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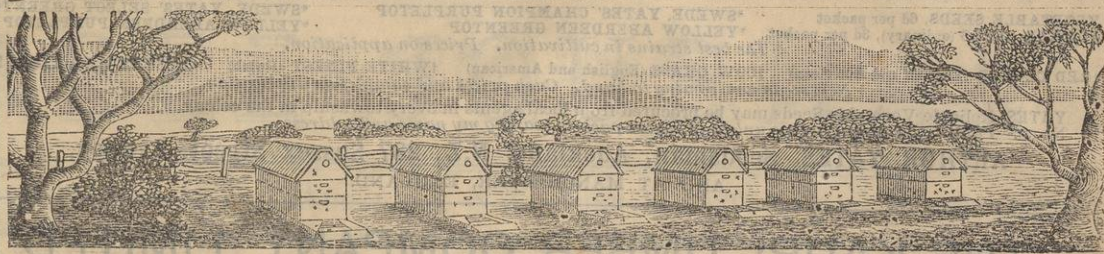
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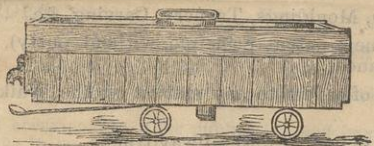
THE AUSTRALASIAN

BEE JOURNAL



No. 12. Vol. II.] AUCKLAND, N.Z., JUNE 1, 1889.

[PUBLISHED MONTHLY
SIXPENCE.]



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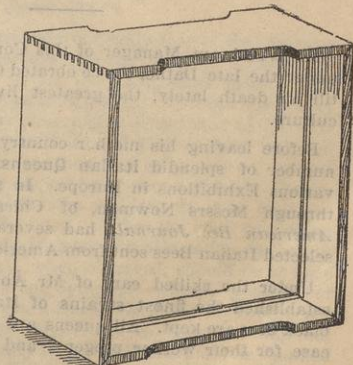
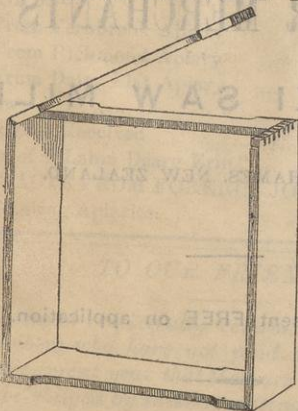
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AUCKLAND, N.Z., JUNE 1, 1889.

[PUBLISHED MONTHLY.
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The Australasian Bee Journal.

PUBLISHED MONTHLY.

I. HOPKINS ... EDITOR AND PROPRIETOR.

TERMS OF SUBSCRIPTIONS

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TO OUR FRIENDS.

We would respectfully remind those of our old Subscribers who have not paid their subscriptions for the current year that they are now due, and we shall be obliged by their remitting the same. Should there be any who do not wish the Journal renewed, we shall be glad if they will drop us a line to that effect. Half-yearly subscriptions taken.

Editorial.

SEASONABLE HINTS FOR JUNE.

We are now fairly into winter, and if the instructions given previously have been carried out the colonies should be in good condition to withstand the cold and damp to be expected during the next month or two. As we have before stated the winter months should be a time of absolute quietness and rest, and under proper management there will be no need to disturb the bees in the slightest unless something unusual should occur. It will be good policy to take a turn through the apiary every day, noting the entrances of the hives, for should there be anything wrong it will generally be indicated there. For instance, the appearance of an unusual number of dead bees shows at once that something is out of order and requires attention, which should be given immediately or on the first favourable opportunity. The mishaps which are most likely to occur in weak colonies, which as a rule are the ones that require the most careful watching and attention, are robbing and queenlessness. In the first instance the measures recommended in previous numbers should be adopted, and in the latter case uniting with some other colony would be the best and only remedy to save the bees.

SECURING COVERS.

Covers, unless properly secured, are liable to be blown off during heavy winds and storms, especially where the hives are not well sheltered. The result of a mishap of this kind occurring during the night in a storm of wind and rain, would be very likely to ruin the colony through damp and exposure. To avoid risk, it will be better to secure the covers by some special means. A small hook and eye, the former screwed into the body of the hive, and the latter into the cover on back and front, will keep things safe. These, we find, can be procured at the rate of about 1s per dozen, and will last for many years, and will well repay the small outlay. They can, of course, be removed after the close of the winter, when all danger is past.

DAMP MATS.

After a continuous heavy storm of rain it is as well to raise the covers of the hives and examine the mats to ascertain if any rain has drifted in. If so, the damp mats should be at once removed and dry ones substituted. This operation may be performed without any unnecessary disturbance of the bees. There should always be a number of dry spare mats kept on hand for this purpose, in case they may be required; should any covers be faulty they should be at once repaired. Dampness in the hive should always be avoided, as it is most injurious to the health of the bees. It has the effect of souring their food, and so causing dysentery; it also causes the combs to become mouldy, which, when observed, should be at once removed. Hives kept on low-lying or swampy ground, or under the shelter of evergreen trees, where the rays of the sun cannot reach them, are very liable to become damp and mouldy inside; consequently such situations should be shunned and, in case of hives becoming excessively damp inside, it will be better to shift the bees and combs into clean dry hives, keeping the entrances enlarged to five or six inches to allow of freer ventilation.

SHELTER.

Few things will conduce to the successful management and well being of the bees more than an apiary well sheltered from high winds. The bees, even during a long spell of stormy weather, can at least take a cleansing flight occasionally, even when prevented from flying afar in quest of food. When well sheltered the bees winter much better and come out stronger in the spring, compared with those in an exposed situation. It is also of great advantage to the apiarist, who can manipulate the hives if required at any time, with a minimum of trouble. We speak from experience, and the bother and worry of attending to an apiary during the winter and spring months in an exposed situation, is something enormous, to say nothing of the poor condition of the colonies in the spring and the bad effect on the season's output of honey. In commencing beekeeping, or enlarging an apiary, the position and shelter should be two of the first things considered. By a judicious selection of the former the latter may often be obtained with very little trouble. Under the modern method of placing hives near the ground advantage may be taken of any slight undulation to afford partial shelter, which may be improved by planting suitable quick-growing evergreen shrubs such as *Erica Arborea* (*Tree Heath*), Laurels, Cyprus (*cupressus macrocarpa*), the large kinds of privet and other shrubs to be found in the catalogue of the nurserymen. The first-mentioned shrub has the advantage over the others in so far as it affords good forage in early spring, and is at the same time very ornamental. No tree or shrub for shelter or other purposes near the apiary should exceed ten feet in height, as it is very inconvenient having swarms which may settle a greater height from the ground.

PLANTING TIME.

The month of June is a very suitable time for planting evergreens, as they stand shifting better at this time of the year than in spring. It is always advisable to remove them in such a manner that they will receive as little check as possible, and if the operation is performed carefully now the growth will not be affected in the least; on the other hand, if left till later on they scarcely have time to recover before the dry weather sets in, which is certain to interfere with the growth, and probably throw them back for a season or two. When planting trees or shrubs care should be taken to properly cultivate the ground for some distance around them. In many cases it is thought sufficient to make a hole just large enough to admit the roots of the plant, and after sticking it in, to fill in the hole. This method of cultivation results in stunted plants, much to the dissatisfaction of everyone concerned. The proper method is to dig the ground for a width of at least four to six feet on each side of where the planting is to be done, which should be carried along the whole length of the row. Of course, if it is necessary, the ground should be well drained previous to planting. After digging and breaking the soil where the plants are to stand, the whole should receive a liberal application of bonedust, particularly near the roots of the plants. For the first season, or until the roots have had sufficient time to get a firm hold in the ground, the plants should be staked to prevent their being blown about by the wind.

MISCELLANEOUS HINTS.

Look occasionally over the spare combs stowed away for indications of the bee moth larvæ, and if necessary fumigate them with sulphur.

Timber intended for hive-making purposes should now be getting well-seasoned, and advantage should be taken of opportunities to get all material in readiness for putting together, remembering that nothing but well-seasoned timber should be used for hive construction, frames, and section boxes. All such like small material should be obtained from the manufacturers, as these are very important parts of the hives, and parts that require to be very accurately cut, which cannot be done without the aid of proper machinery. The apiary should be kept as clean and neatly as possible, and free from pools of water.

