring) with right hand. Lay branch and bees gently on board, and place receiving box over them. They may be shaken in or driven in in many ways which will present themselves to the operator; but once in receiving box they are safe. Have your hive alongside with frames all adjusted. Simply stand it on top of receiving box, and draw out slide, when the brush will gently remove the queen and bees without hurting one. You will have them all safe inside. They will at once rise into your frame hive, and in about fifteen minutes you may take your receiving box away from under it. Run in your sliding roof, and it is ready for another swarm. Our honey pasture is natural mixed bush: unlimited quantity of Scotch thistle, titree, flax, whin, white and alsyke clover; also large orchard of peach, apple, &c.

W. T. BELOE.

Linwood Nursery,

Pukekohe, September, 1883.

[We are afraid our correspondent will find that he cannot remove the hiving box so quickly as he imagines. In fifteen minutes, instead of all the bees being up amongst the combs the greater part of them will be hanging to the bottoms of the frames, unless they are driven by rapping on the box, and this is not advisable with a new swarm. Some years ago we used a box the size of a hive, but not quite so deep, in which we took the swarm, carried it to the hive and turned the box bottom upwards, placing the hive on top; but we often found half the bees clustering on the bottoms of the frames the next morning after hiving them. If a reasonable time is allowed for the bees to cluster, and the hive is then gently lifted off the box and placed on its bottom board—taking care to prop it up a little to prevent crushing any bees,—they will soon ascend by being forced for want of room.—Ed.]

BEE KEEPING IN THE GREY VALLEY. BEES ON SHARES.

SIR,—I commenced three years ago with one stock and have now 50; twenty in bar-framed hives, and the remainder in common boxes, as I had not sufficient time to make frame-hives for the whole of them.

There are a great many bees kept in the Grey Valley, but all under the old style. There is not one bee-keeper here with whom I can exchange an idea, my information on bees being wholly gathered from newspapers. I have no honey-slinger or other appliance for the proper manipulation of my bees. In taking honey I simply cut the comb from the frame and return the frame to the hive. I use a lower box and super. I find the bees do much better in frame-hives than in common boxes, and they are so much handier to work. You will perceive I am not very far advanced in bee-culture, never having had any previous experience and not having seen any person as yet who has worked hives on the modern principle.

Would you kindly tell me what is the price of honey wholesale for a quantity? I have sold mine in the comb at 1s per lb., but demand very limited. Would

it pay me to get a man who thoroughly understands the business for the season? Are there stocks enough for anyone to undertake the management of my apiary on half-shares, supposing I found him in board and lodging? I think the district is good for bees if properly managed. By answering the above you will greatly oblige—Yours, &c.,

JOHN BAYBUTT.

Twelve Mile, Grey Valley, Sept., 1883.

[The market quotations for first-class honey will be found in the JOURNAL; if you have a quantity for sale we would advise you to write to the Auckland Agricultural and Mercantile Company, who are cash buyers of honey in bulk; their advertisement appears in the JOURNAL.

With regard to whether it would pay you or not to get a man who "thoroughly understands the business" to manage your apiary, we think even if you could get such a man, which we are doubtful about just now, that in the present backward state of your apiary it would neither pay you nor him. We would advise you to get your apiary arranged on the modern principle, and procure the latest appliances such as comb foundation, honey extractor, smoker, etc., and get everything in good working order this season, so that you may be properly prepared to make a good start next season. By that time you will have gained more experience, and your apiary will be in such form that it would pay an experienced person to work it on shares.—Ed.]

HONEY BEES IN EGYPT.

SIR,—Under the above heading I found, a few days ago, what appeared to me a very interesting paragraph in an old *Field* newspaper, under date of July 13th, 1878; and as I think every bee-keeper in New Zealand and the neighbouring colonies should do all that lies in their power to second the effort now being made to make this industry both a pleasant and paying one, I beg to contribute my mite, and trust it will be thought worthy of insertion.

