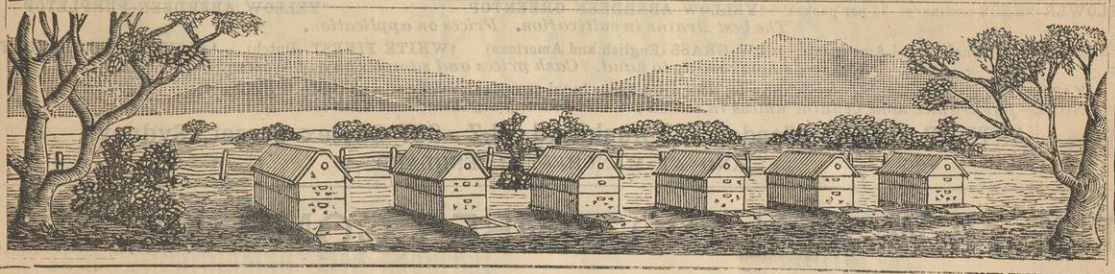
The Australasian bee journal. Vol. I, No. 12 June 1, 1888

Auckland, New Zealand: Hopkins, Hayr and Co., June 1, 1888

REGISTERED FOR TRANSMISSION ABROAD.

THE AUSTRALASIAN BEE JOURNAL



No. 12. Vol. 1.] AUCKLAND, N.Z., JUNE 1, 1888. [PUBLISHED MONTHLY SIXPENCE.

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The Australasian Bee Journal.

PUBLISHED MONTHLY

I. HOPKINS ... ... Editor.

HOPKINS, HAYR & CO.,

Proprietors and Publishers.

TERMS OF SUBSCRIPTION:

Per Annum (in advance) .. .. 6s.

Post Free on day of Publication.

All correspondence for publication and business communications to be addressed to the Editor, P.O. Box 296, Auckland, New Zealand.

Contents.

NOTICE TO OUR SUBSCRIBERS.

The Index to Vol. I. will be issued with the next number.

Editorial.

SEASONABLE OPERATIONS FOR JUNE.

We are now fairly into winter, when all apiary work, that is, work directly connected with the bees themselves, should have been finished. If the instructions given in this column have been followed, the bees will now be nice and snug in their winter quarters, and, as we stated last month, will need very little further attention till about the beginning of August. A careful person will, of course, make an outward inspection of the hives, if not every day, at least three or four times a week, and every morning after a stormy night. Covers, where they are not secured by some special means, are liable to be blown off during high winds, and should this happen on a cold, wet night it would mean ruination to the colony. All covers, but more especially those on hives in exposed positions, should be fastened to the bodies of the hives during the winter and early spring months. We have found a small hook and eye—the hook screwed into the body and the eye into the cover—on back and front the handiest plan. They are cheap—about one shilling a dozen—and they can be taken off when no longer required. After a day or two's continuous rain it is as well to lift the covers and examine the mats to see if any are damp, and if so to put dry ones in their place. For this purpose there should always be a number of spare mats—at least two to each hive—on hand. Directly a wet mat is discovered the cover should be examined for leakages and repaired. Sometimes the underside of the cover will appear quite damp, with globules of water hanging under the roof when there is no apparent leakage. In these cases the ventilation is faulty, and if not rectified the outside combs will soon become mouldy, and the bees will suffer through the excessive dampness souring their food. The hives should be examined and every comb showing signs of mould should be removed and dried by hanging them in a warm room for a day or two when the mould can be removed with a soft brush. A dry cover and mats should be put on the hive and the entrance enlarged to four or five inches for a few hours on warm days.

SHELTER.

The advantages of having good shelter round an apiary can only be fully appreciated by those who have been without such shelter. Circumstances compelled us one season to work over a hundred hives in an exposed position open to almost every wind that blew. There was no help for it, and the bees and ourselves suffered in consequence. Except in the very height of the honey season we could never depend upon being able to open the hives on two consecutive days. Sometimes a week or ten days would intervene between the times when the hives could be worked and that at a time when queen-rearing was going on. How different when sheltered from high winds! The only thing to prevent the hives being manipulated any day throughout the year, if needful, is rain. Under good shelter—all things being equal—the

bees will thrive as well again and give double the returns with less labour than when exposed. We have had good proof of this. In starting or enlarging an apiary, shelter should be one of the first things considered. It is not necessary to have very tall trees to provide the requisite shelter; in fact, tall trees near an apiary are a nuisance, particularly when swarms settle near the top of them, as they sometimes will. The space for a couple of hundred hives and the necessary buildings would be amply sheltered by a live fence nine or ten feet high, or even less if the configuration of the ground was such that advantage could be taken of a slight depression in which to place the hives. If shelter cannot be obtained without planting it is best to choose some evergreen that will run up quickly, allow of being trimmed, and if possib e ornamental, and that will provide bee forage. Privet is very rapid in its growth, and very close, but we do not think it is any use as forage. Cyprus (cupressus microcarpa) makes a splendid shelter hedge, is quick in its growth after getting established, is very ornamental, and will bear clipping to any extent, but no good for bees. Erica Arborea, another very handsome and quick-growing shrub, though not quite so quick in growth as the cyprus, has the advantage of being a grand plant for bees, very sweet-scented and blossoms in late winter and early spring when bee food is scarce. It grows to the height of ten feet, and can be trimmed to any shape required.