"The beekeeper will ordinarily derive all his profits from stocks, strong and healthy, in early spring."—*Langstroth*.

UPWARD VENTILATION.

WE have always advocated hitherto the adoption of porous mats and contracted entrances for wintering, but since assisting the Rev. Father Madan in carrying out his experiments in hive ventilation our views have, in this respect, been very much modified. As our readers are aware, experiments have been conducted to test the internal temperature of a hive, both hermetically sealed and with porous mats, and, as can be seen by referring to the table of temperatures given from time to time in this journal, there was very little difference, seeming to show that upward ventilation was of little importance. Another circumstance observed since being located in Auckland goes a long way towards convincing us that upward ventilation is not so necessary as we had before thought, and that is the manner in which the bees hermetically seal themselves in by propolis the exposed portions of the mat and any little crevice between that and the edges of the hive. We have never before seen so much propolis gathered as in this neighbourhood. At Matamata it was only occasionally we saw any at all, and at the Thames very little was used by the bees, and in no case that we can recollect did we ever see the mats propolised to any extent. Consequently, there was nothing to lead us to believe that the necessity of upward ventilation was contrary to the economy of the hive. Here, in Auckland, however, it is very different. A clean mat is no sooner put on the hive than the bees commence to propolis every portion that they can get at, and in every case their endeavours appear to be to prevent the slightest upward ventilation. To give some little idea of the amount made use of by the bees in the hives here, Mr. Poole took from a chink about two inches long, situated at the junction of the upper and lower hive, a lump of pure propolis weighing over two ounces.

With these facts before us we can come to no other conclusion than that upward ventilation, at least in cold weather, is of doubtful value. If it is correct that the bees, if left to themselves, would carry out all the ventilation of the hive by means of the entrance, then it is reasonable to suppose that it should be left wider in winter than has been generally advocated. In America the wintering question is one of very great importance, and many leading beekeepers there have advocated from time to time the stoppage of upward ventilation and the enlargement of the entrances. The question was recently discussed in the columns of *Gleanings*, when sixteen prominent beekeepers gave their opinions as follows:—Ten advocated impervious quilts or mats, four of these simply used the flat covers of the hive, which, being wood and covered with propolis, are impervious; woven mats were advocated by four only, and the remaining two gave uncertain replies. Enamel cloth appears to be the chief material used for impervious mats, but it is generally recommended that a warm chaff cushion should be used above it to prevent the condensation of moisture on the under side. In order to further satisfy ourselves on the point

we have at present about twelve of our colonies covered with enamel cloth with some porous mats above and the entrances enlarged to about seven inches in width. Others, again, have the ordinary porous mats only above the frames while the entrances are contracted to about three and a half inches. We expect by this means to finally satisfy ourselves which system is the best. If any of our readers have had any experience of both methods we should be glad of their opinion as to which they consider the most suitable.

SUPPOSED CASE OF HONEY POISONING AT MATATA.

A REPORT recently appeared in the New Zealand papers that three Maoris had been poisoned by honey, two of whom died. The said honey, it appears, was obtained from a hollow tree, but believing that the poisoning did not result from the honey, we sent the following letter to the *New Zealand Herald*:—

SIR,—With regard to the alleged case of poisoning by honey, I believe that when the circumstances are thoroughly investigated it will be found that the deaths were due to some other cause than that of eating honey. I have an extensive knowledge of the different kinds of honey produced in the colony, and am only aware of one variety that is at all deleterious, and that is gathered from the flowers of the wharangi, a native shrub usually found growing on the edges of the bush and clearings. This shrub comes into blossom in August, and remains in bloom but a very short time. Owing to this circumstance, and the fact that the weather at that time of the year is usually unfavourable for the secretion and gathering of honey, the bees are enabled to store but little of it, and being so early in the season, what little they do gather is quickly consumed by themselves. Now, as our season for extracting honey does not as a rule commence south of Auckland before December, there is not the slightest possible chance of any of the wharangi honey being in the hives at that time, and the same will of course apply to the nests of wild bees. I have in my possession a sample (about 2lb) of honey gathered at Maketu not far distant from the scene of the alleged poisoning, and this is as fine a sample as one could wish to eat. I am taking steps to procure a sample of the supposed poisonous honey, which I intend to have analysed, and the result of which I will communicate to you.—I am, etc., I. HOPKINS. Queen Street, May 7, 1889.

Shortly after, apparently in reply, a communication from Mr de Thierry was published to the following effect: That on one occasion he was travelling with some Maoris along the sea coast when they fell in with a store of honey accumulated by wild bees. Mr de Thierry and one of the natives ate heartily of the honey and soon after became very ill. The Maoris adopted at once remedial measures which caused them to vomit freely, and this brought them round. Mr de Thierry is of opinion that it was not the honey that contained the poison, but the wax of the combs which they ate with the honey. He believes that in building the comb the bees use a gummy substance exuded by the karo plant which they mix with the wax, and which, he says, is poisonous. This opinion regarding the use of gum to help to build the comb is, as every beekeeper will be aware, erroneous, and this we pointed out in another communication to the *Herald*. It is strange, however, that Major Lusk, a gentleman well versed in native matters, should hold the same

opinion that when bad effects arise from eating the wild honey in the comb it is due to the comb alone and not to the honey. Two or three other communications have appeared on the same subject, amongst them a very interesting one from a Kaglan correspondent (a beekeeper) to the effect that he is inclined to believe the poisoning was not due to any deleterious substance in the honey, but rather to the enormous quantity that in all probability was eaten by them—'a veritable gorge,' such as he had previously witnessed in other cases, when the after-effects were somewhat similar.

Whatever was the cause of the deaths the matter should have been thoroughly investigated, and the truth brought to light; but so far, nothing has appeared to show that there was any inquest held or *post mortem* examination made. It was stated by a European resident at Matata as peculiar that, although the bodies were kept for nine days before interment, they showed no signs of decomposition having set in.

RED TAPE IN THE POSTAL DEPARTMENT.

It has been the custom, since the formation of the Otago Beekeepers' Association, for this institution to circulate amongst its members literature in the shape of bee journals, and as a more ready means of securing a perfect distribution of the same, a tabulated form containing the names and addresses of the members, and spaces for entering the dates of receipt and despatch was enclosed in each journal. This enabled the members to pass the journals from one to another without the trouble of sending them back each time to the secretary. This worked well for a time and no objection was made by the postal authorities, but latterly they have refused to allow this system to go on any longer. When in Otago we saw the form in question attached to the journals of the Association, and one could hardly imagine that any Government desirous of helping a rising industry would take notice of such a simple matter, but they have done so, and object on the score of the form not being a supplement to the said journals, and have thus put the Association to great inconvenience.

We shall bring the matter before the New Zealand Beekeepers' Association, when no doubt the committee will ask the president to bring the matter before the House of Representatives during the coming session, and endeavour to get the matter remedied.

OTAGO BEEKEEPERS ASSOCIATION.