BUMBLE BEE.

Paragraph in *Field*, July 13th, 1878:—"I wish to inform apirians and entomologists of singular facts that have no parallel in my experience of bee-keeping. I have in my possession the observatory hive which won the first prize in the International Exhibition of 1851, at the close of which it was presented by the inventor—Major Munn—to the late Dr. Bevan, and at his death, at his request, was sent to me. I put into it an after-swarm in the month of June last year. On the 30th ult., 11 a.m., it threw off a prime swarm, which I easily hived in a bar-hive. At 2 p.m., however, I observed continued commotion about the parent hive, and shortly after I secured a second small swarm; on the 1st inst., a third swarm; and on the 2nd inst., a fourth. This last, being very small, and lodged in an orange tree difficult of access, I secured between two bell glasses, and to my astonishment I found five queens in it; these I separated by the use of chloroform. During the afternoon of Tuesday, the 4th inst., another large swarm was discovered on the same bough of a tree on which the prime swarm had alighted; this was evidently accompanied by several queens, because soon after hiving a persecution of them commenced, and I picked up several. Not only that; three others have

since been forced out of the parent hive, all of which I have secured. Some of these swarms may have come from a neighbouring apiary, but can any person account for the superabundance of queens? I may add that the original family, and all the newly-hived swarms are working harmoniously and prosperously. The bees we have differ somewhat from the race in England; they are surprisingly docile, and I have not even worn a glove or any protection in hiving them.

"Since the above was written, the original hive has thrown off a very strong swarm, and the day after I captured six queens that they were driving out. The parent hive is now very weak, and the workers have for many days been persecuting the drones.—(Signed), J. HASELDEN, Bella Sombra, Alexandria, Egypt, June 10th."

[The superabundance of queens accompanying the last swarm, which appears to astonish Mr Haselden so much, is very easily accounted for by anyone who understands the habits of bees.

When preparing to swarm the bees start to raise several queens—there may be as many as a dozen. The majority of these may all come to maturity at the same time, when, if an after swarm issues, all but one will take flight with it. A number of queens more often accompanies the second after swarm than the first; we have repeatedly had four and six with an after swarm.—Ed.]



TRANSFERRING.

SIR,—I noticed in your columns this month directions for transferring combs to frames, and in accordance therewith attempted to exchange the combs from a gin case to a Langstroth hive. I smoked the gin case gently at first, and then proceeded to drive the bees into an empty box. Your directions give fifteen minutes, but it took me an hour before I could dislodge them, and then I had to shake them out, so reluctant were they to leave, owing, I suppose, to there being brood comb in the hive. Next, having placed the swarm on the stand, I cut the combs out and laid them in the frames, tying them with twine. Unfortunately, the twine cuts into the comb—tape or broad slats of wood would have been better—and my combs being soft and brittle hung all awry in the frames as I put them into the hive. Seven frames about filled it, so I spread a sheet in front and shook the bees on to it, and they soon found their way in, as you have described. From first to last the operation took me two hours, and as the air was cool the young brood must inevitably succumb, I suppose, from the long exposure.

I should be obliged if you will kindly answer the following queries:—1st. How long should bees be allowed to fill themselves after being smoked? 2nd. Is open or close driving the quickest way to dislodge them? 3rd. Will not the birdcage wire cut into the combs like twine? 4th. What is the cause of the bees refusing to leave the combs, notwithstanding the stick-

tapping and hammering when driving? My bees are on the North Shore, where they get pasturage amongst the gardens and wild flowers. The yellow wattle is a favourite with them. Most of the honey is obtained in spring; very little is got in summer and autumn.

I have lent your September number to the Italian Bee Company, who have an apiary at Parramatta, and the previous numbers to friends, who have a few hives in the neighbourhood, and hope your Journal may find more subscribers here.

“ST. LEONARDS.”