Now is the time to procure and plant evergreens: they do much better when shifted at this time of year than in spring. If carefully done, plants of large size can be removed now without receiving a check, and by spring they would be established in their new pasition. To grow an evergreen hedge quickly, some attention should be paid to the cultivation of the ground immediately around the plants for at least a couple of seasons after they are put in. Bonedust is the best fertiliser to use, and the ground should be well dug at least six feet wide along the line of the hedge before planting, and this line kept clear of weeds, and occasionally hoed till the plants have made good growth. It is astonishing the difference that a little attention to the proper cultivation of hedge plants will make. It is customary to make a hole just large enough to admit the roots of the plant, stick it in, fill in the hole, and pay no more attention to it, and the result is stunted plants and disappointment.

Look over the spare combs occasionally for the bee moth and fumigate them with sulphur, as explained last month, if necessary.

Timber for making into hives should now be seasoning under shelter to be ready for making up later on. Frames and section boxes should be obtained from the manufacturers, as it will never pay one to make these without the aid of good machinery adapted to the purpose. Keep down long grass and weed around the hives, and see that there are no hollows near them for rain water to lodge in.

END OF VOL. I.

WE have now reached the end of our first volume, and it may not be out of place to draw attention to the present position of the beekeeping industry in Australasia, and its outlook for the future. At the same time we wish briefly to lay before our readers our own position with regard to the *Journal*. Twelve months ago, through adverse circumstances which it is needless to recapitulate, apiculture in most parts of Australasia, but more particularly in New Zealand, had reached a very low ebb. The outlook at that time was very dreary indeed, for the difficulties standing in the way of its onward progress seemed almost insurmountable. Honey had reached starvation prices (for the producer), and foul-brood had spread to an alarming extent; indeed things had reached that stage when it became a serious question among many of our leading beekeepers whether it would not be better to give up honey raising altogether and get rid of their bees. Others, however, believed, as we did ourselves, that great as the difficulties were, they might be overcome, and the industry started on a prosperous course, provided beekeepers could be induced to work conjointly for their mutual benefit. This appeared to be the only hope, but before that could be accomplished it was absolutely necessary to have some medium of communication between them for exchanging opinions and comparing notes. Owing, we suppose, to our connection with a former journal, several of the leading beekeepers in this and the neighbouring colonies, asked us whether it was not possible to start a bee journal again, promising hearty support if we would bring out one. Seeing it was the only chance of reviving the industry, and believing that the bee fraternity would, in their own interests, support it in every possible way, we consented, and we venture to think that the *Journal* has accomplished some of the objects for which it was established. It has been the means of bringing about co-operation between our New Zealand beekeepers in tackling some of the difficulties, and with every prospect of success. The first result of such co-operation was the publication and distribution of the honey pamphlet, which is already bearing fruit in the way of increasing the demand for honey. The next was the establishment of the New Zealand Beekeepers Association, an institution that has given ample proof of what it is capable of doing for our benefit, and last, though not least, it has encouraged many that were despairing to persevere, and the result is that some have done better than ever before, and now look forward with brighter hopes to the future. The present outlook is certainly brighter than for several years past. There is a better demand for our produce, and the prices are improving, so that if we can but agree to continue in the good work of co-operation, we shall have nothing to fear in the time to come.

With regard to ourselves, in the first place, we thank most heartily all those who have so ably assisted us by their valuable contributions, for to their aid principally we attribute whatever success the *Journal* has achieved. And, in the next place, we sincerely thank our subscribers for their support, and assure our Australian friends that they have only to call upon us whenever they need any reforms brought about, and the *Journal* is at their service. Financially the *Journal* has not been a success, in fact, up to the present time it has entailed a very heavy loss upon us, notwithstanding the fact that we do our own editing and publishing, which, to say the least, is very discouraging. Now, no one could be expected to work a losing concern long, and as we are sure our subscribers will sympathise with us, we ask them to help us all they possibly can to obtain new subscribers to the next volume. The cost of printing and sending out the *Journal* every month is considerable, but provided the expenses are cleared we shall be satisfied, and will count our time and trouble as nothing. Twice the number of subscribers that we have at present would just do it, so that if each subscriber would

make it a point to secure another, it will save us from further loss, and ensure the continuance of the *Journal*. We trust that *each one* of our present subscribers will send on his subscription together with a new one for the next volume, and so help us out of our present difficulty.

MICROSCOPIC EXAMINATION OF COMBS, BEES, HONEY, ETC.

WE have very much pleasure in stating that a member of the Executive Committee of the New Zealand Beekeepers' Association, who is in possession of a very powerful microscope, polariscope, and all the appliances for conducting microscopic analysis, has most kindly offered his services, through the New Zealand Beekeepers' Association, on behalf of the beekeepers of Australasia.

The only true test for foul-brood is microscopic examination of comb and bees for the germs of the disease which Mr. Cheshire has already made so well-known. There is, however, considerable technical knowledge and skill required to prepare, mount, and stain the objects before they can be properly examined. The adulteration of honey can in most cases be detected by the use of the microscope and polariscope, so that when we say this gentleman has offered, free of cost, to examine and report upon portions of suspected comb, bees, and honey sent to the New Zealand Beekeepers' Association by any beekeeper in Australasia who may be in doubt, our readers will appreciate his generous offer.

He wishes it to be mentioned that he will be in a position to conduct the first examinations about the beginning of next month (July); that all specimens of comb, bees, or honey should be sent if possible in small, clear glass, wide-mouth bottles—what are known by chemists as "one ounce squats"—sealed and marked with date, accompanied by a letter of instruction to the Secretary of the New Zealand Beekeepers' Association, Auckland. The reports will be published through this *Journal*, or should a private answer be required, a stamped addressed envelope must be sent.

ADULTERATION OF HONEY.