THE regular monthly meeting of the Otago Beekeepers' Association was held last month in Messrs. Royse, Smith and Co.'s office, Rattray-street. Present—Mr. J. Brent, vice president (in the chair); committee men, Messrs. Skey, D'Oyley, M'Cracken, Brickell, and the secretary. The sub-committee appointed at last meeting to draw up a set of questions for submitting to the *British Bee Journal* and *Gleanings in Bee Culture* brought up

their report as follows: "Your Committee report that they forwarded the following questions: 1. Is clover honey superior to all honey, and if so, why? What makes it so? 2. What should guide judges in judging honey? 3. In judging honey by points, allowing a maximum of 20 points in all, how would you allot them?" The sub-committee appointed to interview the Dunedin Horticultural Society with reference to amalgamating the annual honey show with their autumn flower shower—"not the amalgamating the of the societies as lately reported"—stated that they had submitted the schedule of prizes and conditions to them; that pressure of business prevented the matter being finally settled; but that the feeling of the Horticultural Society was strongly in favour of the joint show. On the motion of Mr Brickell, the secretary was instructed to order two additional copies of the *Australasian Bee Journal*. Mr. D'Oyley then read an interesting paper on "The Metamorphoses of Insects," after which Mr. Morris announced that his paper would be upon "Foul Brood." A vote of thanks to Mr. D'Oyley closed the meeting. The following schedule of prizes, to be offered at the next show, was agreed upon: Class 1: For the best observatory hive, stocked with bees and queen, hive only to be judged, 10s., 5s. Class 2: For the best twelve sections, to approximate twelve pounds in weight, first-class certificate, second-class certificate. Class 3: For the best six sections, to approximate six pounds in weight, 10s., 5s. Class 4: For the best extracted honey, in glass, the gross weight to approximate twelve pounds, first-class certificate, second-class certificate. Class 5: For the best exhibit of comb and extracted honey, in any form, the gross weight of each kind to be stated, 20s., 10s. Class 6: For the most interesting and instructive exhibit of any kind in connection with bee-keeping, 7s. 6d.

A MODEL APIARY.

We notice in a recent number of the *Town and Country Journal* a description of Mr. R. K. Allport's apiary of St. Ives Lane Cove, Sydney. It appears that Mr. Allport only arrived in the colonies some two years ago, having previously held thy position of 'Expert' for the Surrey Beekeepers' Association in England. Mr. Allport recently purchased about 9½ acres of land as a site for his apiary at £40 per acre. To accommodate the hives, and to afford them a fair degree of sun and shade, the native forest trees have been sawn off about eight or ten feet above the level of the ground, and the stumps permitted to send out their new shoots around the top. Around these stumps the bee-hives are at present scattered, being set upon blocks of wood about eighteen inches in height. Mr. Allport's colonies at present number about 175, most of which are hybrids, and hitherto they have been exceptionally free from disease. The average yield of honey per annum is set down at 112lbs. although many hives will make double this quantity. The best class of honey in Mr. Allport's apiary is early spring orange tree blossom, and it is

of a beautiful light golden colour, and of mild and pleasant flavour. Honeysuckle comes next, and is described as being a little darker in colour, with a beautiful aroma, and readily granulates. The bee-hives are modified Langstroths and are manufactured by Mr. Allport himself, as also are the comb foundations used in the apiary. The article, which extends to some length, is fully illustrated, and very interesting.

John Dzierzon, to whom the credit of proving parthenogenesis must be given, was born on January 16, 1811, was Catholic priest at Carlsmarkt, Silesia, from 1835 to 1869, and afterwards retired into private life.

A RECEIPT FOR FLOUR CANDY.—Into three pints of soft water, boiling, stir 15lbs. of lump sugar, ½oz. of cream of tartar; and, after cooling, before pouring out, stir in well 6lbs. of flour, or pea flour, or half-and-half.

LECTURE ON BEES AND BEEKEEPING.

A MOST interesting lecture on "Bees and Bee-keeping," was given by the Rev. J. R. Madan, at St. James's Hall, Auckland, on Friday, May 17, before a very fair audience, in aid of the Society of St. Vincent de Paul. Mr Hiscocks' orchestral band was in attendance, and played selections during the evening.

Mr E. Mahony presided, and in a few well-chosen remarks introduced the lecturer. He also mentioned that the St. Vincent de Paul Society, Auckland Branch, had now been established in Auckland for four years. During that time about £400 had been given away in charity and assisted to educate three boys at the Marist Brothers' school.

The rev. gentleman was received with applause, and illustrated his lecture with samples of hives, extractors, and other apparatus lent by Mr. Hopkins; also by well-executed coloured diagrams, published by the British Beekeepers' Association and others, some of which were quite six feet in length. The lecturer explained how the queen bee deposited the eggs in a cell. When the larva hatched it increased in size so rapidly that in five days it became 1,400 times as big as it was when hatched. In thirteen days the bee became perfect, and then ate its way out of the cell. The drone cell contained the grub which turned into the male bee. By means of a change of food the young working bee was transformed into a queen bee. When flying the wings of the bee flapped four hundred times in a second, and to provide sufficient oxygen to support its extraordinary activity, the bee was provided with 14 mouths to take in the air.

The eye of the bee was next described, and illustrated. The worker bee had 12,000 little eyes about the thousandth part of an inch big, and the queen 8,000. The drone was provided with 36,000 noses and 26,000 eyes, so that he might find the queen bee when she was out on what might be

called her wedding tour. The queen bee was only allowed one outing in her lifetime. When the queen was laying she would lay about 3,000 eggs per day. She required much nutriment, as she would lay twice her own weight in eggs in one day.

Father Madan next pointed out on the diagram the honey-sack in which the working bee stored the honey as it went from flower to flower. He pointed out that the bee had the power of flying backwards or forwards with equal facility. The bee's legs were provided with no less than 30 tools. Amongst these were twelve hooks for climbing steep places, six sticky pads for going along smooth places, various brushes for cleaning itself, two stomach scrapers, and two combs for cleaning the stomach scrapers. There were also hairs on the legs to collect pollen, and thus flowers were fertilised. There were also pollen baskets on the legs; *in fact, the bee had everything on its legs that it could possibly want.* The foot of the bee was also described and illustrated. The bee had to eat from 12 to 20 pounds of honey to make one pound of wax. At the rate that bees used wax, two pounds of wax would store nine gallons of honey.

The sting of the bee was next described at some length. It might be some pleasure to those who had been stung to know that the oftener they were stung the less effect the poison had upon them. A queen bee would live four or five years, and as soon as she began to give up laying eggs she was neglected and allowed to starve. The drones might be termed the mashers of the hive. They did no work and were provided with a number of brushes to keep themselves clean. When the winter came on, the working bees ruthlessly massacred them.

An interval here took place, during which the orchestra played a selection of music.

Father Madan next spoke on practical beekeeping, illustrating his remarks by the aid of the hives, etc., before mentioned, and the audience appeared much interested at the exhibition of a small observatory hive containing a queen and worker bees, which seemed to elicit general admiration.

At the conclusion of the lecture, a hearty vote of thanks was accorded Father Madan on the proposition of Mr Mahony.

INTERNAL TEMPERATURE OF HIVES.

By J. R. M.

THE observations recently made at the apiary of the editor of this *Journal* have now reached the end of the preliminary stage. All observations with thermometers require the most rigid criticism on the part of the observer and his interested confreres. Carelessness in insulation, a disregard of apparently non-disturbing causes, the acceptance of apparently conclusive explanations without the rigid examination directed expressly to ascertain their truthfulness, may render a whole set of observations useless; we might almost say "worse than useless," for it will have set off a number of people on a wrong track. Hence the observation recently made, as recorded in this *Journal*, should

be accepted with considerable distrust until verified by others.

However, they will at least, it is hoped, have placed the subject of the internal temperature of hives on a safer footing, viz., that of actual facts. For, strange as it may seem with all the pages of matter bearing on it, and all the important issues depending on it, it seems as if no serious attempt has as yet been made to get at facts by inserting a number of thermometers simultaneously in a hive, and noting their variations under different circumstances.

It is said above that the preliminary stage has now been reached in the attempt made, as recorded in this *Journal*, however inaccurate it may turn out to be. They at least show that it is worth while thoroughly to investigate the question, as to whether white one inch hives are sufficiently non-conductive of heat and cold to keep the bees in health; and it is intended to take advantage of the cold nights coming on and the summer heat in six months' time, to make some crucial tests on the subject with the advantage of extremes of temperature. Also, it is intended to try, side by side with the common one inch hives, some hives with double sides, but retaining the exact shape of the present Langstroth.