Sydney, N.S.W., September, 1883.

[1st. Bees fill themselves with honey very rapidly after receiving a puff or two of smoke; one minute will be ample. 2nd. We have driven bees both ways, but do not think there is any difference with regard to the time it takes. 3rd. We always use wire, and find it answers the purpose admirably. When combs are heavy with honey it is difficult to fasten them in the frames in warm weather. We usually cut off the comb containing honey when it is soft. We would advise you to straighten the combs by some means, and insert some frames of artificial comb between them, gradually shifting the transferred combs to the outside as the brood hatches, finally removing them altogether; for there is nothing so objectionable in a hive as crooked combs. 4th. Most likely the queen, instead of being amongst the first to ascend, as is usually the case, hid down in one of the corners of the old box; the bees naturally remain close to their queens in time of trouble, and thus would be loth to ascend into the receiving box. In our early experience of transferring we have met with similar cases. We now do away with driving altogether, although it would scarcely do to advise beginners to adopt our method, as a person requires some little experience with bees before he would have sufficient confidence to make a nice clean job of transferring by our plan. However, for those who wish to try our method we will describe it briefly:—

After blowing a few puffs of smoke into the entrance of the box hive we remove it a few feet away from its stand, putting the new hive in its place. We now turn the box upside down, and with the smoker blow the bees clear of one side so that we can cut the combs free without injuring any of them. We then prize off the side and one end of the box and force the bees with the smoker to the opposite end, throwing a cloth over this part which tends to keep the bees quiet. The combs at one end are now ready for cutting out and transferring to frames in the usual way. If there are a few bees adhering to them we brush them into the new hive. By using the smoker when required we can drive the bees to the end, so that when the last comb is cut out they will be clustered like a swarm under the cloth, and can be hived in the usual manner.—Ed.]

MOVING BEES, &c.

SIR,—From the address below you will see that I have removed my apiary from Ormond, as I previously wrote you I intended doing. As the moving of bees is an item of interest to bee-keepers, and my way of doing it was simple and quite as successful as any I have read of, I shall give your readers the benefit of my experience. I sewed up each hive, minus top and bottom,

in a piece of scrim; packed them in the bottom of a three-horse dray, piled up the tops and bottoms over all, roped all down tightly, and away they went over as rough a road as you could find, without breaking a single comb. It took three trips to get my eighty hives and piles of empty boxes and other plant removed. Fortunately it was fine weather; but I was just in time, for ever since it has been nothing but wind and rain, and bitter cold. Bees have perished in great numbers here, and all my hives have been much weakened. The outlook is not very bright, and when the clover comes into bloom shortly I fear we will be short of labourers to reap the harvest.

If you had 80 hives—50 of them weak and 30 fairly strong—would you remove frames of brood from the strong hives and build up the weak ones, so as to equalise the strength of the apiary, or would you let the weak hives take their own time to recover and take surplus honey from the strong hives only?

GEORGE STEVENSON.

Upper Taruheru Apiary,

Waerenga-a-hika, Poverty Bay, 29th Sept., 1883.

[You have not stated how you packed the interior of your hives—that is, secured the frames. Were we in your position we would take the weakest of the colonies and unite them, even if we had to put three or four together to make one good one, and feed liberally to stimulate breeding. A few of the strongest of the weak ones we would reserve and strengthen with brood from the strongest stocks. When uniting take care of your spare queens, as you will find them valuable if increasing your stocks during the season.—Ed.]

FROM OUR CONTEMPORARIES.

MAKING OR FORMING NUCLEI.

EVERY bee-keeper who expects to be up with the times, and make the most from his bees, should have on hand, at this season of the year, several laying queens, held in reserve to supply any colony needing a queen at a moment's notice; especially where any method of increase other than natural swarming is adopted, reserve queens should be kept on hand to be given to the queenless part of the divided colony.