SOME short time ago Major Shallard, an extensive beekeeper in New South Wales, felt convinced that a great deal of adulterated honey was being sold in that colony to the injury of the legitimate honey producer. After drawing attention to the matter through the press he was instrumental in getting the New South Wales Beekeepers' Association to take it up. This body instructed one of its members—Mr. Hamer, an analyst—to examine several samples of suspected honey, and report the result. On the 8th of March last, Mr. Hamer submitted his report, prefacing it with an interesting paper on the constitution of honey, which we now publish. For the copy we are indebted to the kindness of Mr. J. R. Dibbs, Honorary Secretary New South Wales Beekeepers' Association. It is gratifying to know that adulteration is not carried on to the extent that was supposed.

Before attempting the subject of the adulteration of honey it will, perhaps, be best if we have first a clear idea of the nature and composition of the genuine article. To gain this we must go to the beginning of things, and trace its origin, for we shall then see that more than one branch of science must be entered upon before we can adequately appreciate the labours of the wonderful little insect that furnishes us with the product we so much esteem, and which is so often used in the poetic sense to denote the riches and abundance of a favoured country when we speak of such and such a land as "flowing with milk and honey."

One of the lessons that a science student soon learns when brought face to face with the facts of Nature is, that all the branches of knowledge commonly called "the sciences," are dovetailed, as it were, into each other, and any particular department of science is very much better understood if the borderland of the next adjoining science is carefully surveyed too. Such is the case with regard to the subject now before us; and without more preface let us commence with the

ANTECEDENT ELEMENTS OF HONEY.

An unpalatable gas exists in the vast ocean of air above us called carbon di-oxide, or carbonic acid gas. This substance, although existing as an invisible gas, is of the greatest importance to plant life, and serves, amongst other things, in the air, the soil, and the water, as an indispensable food to the living plant.

One of the most graceful and beautiful parts of the plant is its leaf, and whether from the poetic, artistic or utilitarian point of view, the study of the leaf alone will amply repay one's time and study. Microscspic study of a leaf; its form, position on stalk, toothed or plain edge, texture, surface, smell, smooth, woolly, or venatious, are each worthy of note. But we are more particularly interested in the under side of the leaf—the stomata or mouths. 100,000 of them are often to be found on a single leaf; size of one = $\frac{1}{8000}$inch; their use, the absorption of CO_2 (carbonic acid) and OH_2 (water). Presence of chlorophyll (the colouring matter in plants). Water + chlorophyll + CO_2 (carbonic acid) + sunlight, produces starch. Product of life—Atoms, raw materials = COH (carbon, oxygen, hydrogen). Honey, the finished product. Steps: CO_2 (carbonic acid), OH_2 (water), $C_6H_{10}O_5$ (starch), $C_6H_{12}O_6$ (dextrose, main constituent of honey). Example of the work of a living plant, formation of starch—1. Afternoon; 2. morning; 3. midday; 4. evening, etc. The work does not stop here. Another agent, diastace, converting starch into sugar, and $C_6H_{10}O_5$ (starch) into $C_6H_{12}O_5$ (dextrose), in some plants stored up as sugar; others as starch. Examples—Vine, passion fruit (sugar); maize, potato (starch). Plants are hard workers, and know no eight-hour movement. The most wonderful of all is that these large stores of starch or sugar are not available to the bee in making its honey. A portion of the sugar is diverted to the nectaries of flowers, generally known as nectar, and this sugar is placed in such a position that the bee fertilizes the flower in the very act of obtaining it. The fertilization of flowers is a most interesting subject, which, however, I must pass by. The greatest naturalists who ever lived have devoted their lives to this branch of science.

QUANTITIES OF SUGAR IN CERTAIN FLOWERS.

Common garden pea, one flower, ·153 grains sugar; vetch, ·002 grains sugar; red clover, ·003 grains sugar; fuchsia, ·117 grains sugar. In the bee's honey sac an acid converts the cane sugar of the plant into a variety of sugar called dextrose by the time it is deposited in the cell. Honey consists chiefly of dextrose and lævulose.

COMPOSITION OF HONEY.

Water, 14 to 23 per cent.; a variety of sugar called dextrose, a variety of sugar called lævulose, cane sugar, traces, in new honey, but is converted into dextrose by the acid in the honey, mannite, 67 to 75 per cent.; wax, pollen, mineral matter (ash) ·15 to ·3 per cent.; phosphate of potash, ·013 to ·032 per cent.; bitter principle, alkaloid; formic ocid, organic acid not yet isolated; dextrose, $C_6H_{12}O_6$; lævulose $C_6H_{12}O_6$.

ADULTERATION OF HONEY.

Fbviously the cleverest, would be the mixture of these two kinds of sugar in about the proportion found in genuine honey. This is both theoretically and practically possible, and the most difficult cases to detect sophistication are just those in which such proportions have been used. But the most valuable and most reliable tests are those based upon

the presence of what I may here term the minor constituents, namely, the wax, pollen, organic acids, and ash.

Tests adopted until very recently :—A solution of pure honey in water precipitate. 1. Fehling's mixture in the following proportion—100 parts honey give 137 parts Cu_2O (copper oxide); 2. Alcohol should give no precipitate; 3. P_6 (lead) acetate = no precipitate; 4. Ba Cl_2 (barium chloride) = no precipitate; 5. Pure honey is entirely fermentable into $C_2H_5H_6$ and Co_2 (alcohol and carbonic acid); 6. A ten per cent. solution should have no action on polarised light, but if any to the left.

In 1884, Messrs. Abram, Lyle, & Co., Mincing Lane and North Woolwich, brought out their artificial honey or honey substitute. Now, as this was entirely manufactured from molasses and converted cane sugar, the preceding tests (many of them) were useless. Entire absence of P_2O_5 in ash of artificial honey, in genuine honey, .01 to ·035 per cent. P_2O_5. Possible adulteration :—1. Corn or starch syrup; 2. Converted cane sugar; 3. Mollasses or cane sugar syrup. Curiously, American artificial honey made from glucose syrup and of so-called Swiss honey in the British market over sixty per cent. are adulterated.