Another subject also is opened up for more careful investigation, viz., the movement of the air in hives with pervious and impervious mats. It will be remembered that with pervious mats there seemed to be definite proof that the air actually descended at the sides, instead of ascending, although a certain amount in the middle ascended. With impervious mats a strong highly heated current was noted as rapidly coming out of the low narrow entrance; and yet no bees were observed at the entrance fanning. To investigate this some very careful observations will be needed; a glass hive, glass cover, and glass bottom board, all doubled and fitted with the most delicate instruments for noting the currents of air will be needed. This will need some time and care, but it is of the gravest consequence that the question should be settled by actual experiments; for, if it should turn out that the conditions under which we have been artificially keeping bees, tend to render them liable to sudden chills, and generally to rapid changes of temperature, we shall probably be put on the track towards striking at the root of the fatal prevalence of foul brood, sooner or later, in almost every apiary.

EXTRACTING THICK HONEY.

IN the May number of the *Journal*, I notice Mr Mulvany's complaint respecting thick honey. Now, towards the latter end of February, when the weather was very hot and dry, I had a good many frames of very thick honey which I could not extract. I put it down to over-evaporation or over-ripening, if I may use the word, and thought of wintering the bees on it; but quite accidentally I found out that if these combs were hung three or four at a time in the upper story of a strong hive for two or three nights after the weather

begins to get chilly, the honey absorbs moisture enough to allow of its being extracted with ease. The cappings of a comb, after being subjected to this steam bath process, lost their beautiful white drawing-paper look; the reason being that the honey takes up more room than it did before, and fills not only the cells but the caps also. I do not know if the thick honey Mr. Mulvany speaks of arises from a similar cause—evaporation; but it might be worth his while to try my dodge. I ought perhaps to add that I place a thin mat over the bees to prevent them getting into the upper box, though there is little fear of this on a cold night.

C. B. MORRIS.

ENGLISH BEE JOURNALS.

By J. R. M.

THE *British Bee Journal* of March 14 contains scattered facts in favour of impervious mats, protected by non-conducting substances. Eleven eminent United States beekeepers gave opinions in favour of them, and are quoted. The editor of this journal has experimented with them the last few weeks, and found that four thicknesses of paper over an enamel mat do not act as a sufficient non-conductor, but that condensation takes place even in the mild autumn weather which we are enjoying; but that chaff mats do prevent the condensation. It stands to reason that the constant creation of new, heated air in the cluster must be constantly creating an up-current, while the comparatively chilly sides of the hive, and the heavy carbonic gas must equally constantly be creating a down current, and thus a movement of the entire air in the hive must be going on, and the fresh air near the entrance must, however slowly, be constantly mixing and purifying the passing currents. Hence, why be so afraid that, unless the top mat is pervious, the bees will suffer from bad air? A well-protected impervious mat must be apt to keep the hive warmer, for a pervious mat, by letting out the rising air, will check the storage up of the heat (evolved by the bees) in the sides, which will then be all the more acted on by the external air. At present there is a decided tendency to leave wide entrances and to save the bees the trouble of trying to propolize two superficial feet of pervious matting.

The number for March 21 adds other testimony in favour of well-protected impervious mats and wide entrances, only warning against the action of cutting winds, and recommending oilcloth, oiled once or twice a year to keep it supple. Mr. Samuel Simmins, the enterprising beekeeper and clever queen-introducer, is the one who gives us this experience on the matter.

A beekeeper, signing himself Peter Bois, has repeatedly noticed the immense progress which a colony makes on being shifted from the single

wall 'swarm box'—he means an ordinary one-inch hive body—to a double-walled one. The cork dust space stores the heat of the cluster, and increases the heat area; and 'while it allows heat to escape less rapidly, it protects the nest very effectually from outside influences of extreme heat and cold, as well as outside dampness.'

In the March 28 number allusion is made to Mr. Pond's (U.S.A.) experience that frames one-fourth of an inch apart are almost entirely crammed with brood to the exclusion of honey, and *a fortiori* of drone brood. 'With no honey and no drones below the bees are less inclined to swarm.'

Mr. C. J. Robinson thinks that bees had their original home in Egypt, and notes that with the Egyptians the picture of a queen bee was an emblem of royalty. In the Egyptian picture-writing the picture of a bee represented Lower Egypt or the Delta; and probably implies that the Delta was the sovereign mother country of the rest of the Nile valley.

A contributor signing himself 'Dunbar' gives a 'new idea.' On the ground that bees prefer to build wax downwards and store honey upwards, he places a crate of sections between the floor board and brood chamber; and when the comb is worked out, removes it and places it *above* the brood chamber to be filled with honey, while another empty crate is placed below (if the season is favourable, of course), and the same process repeated. He claims that the work is quicker, and by putting an excluder over the top of the under crate, so cut as to leave room for the drones and queen to pass down by the sides only, he retains the means for their exit, when necessary to allow it.

The editor prefers frames $1\frac{1}{2}$ in. apart in the winter to enable the bees to cluster together in larger masses. We doubt if sufficient attention has been given to this obvious drawback to our modern system. How, when frames are only $1\frac{1}{2}$ in. or $1\frac{3}{4}$ in. apart, can the bees cluster sufficiently to keep warm? This will very probably be one of the many factors in the general lowering of the health of bees, in which state they are, like us, liable to any disease that crops up.

There is a warning against breaking up the brood nest by inserting empty combs right in the middle of it. Let the empty combs be placed each side of it, leaving the two or three central ones undisturbed.

CURIOUS ACCIDENT WITH A BEE STING.—A somewhat curious but dangerous accident befel one of the Messrs. Hobbs Bros., apiarists, at Tamahere on Tuesday afternoon. One of them had pulled a bee out of a tin of jam, and the bee darting out its sting must have left it in a more solid portion of the jam. His brother not being aware of this, swallowed the sting with a portion of the jam, and was severely stung in the throat. Suffering great pain, and inflammation setting in, he was taken into Hamilton yesterday evening, and treated by Dr. Kenny, and able to return home cured the same night.—*N.Z. Herald.*

BEE GOSSIP.

BY O. POOLE.

BEES AND RED CLOVER.—With all due deference to Mr G. A. Green, I still maintain that bees cannot be depended upon every season to fertilize red clover. Most writers on the subject admit that bees, Italians and Syrians especially, do in some years visit the red clover, but this is, as I have before pointed out, owing to an abnormal growth of the corolla, which only occasionally takes place. Professor Cook says: “Sometimes all bees can get some honey from red clover; those with the longest tongues could do the best.” Mr Root, in his “A B C of Bee Culture,” says: “The Italians will often do finely on red clover, while the common black bee will not even so much as notice it.”

In his work on “Cross and Self-fertilization,” Darwin writes: “I have often watched this plant (*T. pratense*), and have never seen hive bees sucking the flowers, except from the outside, through holes bitten by humble bees, or deep down between the flowers, as if in search of some secretion from the calyx. . . . It is at least certain that humble bees are the chief fertilizers of red clover.”

In New Zealand the fertilization of red clover is partially accomplished by a nocturnal moth, which in some years is exceedingly plentiful, and when this is the case, and the growth of the corolla admits of the visits of the honey bee, a fair crop of seed might possibly be harvested; but if we are to make certain of a payable crop, I am certain the presence of humble bees is absolutely necessary. For instance, notice the splendid returns of seed gathered in the Canterbury district, as reported in the *Canterbury Times*, since the advent of the humble bee. Had it been possible to have successfully raised the seed by the aid of the honey bee alone, depend upon it the large runholders who for years past have been using a vast quantity imported from England every year at an enormous expense, would never have awaited the introduction of the humble bee before attempting to save their own seeds, yet we never hear of its being done until after the arrival of this most useful and interesting insect.

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MR MORELAND'S BRINE REMEDY.—Having a few dozen old combs, some of which contained dead brood, old pollen, and some of the cells nearly full of cast cocoons, and wishing to clean and, if possible, again utilise them, I determined to give Mr Moreland's “brine remedy” for cleaning them a trial, and following his directions as given in this *Journal*, I am glad to report that it succeeded admirably. I allowed them to soak in the brine for about four or five days, when I put them through the extractor, and most of the refuse came away with the liquid brine. They were then hung in an airy place to dry for another week or so, by which time the remaining refuse had so dried and shrivelled up that it was easily removed by the bees. These combs were not affected with foul

brood, but simply required cleaning, and I consider Mr Moreland's plan a capital one for that purpose. I have not tried it on foul broody combs and have no ambition to do so if I can manage to keep that terrible disease from the apiary. I would, however, suggest to others when operating on foul broody combs to add to the brine some “absolute Phenol,” to make sure of the destruction of the disease.