In order to keep these reserve queens, it is necessary that we have a nucleus or small swarm of bees in which to rear them, from the time the queen-cells are ready to be taken from the colony producing cells, till the queen is fertilized and ready to become the mother of a colony.

Many ways have been given for making a nucleus of bees, most of which prove to be a failure, and result in loss with the inexperienced. The one most commonly given in our books and bee journals is to go to any colony which can spare them, and take a frame of hatching brood and one of honey, together with all the bees thereon (being careful not to get the old queen), and place them in a hive where you wish the nucleus to stand; thus forming a miniature colony of bees. The hive is to be contracted to the requirements of the nucleus, and in 24 hours a nearly mature queen cell is to be given. This looks very pretty on paper, but when we come to put it in practice, it is found that in nine cases out of ten, so many of the bees will return that our nucleus is practically good for nothing,

and often results in the chilling of all the brood in the frame, if the weather is cold. The other day, while in conversation with a bee-keeper having several years' experience more than the writer of this article, he remarked that his nuclei had "gone back on him," and when asked how he made them, he gave the above plan. I remarked that it was strange how young a bee would return to the old hive under such circumstances, when he said there was scarce a hundred bees left in his nucleus where he had put a quart or more.

If the above plan fails in the hands of a bee-keeper having 16 years or more of experience, how can it be expected that the novice will succeed with it? Several years ago, after repeatedly failing with the above plan, I had occasion to set a frame of bees and brood, on which was the queen, into an empty hive, and to my surprise nearly all the bees staid where I placed them. In a few days I returned the queen, and as the bees had become established in their new location, while the queen was with them, a good nucleus was the result. Thus I learned how I could form a nucleus which could be depended upon every time. Another thing I ascertained, that a colony having queen-cells considered such cells the same as a queen, and by taking a frame of brood which had a nearly mature queen-cell upon it, together with one of honey, bees and all, from such a colony, a nucleus could be formed so that nearly all the bees would stay where placed. Thus to make several nuclei, all I had to do was to count the queen-cells in the hive about the time they were sealed, then go to the other hives and take frames of hatching brood (brushing off all the bees), till I had as many as I had queen-cells, and place them in the hive having the cells. Two days before the queens were to hatch, cut out the cells and fix one in each frame of brood, and the next day make the nuclei by taking the frames to their several hives, giving each a frame of honey. In this way I rarely, if ever, had a nuclei "go back on me," and have so formed the most of my nuclei till the present season. This season I have adopted a new plan which pleases me so well I will give it to the readers of the *BEE JOURNAL*, so that they can share in my pleasure. Seeing a note in some convention report, of how a party had a queen nursery made so he could hang a frame of queen-cells in it, and then hang the nursery in a full colony of bees in the place of a frame of brood, I jotted down in my reference book [see former article on "How to use our Bee Journals,"] under the appropriate date, "Try forming nuclei in that way," giving page and bee journal where it was to be found.

When the time arrived I made a cage of wire cloth, which would hang in the hive, and large enough so that one frame would hang inside of the cage. I now got a frame of hatching brood, brushed all the bees off from it, hung it in a hive having a full colony of bees, and left it six days, when I had the cage pretty well filled with bees, and more hatching all the while, I now took it to a hive where I wished a nucleus to stand, took the frame out of the cage, placed a frame of honey by the side of it in the hive, placed the cage in empty side of the hive, so the bees which adhered to it could get with the rest on the combs, and I had a nucleus so formed that none of the bees could go back, for they had never had a flight. I was also independent of the weather, for a nucleus could be thus formed during quite cool days and nights.

Another thing which pleased me still more: The next

time I tried I inserted in the frame of brood, before placing it in the cage, a queen-cell nearly ready to hatch. As this queen-cell hatched in a day or so, I had a queen five days old in my cage when I took it to my nucleus hive. In a day or two she took her wedding flight, and I had a laying queen five days after I formed my nucleus, thus making a great gain of time. I have written this in a hurry, and if all is not sufficiently plain, I will describe it further. All will readily see the advantage of the plan.—
G. M. DOOLITTLE in *American Bee Journal*.