EXAMINATION OF HONEY SAMPLES SUBMITTED BY MR. SHALLARD.

Sample.	Copper Oxide Test.	Alcohol.	Lead Acetate.	Barium Chlor. Test.	P_2O_5	Polariscope.	Microscope.
Mr. Mackay's, in the comb ..	parts	nil	nil	nil	yes	—	pollen
Flowerdale ..	parts	nil	trace	trace	yes	*5	pollen
* Robert Cooper's	parts	nil	parts	parts	trace	*6·5	traces pollen
† Walker & Kirkham	parts	nil	parts	parts	nil	*9·0	traces pollen
San Jose, California	parts	nil	nil	nil	yes	—	pollen
Cutting Packing Company .	parts	nil	nil	nil	yes	—	pollen
In the comb, Sydney market ..	parts	nil	nil	nil	yes	—	pollen

* Five per cent. foreign syrup. † Ten per cent. foreign syrup.

NEW ZEALAND BEEKEEPERS' ASSOCIATION.

BY an oversight on the part of the printer, the report of the Committee meeting for March was unfortunately left out of last month's *Journal*. We now append it together with a report of the meetings held since :

A meeting of the sub-Committee appointed to draft a Foul Brood Act for New Zealand was held at the secretary's house on March the 20th, at 7.30 p.m.—Mr F. Lawry, M.H.R , the president, in the chair. The various clauses in the three existing Acts of Michigan, Utah, and South Australia were carefully considered, and notes made of such portions as were deemed suitable for embodying in the draft of an Act for this country. From these and original suggestions, an Act was framed ready to be submitted to the Executive Committee for their consideration.

The regular monthly meeting of the Executive Committee was held on Friday, April 6th, at 7.30 p.m., at Hopkins, Hayr, and Co.'s office, Mr G. L. Peacocke, vice-president, in the chair.

The minutes of the general meeting having been read and confirmed, the Committee proceeded to consider the draft of the Foul Brood Act drawn up by the sub-committee. After a long and careful consideration of the various clauses, in which several alterations were suggested and made, the meeting adjourned at 10.30 p.m., till that day fortnight for further consideration of the draft. The chairman, Mr G. L. Peacocke, kindly undertook, in the meantime, to alter the phraseology where necessary and put it into legal form.

The adjourned meeting of the executive committee was held at the same place on Friday, April 20th, at 7.30 p.m., the President, Mr F. Lawry, M.H.R., in the chair.

After further consideration of the amended draft, it was resolved, on the motion of Mr Poole seconded by Mr Hooker, that the draft as it now stands be adopted.

The Chairman commented upon the valuable assistance rendered by the vice-president, Mr G. L. Peacocke, and the Rev. Father Madan in framing the Act, and proposed that a hearty vote of thanks be accorded both gentlemen. The proposition was seconded by Mr Poole and carried unanimously.

The Secretary was instructed to get the draft copied, ready to be forwarded to the law officers at Wellington.

The usual vote of thanks to the chairman terminated the meeting.

THE regular monthly Committee meeting was held at Hopkins, Hayr, and Co.'s office, on Friday, May 4th, at 7.30 p.m., Mr O. Poole, Vice-President, in the chair. After the routine business had been disposed of, the Secretary stated that he had, with the assistance of the Chairman, copied the draft of the Foul Brood Act and sent it to their President, so that he could take it with him to Wellington. The Secretary also reported the receipt of the majority of the petitions sent out for signatures with close upon 400 names attached to them. He estimated that when all were in we should have a list of nearly 500 names. This was considered very satisfactory, and would prove of great assistance towards getting the Foul Brood Act passed.

A letter from the Secretary of the Otago Beekeepers' Association, inquiring upon what terms his Association could be affiliated with the New Zealand Beekeepers' Association, was next considered, and after some deliberation it was resolved, on the motion of Mr Hooker, seconded by Mr Hopkins, "That local Beekeepers' Associations making application, be admitted into affiliation with the New Zealand Beekeepers' Association on the payment of an annual sum at the rate of 1s per member, for the number of members on the roll of such Association. The minimum annual payment to be fixed at 20s."

The Secretary drew attention to the proposed revision of the Customs Tariff during the present session of Parliament, and suggested the consideration of a duty being put upon imported honey. A short discussion on the subject took place, and the opinion was unanimously arrived at that some protection against the importation of spurious honey was required, and that a duty of twopence per lb. on all honey imported into the colony would be a most effectual check to its introduction. Some of the members were in favour of allowing Australian honey to come in free, but it was seen that such a course might defeat the object in view by giving an opportunity to reship from Australia, American or English manufactured honey to New Zealand. It was resolved :—"That in the interests of the honey industry in New Zealand, and to protect the legitimate honey producer and the public against the importation of spurious honey, a duty of twopence per lb. should be imposed on all honey imported into the colony." Attention was also called to the excessive railway charges for carriage of honey, wax, and apiarian appliances as compared with other goods. A sub-committee was appointed to inquire into the matter and report at the next monthly meeting.

The Secretary informed the Committee that as the microscope would have to play an important part in the detection of foul-brood in bees and combs, and the operation requiring delicate manipulation, he had sent to Mr. F. Cheshire, on his own account, for two or three sets of type slides of "foul-brood" and particulars. These were intended for the use of the Association and the experts appointed under the Act to guide them in their examinations. The meeting closed at 10 p.m.

Four hundred and seventy signatures to the petition have been received and forwarded to Wellington. A few sheets have still to come in, which we hope will be sent along at once.

VENTILATION OF HIVES.