I notice a somewhat similar plan to Mr Moreland's advocated in the March number of the *British Bee Journal* by Mr W. B. Webster. Speaking of combs and foul brood, he says:—

“It should be remembered that larvæ which have died in the cells from ‘foul brood’ before capping over are allowed to remain, and after some time dry up, becoming, I might almost term it, amalgamated with the cocoons of preceding larvæ; hence an infected colony will always have a number of these mummified larvæ lying in the cells, yet invisible to the naked eye. Now to renovate or bring back any such desiccated tissue to its (almost) original form requires but the application in a proper manner of moisture. This being so, we have only to immerse the suspected comb for six hours in warm water, and such larvæ will show themselves in the cells they occupy, but mind, rather in an attenuated condition. To do this, procure a box of sufficient size that will hold water; it can be made watertight by running molten wax at the angles; place the suspected combs upright as in a hive in same, and fix them by nailing a strip of wood across to each side of the box. Then get some boiling water, add to this about four ounces of Calvert's carbolic acid No. 5, and well stir. Now allow it to cool down to about 110° Fahr. When this degree is reached the solution must be poured very gradually into the box; as it rises it will fill most of the cells. Allow it to stand about six hours, when the combs will be ready for examination. The carbolic acid is used simply to prevent infection. Chilled brood is usually removed by the bees, so that if any larvæ are found it may be relied upon that they have died from ‘foul brood.’ The larvæ will be found to be almost shapeless, and of a yellowish-white colour.”

* * * * *

LEAKY COVERS.—These are a great inconvenience to the bees, and often leads to the destruction of the colony. They may be effectually stopped by first painting over the top of the cover with boiling-hot pitch, and laying on that a thick sheet of brown paper, which should immediately be well smoothed over with a hot flat-iron. This will cause the paper to absorb the pitch, and the two to become as it were amalgamated, and will resist any amount of wet. The paper can afterwards be painted, if thought desirable.

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FOUL BROOD IN INDIA.—Many of your readers will probably recollect that some five or six years ago the Indian Government took up the subject of bee culture with a view of ascertaining whether the industry could be successfully carried on there or not. An elaborate report was drawn up by those appointed to investigate the matter, which was favourable to its introduction. Occasionally since then reports have appeared in the bee journals from European residents in the country interested in the culture of bees, and who have become beekeepers. Up to the present time I had heard nothing concerning “foul brood” in that country, but unfortunately the disease appears to be as rife there as in other countries, as the following ex-

tract from a letter sent from Mr Nicholson, of Yercand, South India, to a friend in New Zealand will show :—

“I lost both my hives from that disease, ‘foul brood.’ My own experience of bees had been a pretty large one, but I had never seen the disease to recognise it before, and when I found one hive getting very weak and the other stronger, I exchanged combs with the two hives, with the result that I communicated the disease to the strong hive and lost both, though I used all the prescribed remedies. However, I know foul brood now! I have just received another hive of Italians from Messrs. Neighbour and Sons in splendid condition, full of healthy brood. I am an hon. member of the Australian Beekeepers’ Association of Melbourne. . . . Tell — they ought to destroy the foul brood as they did the *Phylloxera Vastatrix* in vines, by utter destruction of those bees infested with it. It will be the cheapest in the end, for all foul broody bees are listless and weak and consequently easily robbed by others, and thus spread the disease.”

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ENGLISH BEE AND HONEY SHOW.—During the present month the British Beekeepers’ Association hold one of their annual shows under most favourable circumstances, in connection with the Jubilee Exhibition of the Royal Agricultural Society at Windsor, under the immediate patronage of Her Majesty the Queen, who is President of the Society for 1889. A most liberal prize list has been issued by the British Beekeepers’ Association, nearly £50 being offered for competition, besides valuable medals for hives, honey, and appliances. It will be exceedingly early in the year for the exhibition of English honey, and I cannot help thinking that New Zealand beekeepers have lost a most favourable opportunity of sending home a large consignment of New Zealand honey. It would have sold well, and have proved a splendid advertisement. Of course the New Zealand Beekeepers’ Association might have undertaken this, but whilst they get such scant support from beekeepers, who would chiefly benefit by such action, they can hardly be expected to do so.

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ALLEGED POISONING BY HONEY.—Considerable discussion has recently been going on in the Auckland papers with regard to the alleged poisoning of three Maoris through eating poisoned honey. One of the most interesting letters is from the pen of “Egavas,” who offers a very good solution to the supposed mystery and which will doubtless be reproduced in this *Journal*. What strikes me as being peculiar is that in all cases of alleged poisoning by honey, the honey in question is always *wild* or *bush* honey, and never in any case has any ill effect been reported as arising from the consumption of honey from domesticated bees. Now if wild bees gather and store up poisonous honey, why should those in hives do the same? The foliage available for the secretion of nectar must be in many cases be the same. How comes it then that the one should be poisonous and the other innocuous? One way to have solved the present difficulty would have been to have made an analysis of the vomit of the unfortunate men, when, if poisonous honey had been present, it could have been readily detected.

Occasional Notes.

No. 9.

“SOMETHING ABOUT EXOTIC HONEY BEES.”

By T. J. MULVANY.

IN the February issue of a German bee journal published in Hanover (called *Bienenwirtschaftliches Centralblatt*) there appears an article with the above heading, written by Professor Hess, of which I will here take the liberty to give a condensed translation, as a supplement to the notes I have already collected on the subject of “Bees and Honey in the Tropics.” The Professor begins by alluding to the fact that, besides the honey-bee to which his readers are accustomed, there are numerous varieties of bees which gather honey (and, he might have added, some of which store it more or less in such a way that it may occasionally be made useful to man), and expresses the opinion that any person who would write the natural history of all honey-bees in the world would doubtless afford us much interesting, and probably some practically useful information. In this opinion, I quite agree, but it is scarcely likely that any naturalist will be in a position for a long time to come to undertake such a complete work, which would require tedious and difficult investigations in many parts of the world as yet but little known, in order to supply the necessary scientific data. In the meantime we must be content to collect as much information as we can (often imperfect and even doubtful), which has been furnished in the books of travellers who have touched on the subject. The Professor, evidently taking the same view, proceeds to mention facts stated by some recent travellers in tropical countries.

First, as to the Kalahara desert in South Africa (which is semi-tropical, and which I have already had occasion to mention as alluded to in Livingstone’s travels), he says :—

“As Farini reports, in his ‘Description of a Journey through the Kalahari Desert,’ the honey-bees found there seem to adapt themselves completely to the local conditions. They build their nests in the holes of rabbit burrows, in hollow trees, and in fissures of rock; but they also content themselves with hanging their combs in the open air from branches of tree, or projecting points of rock.

“The manner in which the Bushmen seek out these nests is peculiar. As the desert is nearly destitute of water the bees find it very difficult to procure it, and assemble immediately where any is offered to them. Making use of this fact the Bushmen fill a fragment of an ostrich egg-shell with water and deposit it in an open place. In a short time a bee, scenting out the water, hastens to the spot, settles on the edge of the shell, and stills its thirst. Then she flies away to inform her companions of the great discovery. Soon the whole edge of the shell is covered with bees. The Bushman now cautiously holds up the egg shell, and as the bees fly away one by one he follows in the direction they take, and in that way arrives at the nest. He devours the bright white combs, not only for the sake of the honey contained in them, but also for the fat bee larvæ, which he considers

a special delicacy. He also prepared a sort of beer from the honey by letting it ferment with the boiled juice of the watermelon."