QUERIES AND REPLIES.

QUERY.—Italian Bees—Sulphuring Combs.—There is one or two questions I should like to ask you. 1st. If I were to get Ligurian bees could I keep them? The Acclimatization Society here had them repeatedly; sent by the firm of Neighbour and Sons, London, and lost them each time. Mrs French, of Moriveau, near Hamilton, had swarms sent from Melbourne, and lost them; likewise a Mr McIntosh, of Glendinon. 2nd. How about exposing frames of comb to the fumes of sulphur—how will that affect the brood? for my combs contain brood all the year round.

HERMAN NAVEAU.

Hamilton, Victoria.

REPLY.—1st. Ligurian bees may be kept anywhere, the same as black bees, if they are properly looked after. In the instances you cite of Ligurians being lost, we suppose that if they had been common bees the result would have been the same. 2nd. We scarcely understand this question; fumes of sulphur should not be allowed near combs containing brood. We think there must be some misunderstanding on your part. The only mention we make of the use of fumes of sulphur, either in the *JOURNAL* or *Manual*, is in fumigating spare combs stowed away in winter in order to kill the larvæ of the bee-moth, or other insects that would destroy them.

QUERY.—Bee Gloves.—I should be very glad of a hint through your instructive journal as to the best kind of glove to wear when at work amongst the bees. Can india-rubber gloves be procured? I have been told they are a good protection.

NOVICE.

September 12th, 1883.

REPLY.—Care should be taken that gloves made of any material that will absolve the poison of the bee sting are not worn. For not only will these gloves be injurious to the hands, but they will also give forth the odour of the poison, and so alarm the other bees, and cause them to fly from all points to the gloves, guided by their sense of smell. India-rubber gloves do not absorb the poison, but we do not think they are to be obtained in New Zealand. Having had several enquiries for gloves, we call the attention of Messrs. Bagnall Bros. and Co. to this matter, who, we have no doubt, will take steps to obtain some. In another column we give a clipping from the *British Bee Journal* on bee gloves.

QUERY.—Parthenogenesis, Italianizing, Packing Bees, Drones.—I would like to ask you one or two questions for answers through your correspondence columns. I have been reading a good deal lately about bees, my chief authority being the *Bee Keepers' Manual*, by Henry Taylor, revised by A. Watts, in which there seems to be a great many authorities quoted. They say if the queen of one breed is

impregnated by the drone of another, it is only the workers of her progeny which turn out mongrels. Thus the introduction into an apiary of a single Italian queen is sure to be followed by the raising of pure Italian drones. Now (1) is this true? Could I Italianize an apiary with a single fertilized Italian queen? 2. What is the mode adopted in packing and carrying bees a long distance by sea? 3. Is there a time of year in which there are no drones in a hive.

Lincoln, Canterbury, Sept., 1883.