By T. J. MULVANY.

No one can doubt that the proper ventilation of hives must be, in the strictest sense of the word, of vital importance to the bees, and consequently to the interests of the beekeeper. It must also be admitted that our ideas as to what constitutes a proper ventilation will be found, when we come to look closely at the matter, to be rather vague and undefined. Writers of bee books generally either ignore the question altogether, or else only touch upon it in a very superficial manner; and it would appear that even the most advanced beekeepers, in their practice, do not pretend to be guided as regards this matter by anything better than "the rule of thumb." Any attempt to arrive at the true principles which should guide the apiarist in controlling the ventilation of his hives is therefore to be welcomed, and the articles which have recently appeared in this journal upon the subject, under the signature of J.R.M., must be read with much interest by all thoughtful beekeepers. They cannot fail to direct attention to matters which have not heretofore received the consideration they deserve, and it is to be hoped that they will call forth views and expressions of opinion, the discussion of which may lead to much good.

Fortunately it is not easy, at least in this climate and with the hives now generally used, and without an inexcusable amount of carelessness on the part of the beekeeper, to err so grossly in the handling of the ventilation as to endanger the existence of the bees. The entrance provided in every hive for the passage of the bees is, even when contracted as much as is consistent with its primary purpose, also sufficient for the absolutely necessary minimum of ventilation; the bees are capable of enduring a very considerable range of temperature without any very visibly injurious effects, and they are able, by their wonderfully curious arrangement of "fanning," to provide for the necessary circulation of the air through their hive, and to cause the egress of vitiated and the ingress of fresh air through a very small orifice. No beekeeper of any experience is likely to commit the error mentioned in Root's "A B C of Bee-culture," under the heading of "Smothering Bees by Closing the Entrance," or to suffer the insects to perish by leaving the cover off the hive during a severe frost. Nevertheless, it is plain that a defective ventilation may cause a great portion of the workers to lose their time in unprofitable fanning, and it is quite possible that the result of all their operations—brood-rearing, wax-secretion, comb-building, and honey-storing, may be more seriously affected than is generally supposed by either too scanty or too copious ventilation. Experienced beekeepers are aware of these facts *in a general way*, and they do not fail to do what they think to be right towards the regulation of the ventilation in a "rough and ready" manner, by increasing or contracting the bottom entrances, or even occasionally lifting the covers of the hives a little during very hot weather. A more handy and more certain mode of control would certainly be desirable, and it is possible that such might be established by some mechanical means, which, however, in order to be practically useful, must be very simple and not costly. Before considering the practicability of any such mode of control, however, I think it is clearly essential to arrive at a correct knowledge of the principles upon which that control ought to be exercised, as the mere power of interference without such knowledge would be much more likely to lead to evil than to good.

The first and most essential function of ventilation is to renew the air vitiated by the breathing of the bees; the second is to modify the temperature within the hive. Have we any actual knowledge of the amount of ventilation or change of air absolutely necessary or most desirable for effecting either or both of these purposes under the varying conditions we have to deal with? Supposing the first-mentioned object could be so accurately attained that we could provide the bees with just so much and no more fresh air as they require for breathing, according to the changing condition of the hive, can we assume that that amount would be the most desirable for the furtherance of the different operations the insects are engaged in? or, has anybody ascertained by careful experiments, and recorded for our guidance, what are the limits of temperature within which, for instance, the rearing of brood, comb-building, or the storing of honey can be with safety carried on, and what is the most favourable temperature for each of these operations? As far as I am aware, these questions must be answered in the negative. We are told that the normal temperature in a working hive is something like 85°—that it is not safe to expose brood combs to a lower temperature than 75° to 80°—and that bees wintering in severe climates require to keep up the heat, within their cluster, to some 65°. Still we have cases recorded (by T. Nutt, for instance) where the temperature in a very prosperous working hive has fallen, within the working season, much below 50°, and risen to 100°, and even to 40° and 120°, under the excitement of swarming fever. If I don't mistake, I have read of cases where brood was left exposed, for days together, to a temperature greatly below that given as orthodox, and afterwards returned to the hives and brought to maturity; and there is no doubt that bees may be placed for a considerable time in a temperature even below the freezing point without fatal results.

There is then evidently a great want of carefully made and methodically recorded observations to form the foundation for any reliable conclusions upon the points to which I have alluded above, and it is not easy to make experiments about temperature, owing to the practical inconvenience of introducing the thermometer into different parts of the working hive, particularly into the brood nest. Specially constructed hives and specially adapted instruments would be necessary for the obtaining of satisfactory results, and a scientific observer, with the necessary knowledge and with plenty of leisure, might with advantage devote his time to such an investigation. Perhaps, in course

of time, the matter may be taken up by such men as Mr Cheshire or Professor Cook, who have all the means at their disposal, or some enthusiastic volunteer amongst the rank and file of beekeepers may undertake the trouble of following out such a course of experiments. Any person who can and will do so, will certainly earn the thanks of the beekeeping community. In the meantime I will venture to suggest that the defects of the present system of ventilation, as ordinarily managed by beekeepers of experience, are not altogether so alarming as might appear at first upon a perusal of J.R.M.'s papers.