The bee referred to by this traveller is, I presume, the ordinary African variety, *Apis Adansonii* of Latrielle, and it is something new to find that it will build in holes in the ground in the absence of hollow trees or rocky cliffs. But the writer gives no description of the bee itself, and it is quite possible that it may be the small stingless bee met with by Livingstone in the Bakota country, a few degrees north of the desert (see page 139 of this *Journal*); or there may be bees of both sorts at Kalahari, and possibly only one sort may build in the ground. The habit does not appear to belong to any varieties of the *Apis mellifica* elsewhere. The manner of hunting for the nests is a modification of the ordinary bee-hunter's practice, based in this instance upon the greediness of the insect for water in that parched district. It is to be remarked that there are evidently no honey-guide birds in the Kalahari, such as are found in the more tropical regions of Africa; and also that the Bushmen seem to be behind the natives of the more central districts who provide a rude sort of artificial hive for the bees to build in. They are, however, sufficiently wide awake to have discovered the mode of making a fermented drink from the honey.

Turning to Mexico, the Professor says:—

"G. Knopp, in the journal *Die Natur*, reports upon a sort of ants called *comjenes*, which hang their beehive-like dwellings from the branches of trees in the forests of Mexico. These dwellings are completely closed, the entrance being through a covered gallery formed along the branch and down the stem of the tree. In these structures of the *comjenes*, however, small honey-bees are found to dwell. They make an opening in the building at about half its height, and make their nest in the centre of it. The honey they deposit in large hollow spaces, but for the brood they build regular cells. With regard to the bees themselves, Herr Knopp says: 'This sort of bee is about the size of our house fly, but of rather compressed build. The head is black, the body brown, but there are also found some which are entirely black. They have no sting, but are, nevertheless, difficult to manage, for as soon as one cuts open the *comjenes'* nest in order to take the beautiful, clear, light coloured, and liquid honey, the insects pounce with such fury upon man and beast that it is impossible to guard against them, and if the swarm is large, one must absolutely take to flight. In an instant the head is covered with the little animals, which settle themselves in the hair and bite and pinch as well as they can. They creep into and settle themselves in the eyes, ears, nostrils, in the clothing about the neck, in the sleeves, trouser legs, in short in every place where they can reach the skin. Their legs are generally clammy with honey so that they can scarcely be removed alive, especially out of the hair. Such an attack is so unpleasant that, in the case of large swarms, we have always found it necessary to retire, in order, after a few hours' time, to return and take the honey with greater ease.'

"In the mode of building the black and brown bees were alike; in the quality and flavour of the honey, however, there was a considerable difference, with which the Indians were well acquainted."

The editor of the *Hanover Journal* supposes these bees to belong to *Apis tregona*; but I think the description given tallies so completely with that of the *Melipona fasciculata* found by Bates in the valley of the Amazon River, as well as with

those mentioned in the next extract, that there can be little doubt they belong to the latter genus. I presume also, that as in the case of the *Apis amalthæa*, mentioned further on, these bees do not dwell along with the ants, but take possession of their deserted nests.

The next place mentioned is Surinan (Paramaribo) in Dutch Guiana—a district lying north of the water-shed of the river Amazon—and it will be seen that the bees here met with are evidently of the same genera (*Meliphona* and *Englossa*) so fully described by Bates as quoted at page 109 of this *Journal*, though one species is mentioned as being nearly three-quarters of an inch long, while the largest found in the valley of the Amazon did not exceed half an inch in length. The following is the extract given from U. Kappler's work upon Surinam, published in 1887:

"Of bees alone which gather honey there are seven varieties known to me, of which the smallest is scarcely 4 millimetres ($\frac{1}{4}$ inch) long. The largest sort is something smaller than the *Apis mellifica*, about 18 millimetres ($\frac{7}{8}$ inch) long, and has no sting. It lives in hollow trees, and in the neighbourhood of savannas, where flowering palms and other plants afford a rich forage during the whole year. The combs, which contain the brood, are not of wax, but of a brittle woody substance. The honey, however, is stored in bladder-like hollows joined together in tolerably large masses. These consist of black, pitch-like wax, which smells like the wax of the European honey-bee, but does not admit of being bleached. It is used by the Indians only for torches. A large bee's nest may contain two to three pounds of this wax, and 4 litres (French quarts) of good, clear, sometimes a little sourish honey. In order to obtain the honey the tree is cut down and the nest mercilessly destroyed. Although the bees do not sting they defend their property desperately, settle themselves in the hair, crawl up the clothes, and bite away valiantly.

"Another sort is the *Apis amalthæa*, black with yellowish wings, and not over 9 millimetres ($\frac{3}{4}$ inch) long. It builds also in hollow trees, but more often in deserted ants' nests. Their honey is also stored in bladder-like hollows of black wax, and is excellent in taste. Another sort of the same size is yellow, with green eyes, probably *Apis pallida*, and builds in the same manner. Both of these varieties, which are much more frequently met with than the first mentioned larger sort, make their appearance immediately whenever fresh meat is exposed. They are as greedy about it as the wasps, devour it, and carry it to their nests. Nevertheless, they have always an agreeable aromatic smell, and in their nests one finds no remains which indicate an animal origin.

"A splendid golden-green bee, 12 millimetres ($\frac{1}{2}$ inch) long, gives me great annoyance. It builds in the door and chest locks, with which it creeps through the key-hole, and by degrees fills the whole lock with an agreeably smelling pitch-like wax, so that one is obliged to take the lock asunder, burn out the wax, and oil it afresh."

The following statement with reference to the stingless bees of Brazil (which, I presume, must mean the *Melipona* and *Englossa* of the Amazon valley) is curious, and would seem to require some further investigation, and a more detailed description of the peculiar formation of the insects, before it can be adopted as a well ascertained scientific fact:—

"Among the stingless bees of Brazil Von Thering has made the interesting discovery that the pollen collectors and the wax builders exhibit two quite different forms. The wax builders are never found outside the hive. The seals of wax are exuded by them not between the plates of the abdominal rings, but between those of the back. They are easily distinguished from the pollen collectors by the hinder part of their body being large and light

coloured, while in the latter it is small and of a brilliant black. Experiments in breeding showed that the animals exhibit the different forms as soon as hatched, and not as the result of a subsequent transformation."

Coming nearer home for us, the Professor adds the following passages with reference to Australia, but without giving the sources of the information :

"The natives of Australia have a peculiar method of finding the bees' nests. They catch a bee, fasten to it a small piece of white feather, and let it fly again. The feather renders the bee visible for a great distance, and they follow it in a quick run without losing sight of it, and thus generally arrive at the position of the nest.

"In Queensland the stocks of wild bees are procured in the following manner:—As soon as a bee nest is found in a hollow tree, a piece of sacking is nailed over the opening. Then, by tapping along the stem, the position of the nest is ascertained, the stem sawn through above the same, and a piece of sacking nailed over the top of the stump. After removing the sacking from the entrance, the bees are left for a few days to quiet down. On a cool and calm night the entrance is again closed with sacking, the stump sawn through below the nest, and loaded on to a waggon. After being brought to its destination, the upper sack is removed and replaced by a cover, and the entrance opened again. One often sees an entire row of such primitive bee hives in the apiary of the Australian beekeeper."

It is to be hoped that this description refers to a former state of things in Queensland, and no longer illustrates the condition of beekeeping in that colony. The writer seems to be under the impression that the wild bees referred to are indigenous to Australia, and rank among the "exotic bees" which form the subject of his paper, like those previously described in South America. There is certainly a small native bee in some parts of Australia (see *Australasian Bee Manual*, page 39), but we have no satisfactory knowledge as yet how or where it builds, or if it stores honey in such a way as to be worth robbing, and the wild stocks mentioned by Professor Hess are, no doubt, the swarms of the imported European *Apis mellifica*.

Correspondence.

TREATMENT OF FOUL BROOD.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—It has just occurred to me that some of your numerous readers might like to know how I have succeeded in ridding my apiary of that terrible disease which it has suffered from, namely, foul brood. My apiary now numbers about one hundred and thirty hives. Of these I had fifteen affected, and some of them very badly, with that disease; and now these fifteen hives, I am glad to say, are quite healthy, and most of them strong.