REPLY.—1st. It is perfectly correct that where cross fertilization of the queen has occurred the worker bees only will be affected by it, the drones being of the same variety or race as the queen mother. Dr. Dzierzon was the first to discover that only worker eggs are impregnated with the semen of the drone; and that queens which have never met a drone will lay eggs that will hatch into drones. This is called the Dzierzon theory, and is the fundamental principal upon which modern scientific bee-culture is based. Any good work on bee-keeping sufficiently explains this matter. It is possible to Italianize a large apiary with a single queen, but if there were black drones flying in the neighbourhood it would take a considerable time to get purely-mated queens sufficient to stock all the hives. Supposing the original queen to be pure and purely mated, the queens from her would be pure; but if they mated with black drones the queens of the third generation would be hybrids, and would produce hybrid drones, so that you would require to keep weeding out the impurely-mated queens, replacing them with purely-mated ones as you raised them. 2nd. The method we have adopted for packing to travel a long distance, and which we have found to answer, is the following:—We first prepare the body of the hive by nailing small battens on edge—we usually take end bars of frames—on each end of the hive inside, running from near the top to near the bottom. They are nailed just far enough apart to allow the frames to slide down between them easily. We next nail or screw on a bottom board, having four small fillets about 2in. long by $\frac{1}{2}$ in. thick, nailed one on each corner for the hive to rest on; this leaves $\frac{1}{2}$ in. space all round between the bottom board and the hive, which we cover with wire cloth to allow of ventilation. We next prepare a flat cover by sawing a large piece (9in. x 6in.) out of the centre, and covering the hole with wire cloth. We now make a kind of small box over a portion of this hole by nailing four pieces of $1\frac{1}{2}$ in. x 1in. battens on edge, letting them meet at the ends; this is to hold a sponge over which we tack another piece of wire cloth. All being in readiness, we go to the colony we are going to send away, and gently lift out the frames with the bees adhering thereto, and place them in the prepared hive in the same position they occupied in the original one. As the prepared hive will only take nine frames, when we come to the tenth we shake all the bees into it, and place on the cover and screw it down. It is now all ready, with the exception of pasting on the address and instructions to carriers about keeping the hive in a cool place, and watering the sponge daily. 3rd. Yes; at the close of the honey or swarming season the drones are killed off by the workers, as there is no further use for them. They again appear just before the commencement of the next swarming season.

We have a little Spider Plant seeds to spare, which we will send post free at 1s. per packet.

HONEY MARKETS.

NEW YORK, November 1st, 1883.

The demand for extracted honey is very good. Prices at present are—for 1lb. tins, wholesale, 8s to 8s 3d per doz.; retail, 10d to 1s per lb.

AUCKLAND AGRICULTURAL AND MERCANTILE Co., Limited.

ENGLAND.

From advertisements in the *British Bee Journal* just received we gather that honey is still in good demand in England, at what we consider a satisfactory price, 1s to 1s 3d per lb. being offered for bright comb in large quantities.

AMERICA.

NEW YORK, September 10, 1883.

HONEY.—White clover and basswood in 1 lb. and 2 lb. sections, 18c.; dark and second quality, 14c.; extracted white clover, in kegs and barrels, 11c.; dark, 8c.

BEEWAX.—Prime yellow, 30 @ 31c.

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

SAN FRANCISCO, September 10, 1883.

HONEY.—There is a moderate supply of comb and extracted of common quality, but offerings of extra choice comb are very light. The sales being effected are within the range of unchanged figures.

	c.	c.
White to extra white comb	16	@ 20
Dark to good	10	@ 13 $\frac{1}{2}$
Extracted, choice to extra white	7 $\frac{1}{2}$	@ 8 $\frac{1}{2}$
Dark and candied	6 $\frac{1}{2}$	@ 8
BEEWAX—Wholesale	27	@ 28

STEARNS & SMITH, 423, Front-street.

—*American Bee Journal*.

OUR HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of July, 1883, amounted to £7,496.

—*British Bee Journal*, September 1st.

SPECIAL NOTICES.

NOTICE TO BEE-KEEPERS.

Mr H. H. Hayr wishes us to state that he keeps on hand and for sale all kinds of apiarian appliances. We believe he is agent for Messrs Bagnall Bros. and Co.'s bee-keepers requisites. His advertisement appears on the cover.

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 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.

Our Correspondents will oblige by writing articles for publication on one side of the sheet only.

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.

SCALE OF CHARGES FOR ADVERTISEMENTS.

	£	s	d		£	s	d
Single Column	0	1	6	Double Column	2	10	0
Three lines	0	0	6	Page	1	7	6
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Inch of space	0	8	0	Quarter page	0	17	6
Quarter column... ..	0	15	0				
Half column	1	5	0				
Whole column	1	5	0				

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