Calculations founded upon purely theoretical principles require great caution in their application to practical cases, as any error or oversight as to the assumed facts in each case may easily lead us to entirely false conclusions, although the calculation itself may be mathematically correct. It appears to me that some of the conclusions arrived at by J.R.M. are open to objection of this sort, which may be shortly stated as follows :—

In the paper upon the effect of wind on the interior of hives (No. 1 of this *Journal*, p. 9), we are told that "after every allowance is made, even to the extent of 50 per cent., it is a hard fact that with an entrance of only half-an-inch, the whole of the warm air in the interior of the hive, when the bees are clustered, would be reduced to the temperature of a winter wind about *once every minute* in a very moderate breeze of ten miles an hour." Now it must strike one that there is something wrong here; if such were the case, the bees in every hive exposed to such a wind, with the temperature at or near the freezing point, must inevitably perish; and have we ever heard of such an instance with an ordinary well constructed hive? It is here assumed that if a current of air travelling ten miles per hour strikes the front wall of a hive which happens to have an opening half-an-inch long by three-eighths of an inch deep, then a "column or wedge" of that current, of those same dimensions, must pass through that opening; and not only *pass as a stream* through the box, which is supposed to have an air capacity of say 1,000 cubic inches, and out at the top at the same velocity of ten miles per hour, but that it becomes so mixed with the 1,000 cubic inches of heated air as to carry it all away, and replace it with the same quantity of the cold outer air, in less than a minute. To accomplish this, the air entering below through an orifice of one-sixth of a square inch, at a velocity of ten miles an hour, would have to travel upwards through the box (about 10 inches in height) with an area increased to 100 square inches, or six hundredfold, and consequently with a proportionably reduced velocity, and to issue from the orifice above (if only of the same size as the one below) at the original velocity of ten miles; if only twice the size, then at five miles; or if only half the size, then at twenty miles an hour. Now I think we perceive, almost intuitively, that this does not, and it would not be hard to show that it cannot, take place. If we suppose a flat surface like the face of an hive, with such an opening as above described cut in it, and opposed to a current of air (or of water), travelling at the rate of ten miles per hour, we can, I think (without any scientific investigation of the laws which affect aerial or liquid fluids in motion), easily understand that the impact of the air or water against the flat opposing surface must cause disturbances which would materially affect the issue of any portion of the stream through the orifice in question, even if there were only unconfined air on the other side; but when that orifice only gives entrance into a chamber filled with such an elastic fluid as air highly heated, and having only a very small opening for escape at the top, then it becomes a question if any of the outer cold air can force its way through the opening at all. The effects of a pair of bellows worked with its nozzle placed in the orifice would certainly be no criterion by which to judge of the action of a free current of air. When hives are made up for the winter, the bees confined to one story, covered by a good mat, and the ventilation holes in the cover filled with cotton wadding behind the perforated zinc, so as to permit only a slight *leakage* of the upward ventilation, then I should certainly have no apprehension of the cold wind being forced through the hive, even in the case of a stiff breeze blowing straight towards the front of the hive. If the apiary be well sheltered, as it certainly should be, from the prevalent strong winds which (in this latitude) come from the south and west, with its general aspect towards the north and north-east, I think it is immaterial what direction the individual hives may face towards, and should not consider it necessary or desirable to have any planting for breakwinds within a moderate distance of the apiary on its open side (north-east), or any extra contrivance to guard the ordinary entrance.

(To be continued.)

JOTTINGS.

By LAHM DEARG ERIN.

I NOTE two capital articles on ventilation from the pen of "J.R.M.," who has gone into the subject most carefully, and this one, like many others in apiculture, is very often overlooked. I must confess, until I read his articles, I had not paid that strict attention to the ventilation of my hives that I ought to. How often when on examining hives in the spring does one find the two outer frames of sealed stores mildewed, all owing to defective ventilation. Winter is coming on rapidly, and so far with me my bees have got a good supply of stores. The past honey crop has been hardly up to the average, still one must not complain, but be thankful for small returns, as long as that curse of the apiary, foul-brood, still holds its sway in New Zealand. Friend Brown, I have taken the hint and have re-read your March article, and am still of the same opinion as I was in the "autumnal month of April." I cannot see that by passing a Foul-Brood Act we shall humbug the industry by any means; if anything, it should place it on a firmer basis, and I think it will be one of the means by which we shall eradicate the careless beekeeper. "Have I

such a poor opinion of the mental capacity of the New Zealand beekeepers, as to think there are not enough *careful* ones amongst them capable of doing this without the aid (?) of the law." In the first place, friend Brown, *I have* a very high opinion of the mental capacity of *some* of *the* careful beekeepers, and it is those to whom this Act, if passed, will prove an invaluable boon, and to yourself in particular, when, if in course of time, you may get a dose of Bacillus Alvei amongst your bees as well as your neighbours (which, by the bye, I sincerely hope you never will, but for all that you deserve it for trying to choke us off initiating a Foul-Brood Act). "Do I think that by drawing everybody's attention to the fact through Parliament, will do much to help the industry?" I do, to *the beekeeper*, for by drawing that same attention, the careless beekeeper will see he will either have to destroy or disinfect each diseased colony, and the careful beekeeper will take good care to do it without being compelled, and furthermore, he will take care that the careless one does it also. Was it "mis-directed energy" that stamped out Pleuro in Great Britain? Did not the "meshes of the law" catch and stop the germs of small-pox from spreading in New Zealand and the Scabies Acarus in Australia? As to "wiping out the careless beekeeper by keeping your apiary clean, and letting him die out in rotteness, thereby allowing the survival of the fittest," this is altogether too blissful to think of. Not until we can get a thorough and sure cure for foul-brood, or else breed a "disease-proof" bee, can we keep our apiaries thoroughly clean. It is only by constant watch and care that we can get through the winter with even 75 per cent. of our colonies, thanks to foul-broody neighbours, and as for wiping the careless beekeeper out, friend Brown, he is not so easily wiped out. For if a colony dies out with him, the "coffin" is always carefully kept with the rotten comb within, so as to be ready for another swarm to be innoculated from and slowly murdered, directly he manages to *catch* an absconding swarm, most likely one of yours. "Would I be prepared to ask Government to have all unleased Crown lands inspected, etc.?" Would I try to teach my grandmother how to feed a baby? Bunkum, friend; we can't do impossibilities. Where the sore spot is is not on the unleased Crown lands, but at our own doors; clean the freeholds first before you go fooling around unleased Crown lands. I cannot see where the "absurdity" lies in invoking legislative protection in this matter, and as for interfering with a growing industry, I think it will help it along. The beekeepers of New Zealand are to be congratulated on having an Association with such an energetic Executive Committee, who are doing their best towards helping on the good cause. Now, friend Brown, I am afraid the late severe weather that you have experienced down South has upset your equanimity, and we have correspondingly suffered, but come out of your shell and tell us what *is* the best cure for foul-brood. Give us your experiences, and for the "love of the cause" chip in with us, and don't growl. We are each and every one of us doing what we can for our mutual benefit, and in a way that the majority of the beekeepers approve of. Friendly discussions on any subject in the columns of this *Journal* are always welcome, and are both instructive and edifying. Opinions may differ as to what methods ought to be used for the attainment of our ends. YET PERSISTENCE IN THE FACE OF ALL THOSE DISCOURAGEMENTS WHICH ARE SURE TO CONFRONT INEXPERIENCE WILL SURELY TRIUMPH.