This is what I did. In the early part of last January I shook the bees off the frames of each diseased hive on the ground, about a foot in front of the mouth of a clean hive, the frames of which were furnished with full sheets of foundation. The first frame I shook contained the queen. I returned the frames containing the diseased brood to the hives from which they were taken, and carried them from the apiary a distance of about two hundred yards, leaving a few bees in each hive to hatch the young ones in the brood combs. In fourteen days' time I shook all these bees into clean hives, putting as many into each as would make a nice swarm,

supplying each with a queen, three of which were reared in the diseased hives. I then cut out all the diseased comb and melted it down at once, and the comb containing the honey I extracted, and afterwards melted the empty combs. The empty frames I scraped and boiled; the hives I scraped, fumigated with sulphur, and painted inside and out. These frames and hives are now occupied by as healthy a lot of bees as you would wish to see, and so are the hives into which I shook the diseased bees at first. As there was a little robbing going on when I treated the last three cases, I melted the diseased combs down at once, after shaking all the bees from them into a clean hive.

Now I do not say foul brood will not appear in my apiary again, but that all the cases I have treated as above have proved successful. The reason why I shook the bees a little distance from the mouth of the hive was that they might wipe their feet before entering their new abode, and carry in with them as little of the particles of foul brood as possible. I do not approve of allowing the bees to clean out the dried-up foul brood from the cells, because they carry it outside and scatter it about, and so, I fancy, spread the disease. That is one reason why many of the remedies have not given satisfaction, I think. The medicine given the bees has not killed the germs of the disease. No doubt other beekeepers have treated their cases of foul brood as I have done. I merely wish to testify that it is an effectual, easy, and economic method. I may state further that I have manufactured the wax rendered from the diseased combs into comb foundation, and by way of experiment used it in several of my hives; and in no case has foul brood appeared through three successive generations of bees reared in the combs built on them. This I consider is very satisfactory.

J. F. MUNDAY.

Woodville, Maitland, N.S.W.

MARKETING EXTRACTED HONEY.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—Now that the honey season is over and the crop harvested, comes the question where to sell; most important of all is, not to be in a hurry. The city markets are full, so we must not help to make prices still lower with further supplies. I find as soon as the fruit season is over (about end of April here) the demand for honey increases wonderfully, and a good lot can be sold at home if you are careful, and it will pay much better than shipping to a market that is already stocked. I'll tell you the way I supply our home market. I got our tinsmith to make me round tin cans 9½ in. diameter and 20 in. high, with honey gate fixed at the bottom, a light fitting cover to keep out dust and ants, all neatly made and japanned, and 'Choice Table Honey' painted on in large gilt letters. I made arrangements with the storekeepers, fruit-dealers, and confectioners to keep these cans on their counters, or some other conspicuous place, and I was to supply the honey, in 60 lb. tins, at 4d. Since I adopted this plan I have been unable to supply the demand. I am always sold out long before the next crop comes in. Very likely when you first speak to the shopman re dealing in honey he will say he has had enough of that stuff, or something to that effect, showing that he has had some experience with our farmers who market honey in all imaginable packages, quite original with themselves. I have had some trouble in this way, but have always been successful, once I showed him the retailing can, and how easy the honey was got out without any daubing or waste.

Yours, etc.,

B. CARLILL.

Richmond Apiary, Casino, N.S.W.

[Your plan of supplying the home market is, no doubt, a capital one, but unfortunately it cannot be generally adopted on account of much of the honey granulating. Here in New Zealand the bulk of our honey granulates in a very short time, and therefore your method would be very impracticable with us.—ED.]

AN IMPORTANT QUERY.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

DEAR SIR,—I desire to lay before your readers a question of some importance which has been puzzling the heads of Otago beekeepers during the last two months, and still puzzles them. Here it is. Is pure clover honey to be preferred to that obtained from the bush? I said just now that it was a question of some importance, and your readers will agree with me when they recollect that on its answer depends greatly where we are to locate our apiaries when raising honey for market. I trust quite a number of beekeepers will give us the benefit of their opinions.

AN OTAGO BEEKEEPER.

[We are surprised that the Otago bee-keepers should have found the above query a difficult one to solve, for in our opinion there can be but one answer. However, we refrain from expressing any opinion at present, and we ask our readers to let us have as many answers as possible in time for next month's issue, when we shall give our opinion.—Ed.]

Reports.

FROM FERNBROOK APIARY, OTAGO.

I BEG to forward report of my little apiary during the last season. I wintered eighteen colonies, and doubled them down to fifteen in the spring, as I found three out of four hives standing under some blue gums queenless. Whether the drip from the gums had a bad effect on their majesties or not, I am unable to say, but it struck me as being suspicious. I increased to twenty-one hives in November, and extracted between 1,600 and 1,700lbs. of good clover honey, nearly all of which has gone in small retail lots.

The season just passed has been a remarkable one. The winter finished up very wet indeed; but spring brought promise of a grand honey harvest, the month of September being exceptionally fine, and spring showers abundant; fruit trees were thicker out in blossom than they had been for years. I took my first swarm on the 6th November, and this one was quickly followed by five or six more. Then came a month of cold wet weather, which threw everything back terribly, and most of my neighbours lost the inmates of their gin cases. The honey season did not commence until the old year was fairly at its last gasp, and when it did come, it came with a rush and sent the bees into the supers in a hurry. There was no bother about swarming after this, and we had a grand run of honey weather all through January and February, and then it got too dry and the clover died off.

I think I am right when I say there has been no autumn crop this year in Otago. I found a trace of foul-brood in seventeen out of twenty-one hives; but it only showed itself in the month of March, though I have no doubt the spores were there long before. I have wintered my bees on their super combs, and have given them nothing but phenolated stores, as I have great faith in the Cheshire remedy not that I ever hope to get rid of the disease, there are too many gin cases about for that, but to keep it in check.

C. B. MORRIS.

FROM RICHMOND APIARY.

I COMMENCED spring with eleven colonies, increased them to twenty-three by natural swarming, caught four swarms that settled down near my apiary, and got about one hundred pounds of extracted honey per hive; but I am sure that if I had had things ready I could have obtained double that quantity. I got some very nice one-pound sections, well filled, but the sale of honey in the comb is very slow here, compared with extracted. The first thing the bees started on was red gums, which came out early in August with a fair crop of blossoms.

Next came wild raspberry. Early in September ti-tree yielded a fair crop, but the honey from it is rather inclined to be watery, especially if the weather is damp. In October st ingy barks came out with a good show of flowers, but the bees did not take much notice of them. Swarming was all the rage in November; December nothing of much importance took place, but early in January apples came out, loaded with bloom and covered with bees. This is what I got my crop of honey from, and it is beautiful honey, so clear and bright. Bees did very little in February and March, and in April they were working a little on white gums, but not getting anything like a surplus. Bees are now working on iron-barks. I have only mentioned the principal honey plants in this report. As I live in a thickly-timbered country I often do not know what they are working on, but keep record of what I find out. We have a tree growing about here, some call it peppermint, others turpentine. It grows in considerable quantities in low situations, comes out in flower two or three times a year—at least it did so last year; you can taste and see the honey in the cups of the flowers, the trees are swarming with ants and other insects, but the bees do not seem to notice it. Have you heard of this before? It is a puzzle to me why the bees do not work on it. I only noticed these being neglected this year. I will watch the matter next season, and report.

Casino, New South Wales.

B. CARLILL.

REPORT FROM DAIRY FLAT APIARY.

In my last I promised you my report, but through press of other business it has been delayed. I will now give a few notes on the season's work. I commenced last October with 28 stocks in good condition, 10 being run for extracted honey, and the remainder for section honey. The season was all that could be desired until the commencement of November, when cold weather set in, with the result that there was only nine or ten fine honey gathering days between that time and the 21st of December, when our honey flow generally comes to a close. Up to this time no quantity of honey had been taken, and everything looked extremely gloomy from a beekeeper's point of view. Just then the weather took up fine, and the rata trees which have not bloomed here for three or four years came out into full flower, the blossoming continuing well on into January, with the result that about 50lb. per hive of extracted and 30lb. per hive of comb honey was obtained for the season. Taken altogether, this season's crop must be considered as considerably below the average, especially the extracted honey. Since the honey flow ceased, there has been only a very little gathered, and most of the hives have consumed fully 25lb. of honey. The autumn flow should now commence, which supplies the bees with their winter stores, which are replenished each fine day during winter, and breeding goes on continuously all the time.

G. A. GREEN.

Dairy Flat.

A RARE OPPORTUNITY.

WE have a few Given Presses and Root's 10-inch Roller Foundation Machines of the latest makes, perfectly new, to be disposed of at less than cost price to clear stock. Price of Presses or Roller Machines each £5 10s. Only a very few in stock.

REVIEW.

THE BRITISH BEEKEEPER'S GUIDE BOOK.

By THOMAS W. COWAN, F.G.S., F.R.M.S. London :
Houlston & Son, Paternoster Square.

WE have received from the author a copy of a new edition of the above. The name of Thos. W. Cowan is so well known to advanced beekeepers throughout the world for his scientific and practical knowledge of bees and beekeeping, and his unceasing efforts as editor of the *British Bee Journal* to promote the industry of apiculture, that it is needless to say anything concerning him here. Probably most of our readers have read the previous edition of the Guide Book now before us, which has the reputation of being one of the most concise and cheapest works on apiculture published in the English language. The present edition, as the author states in his preface, has been "thoroughly revised, enlarged, and a great portion of it entirely re-written, obsolete methods and appliances have been excluded, new ones illustrated and described, and much entirely new matter added." Unlike many bee books emanating from English authors, we notice that the Guide Book is singularly free from what we might term "fads," which are usually so conspicuous in these works. This, however, is only to be expected in a work by a gentleman who has an extensive knowledge of English, American, and Continental beekeeping, gained by personal visits to the most prominent apiarists in those countries. The work consists of 106 pages, and is largely illustrated, and we have much pleasure in recommending it as a cheap and reliable guide to practical and scientific beekeeping.

CATALOGUE RECEIVED.

WE have received from Mr. R. K. Allport, of St. Ives, New South Wales, his illustrated and descriptive catalogue of hives and beekeepers' appliances. We notice that Mr. Allport manufactures and sells the Langstroth hive and frames, of which he makes a speciality. We are pleased to notice this, as we consider this hive to be the best for these colonies. His prices for all appliances enumerated in his catalogue appear to be very reasonable. The list can be obtained on application to Mr. Allport.

ILLNESS OF "LAHM DEARG-ERIN."

THE most of our readers, with ourselves, will have missed the interesting communications to the *Journal* from our friend "Lahm Dearg-Erin." We are sorry to say that when we last heard from him, some three weeks ago, he had been suffering severely from an attack of rheumatism which had confined him to his room for some time. He was then speaking of visiting the hot springs with a view of taking a course of baths. We trust soon to hear of his complete recovery and to receive his familiar communications to the *Journal* again.

A LIBERAL OFFER.

AS we have a number of spare copies of each issue of the *Journal* (with the exception of the first, which is now out of print), we will send post free to any address in Australasia the eleven numbers of Vol. I. for 4s. This is a good chance for new subscribers to get the *Journal* from the start.

There are also a few copies of Vol. I. of the *New Zealand and Australian Bee Journal*, cloth bound, still on hand, which will be sent post free in New Zealand for 3s., or out of New Zealand for 3s. 6d.

I. HOPKINS & CO.

FLOATING APIARIES IN EGYPT.

THE following sketch we copy from the *Deutsche Illustrierte Bienen Zeitung* for November, page 44. The article was written by Mr T. Kellen, of Luxemburg. W. P. Root, our proof-reader, translates as follows:—

Not long ago I discovered in the city library of this place, Luxemburg, a French work on bees, which for a century had been unremoved, leaves uncut, and was covered with venerable dust and finger-marks. In this work I found a very interesting notice in reference to portable apiaries of that period. The author of the above work, B. E. Manuel, procured some notes of a description of Egypt, and added a few concluding observations of Reaumer thereto. From this and other histories of travels, as well as from Maillet's Description of Egypt, published in 1740, it appears that, in the last century, there were a great many colonies of bees kept in the land of the Pharaohs, and that a very lively business was maintained therein, quite unlike what we have in our own country. Dr. Westhau reports, in a description of a travel through Egypt, in 1702, the following: "In many places I found apiculture greatly hindered, notwithstanding the inhabitants manifest much interest in it. In the season of bloom they move with their bees, now here and now there, in order to fill their hives with honey."

In the last century there was found, with all of the ignorance and wildness of the inhabitants, an occasional trace to remind one of the previous luxury of a keener and diligent generation, long past. One of the most noticeable evidences of their activity was the annual sending of their bees to remote districts, that they might secure pasturage, which occasionally failed them at their own stands.

As Upper Egypt is hotter than Lower Egypt, and the land there is freer from the inundations of the Nile, the honey-plants there develop at least six weeks earlier. The inhabitants were fully aware of this fact, and availed themselves of it for the benefit of their bees. In Lower and Middle Egypt they placed a certain number of colonies of bees, which were often kept in jugs and bowls, and often in cylinders or baskets made of burnt clay, or made out of withes braided, and besmeared with Nile slime, made expressly for this purpose—forerunners of the portable bee-hives of Swabia. If the hives were required at the upper end of Egypt, they were transported thither, so the bees could visit the neighbouring honey-plants and shrubs. When the crop in Upper Egypt was exhausted, they floated the skiffs a few miles down stream, and waited there as long as honey could be found in paying quantities.

At the beginning of the month of February they arrived at Lower Egypt, where they deliv-

ered the hives back to their owners. The latter then sold the entire product at wholesale in Cairo. The bee-keepers from Upper Egypt, after they had disposed of their products in the region of the delta of the Nile, and had secured what honey they could there, returned again up stream to their homes. Unfortunately, hitherto history has furnished us no details in regard to portable apiaries in this land of early antiquity, which are authentic; nevertheless, it is easy to conjecture that that inventive people, as the valley of the Nile bears them witness, will convert it, as they did a century ago, into the business of portable apiculture. One may easily believe that Egypt first suggested the same business to Greece and other lands. The Roman agricultural writer, Columella, writes (*De Re Rustica*), Book IX., chapter 14, in replying to Celsus, that in Achaia the bees from Attica and Eubœa, on all the *Cycladian islands* to island of Skiros, and from the various Sicilian coasts to Hybla, were cultivated for honey. This custom was, in all probability, introduced from Egypt at the time of Solon, for the civilization of Egypt is unquestionably much older than that of Greece. Before Solon arose as reformer in Athens he travelled through Egypt, and learned there how to make many improvements which he afterward made useful to his native land.

But how stands bee culture now in Egypt? When even the fellahin and Copts conspire to drive out apiculture, no more will be read in modern history of travels in Egypt in regard to moveable apiaries; and no traveller will see any more the skiffs on the Nile, laden with hives. This is easy to be seen, when one reflects how downtrodden Egypt is under the foot of the Mohammedan.—*Gleaning*.

ERICA ARBOREA FOR SHELTER AND BEE FOOD.

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If planted four feet apart a close and ornamental hedge will be obtained which will bear trimming to any extent.

NOTICE.

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

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

P.O. ORDERS for subscriptions, advertisements, etc., to be made payable to I. Hopkins and Co., and addressed to P.O. Box 296, Auckland, New Zealand.

POSTAL NOTES for sums under £1 are the handiest and

orders for the next issue should reach the publishers by the 20th of the month.

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NOTICE.

The undermentioned works are not mentioned in our new Catalogue, owing to delay in their arrival:—

Cowan's 'British Beekeepers' Guide Book,' post free 2s 4d
Simmins' 'Method of Direct Queen Introduction,' post free 1s 2d

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FOR SALE.—A Set of Diagrams mounted on rollers, good as new; also Large Diagrams, in black, of Langstroth Hive and Honey Extractor, also of Queen and Drone. These are also mounted on rollers suitable for lectures or bee library. Will be sold cheap. Apply to the Editor.

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[TELEPHONE No. 370

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G. I. PANTER, PROPRIETOR.

DIAGRAMS AND INDIA-RUBBER GLOVES.

We have just received a small consignment of the above, but owing to the duty imposed upon these articles, the price of the diagrams in future will be 14s the set, and the gloves 9s per pair. The latter are very superior