BEE GOSSIP.

BY O. POOLE.

BEEKEEPING IN IRELAND.—In your last number I noticed with much pleasure the fact that bee culture is making steady progress in Ireland. To any friends of that unhappy country, the progress of this industry must be particularly gratifying. To a New Zealand beekeeper, the amount of honey obtained per hive may seem small, but in most cases the bees are kept in the old straw skeps, which are annually smothered in the autumn for their stores. However, I know as a fact, that the use of the frame hive and the humane system is rapidly gaining ground there. A few years ago the British Beekeepers' Association sent over a couple of experts, who travelled through the country for some time, giving lectures in practical beekeeping. This doubtless is bearing fruit, for only recently Messrs. Abbott Bros. opened a depôt in Dublin for the sale of their improved hives and appliances.

* * *

REPORTS FROM AMERICA.—American beekeepers report that generally their bees have passed through the winter well and have come out of the cellars in good condition, and every preparation was being made for the coming harvest. Already the supply dealers are sending out their catalogues, which, together with the Home and American journals, should be carefully perused during the next few months, on the look-out for any wrinkle that may be of value to us here during the next season. Should I see anything which I consider useful to beekeepers here, I shall, with the Editor's permission, make it known through this column of "Bee Gossip."

* * *

PRICE OF HONEY.—There has been a considerable advance in the price of honey in America owing to the short supply last season. In Chicago, comb honey is quoted from eightpence to ninepence, and in New York and San Francisco the same prices rule; whilst extracted commands about the same price as here, fivepence to sixpence; at this price no American honey ought to be imported here.

* * *

ADULTERATED HONEY.—The word "Glucose" seems to have the same effect on an American beekeeper as a red rag is said to have on a mad bull; and only recently one of the American journals had a regular smack at the *B. B. Journal* for presuming that American tinned honey is ever glucosed. At a meeting, however, of the New York State Beekeepers' Association, an extract was

read from the *American Grocer* in which it was stated that 42 samples of bottled honey in New Jersey were analysed, and it was ascertained that out of 31 samples put up by packing houses only 6 were pure.

* * *

No attempt was made to contradict this statement. Mr. Root entered a feeble protest, by saying that he feared a mistake had been made in some of the samples examined, as the State chemist in Ohio had said it was a difficult matter to tell when honey was adulterated. Mr. Aspinwall, however, replied that with the polariscope five per cent. of glucose could be detected, and that there was a law against the adulteration of honey, and suggested that the State chemist should be induced to analyse honey sold on the market; a wise suggestion, in my opinion, and more likely to advance the sale of American honey than the repeated denial of palpable facts.

* * *

Far be it from me to accuse any American beekeepers of adultering honey; I know them to be honest, straightforward business men. The mischief is done by the city dealers who buy in small quantities from farmers and others, and then make a compound of maple sugar, glucose, and other abominations. If this were not so how could American dealers with their home market at sixpence, compete with us here in New Zealand?

* * *

AVERSION OF BEES TO PARTICULAR PERSONS.—I notice that many persons ridicule the idea that bees have a natural aversion to particular persons, and that the reason of their animosity is the behaviour of such persons in striking at or otherwise unduly interfering with them. I am convinced that this idea is wrong, as I have known many instances in which it was impossible for certain individuals to enter a garden in which bees were kept without the bees attacking them.

* * *

One instance in particular occurs to me. An aged workman of mine was never able to approach within many yards of the bees but they attacked him most unmercifully. At the back of my apiary were several tall yew trees, and behind them a wall quite twelve feet in height; still I have known them go over even that and drive him from his work; he never could make friends with them. I cannot account for it. I only relate facts.

* * *

HOW FAR WILL A QUEEN FLY TO MEET THE DRONE? "Lahm Dearg Erin" quotes a case in your last issue in which a black queen mated with a Ligurian drone, when kept a distance of three miles apart. Apiarists, however, to be certain of pure mating, must keep their pure races or nucleus hives from which they wish to raise purely mated and guaranteed queens even a much greater distance than that advocated by your esteemed correspondent. In 1865 the only two persons who kept Ligurian bees in Somersetshire, England, were "B. and W.," the well-known correspondents of the *Journal of Horticulture*, then the only organ on bee culture, and Henry Stephenson, Esq., a gentleman to whom I owe much for my early lessons in beekeeping. B. and W.'s apiary was about seven miles, and Mr. S.'s about four and a half miles, as the crow flies, from mine. In 1886 one of my young queens began to produce beautifully marked hybrid bees, so that the queens or drones must have flown either 7 or 4½ miles, or both must have flown half-way, 3½ or 2¼ miles. I am certain as to these facts being correct, as I knew every beekeeper round for miles at the time, and these were the only two possessing Ligurian bees.

* * *

HIVES IN CONDITION FOR WINTER.—By this time the prudent beekeeper will have placed his stocks in order and condition for the winter; feeding should have ceased. The stocks should be well protected with dry warm quilts; attention should have been given to the covers of the hives, to see that they were watertight. Spare combs have been packed away for future use; stray pieces melted down so as not to encourage the wax moth. If the apiarist has done this, and attended to the directions given from time to time in your editorial "Useful Hints," then he may sit down and be thankful.

* * *

END OF VOL. I.—This number ends, I believe, Mr. Editor, the first volume of the *Australasian Bee Journal*. Those who have perused its pages during the past year, I trust have found it not only a source of pleasure, but a source of profit also. In it the amateur beekeeper must have found a guide, philosopher, and friend, and if its teachings as enunciated by yourself in "Useful Hints" have been followed, it seems to me to be impossible for such a one to have gone wrong. As an old English beekeeper, who had the honour, some fifteen years ago, of assisting at the first bee and honey show, and as one of the earliest contributors to the *British Bee Journal*, the publication of your paper has proved particularly gratifying. My small contributions to your columns have to me been a labour of love, amply repaid by the kindly intercourse with the beekeeping fraternity of this grand new country.

I take a keen interest in beekeeping, as you, Mr. Editor, may well believe, and have watched the progress of the industry in New Zealand very closely since I have been here. I am more convinced than ever, that if properly fostered, there is a grand future for beekeeping in this country, and it will be the fault of beekeepers themselves if it does not become a very prosperous industry. The two principal factors to its progress are the *Bee Journal* and the New Zealand Beekeepers' Association, and these ought to be supported at all hazards, for without the *Journal* you will be all working in the dark, and it will be impossible for you to overcome difficulties unless you agree to work unitedly for your mutual benefit. I can see a marked improvement in the industry since the advent of the *Journal*; beekeepers are beginning to pull themselves together again, and adopting a

more hopeful tone. This is solely through having a medium of communication between themselves. Beekeepers, *stick to your Journal.* In conclusion, I have one suggestion to make to my fellow subscribers. Let each and every one of us try to double the circulation of this *Journal*, by endeavouring by all means in our power to obtain *at least one new subscriber* for the coming volume, and to show our respect for and encourage the Editor in his plucky task of providing a long-felt want for the beekeepers of Australasia.

[We tender our thanks to Mr. Poole for his complimentary remarks anent the *Journal*, and we feel sure that our readers will join with us in acknowledging our indebtedness to him for his pleasing and instructive contributions.—ED.]

Occasional Notes.

No. 4.—SHAKESPERE ON BEES AND HONEY.

(Conclusion.)

BY T. J. MULVANY.

IF, as we have seen, Shakespere had a beekeeper's proper disregard for the chances of being stung, he had also the beekeeper's lively sense of the stern reality of the bee's sting. Passages have been already quoted which prove this to be the case, to which may be added from THE TEMPEST—

"*Prospero (to Caliban)*—Thou shall't be pinch'd
As thick as honeycomb, each pinch more stinging
Than bees that made them."

Act I., Scene 2.

And from TROILUS AND CRESSIDA—

"*Pandarus*—Full merrily the humble bee doth sting
Till he hath lost his honey and his sting;
And being once subdued in armed tail,
Sweet honey and sweet notes together fail."

Act V., Scene 2.

IN KING HENRY VI., *Part III.*, there is a humorous hit at the lawyers, and the danger of having anything to do with legal deeds, which latter were generally distinguished by having a large waxen seal attached to them.

"*Cade*—Some say the bee stings; but I say 'tis the bee's wax, for I did but once seal to a thing, and I was never mine own man since."

Act IV., Scene 2.

In some of the most fanciful parts of his dramas, and in some of his poems, Shakespere makes frequent, and often very beautiful use of similes taken from the luscious character of honey, or from the habits of bees. In his plays, besides some of the extracts already given, we find of this class in THE TEMPEST—

"*Ceres (to Iris)*—
Hail many coloured messenger, that ne'er
Doth disobey the wife of Jupiter;
Who with thy saffron, upon my flowers
Diffusest honey drops, refreshing showers."

Act IV., Scene 1.

Here, by the way, we seem to have a hint for another to be added to the fanciful theories which have been advanced from time to time to account for *honey-dew.* Why not start this, under the distinguished authority of Shakespere, as the rainbow theory?

In the same play the "dainty" *Ariel* sings—

"Where the bee sucks, there suck I;
In a cowslip's bell I lie:
There I couch when owls do cry."

Act V., Scene 1.

In the poem *Venus and Adonis*, the goddess of love is made to say—

"A thousand honey secrets thou shalt know."

And when *Adonis* is about to reply—

"Once more the ruby-colour'd portal open'd,
Which to his speech did honey-passage yield."

Again, when *Venus* gives him a kiss at parting—

"'Good night,' quoth she; and ere he says 'adieu,'
The honey fee of parting tender'd is."

In the RAPE OF LUCRECE, *Tarquin*, in his state of guilty indecision, says—

"I know what thorns the growing rose defend;
I think the honey guarded with a sting."

And poor *Lucrece* in her heart-broken complaint laments—

"My honey lost, and I a drone-like bee,
Have no perfection of my summer left,
But robb'd and ransacked by injurious theft.

And again—

"Thy honey turns to gall, thy joy to grief."

In SONNET NO. 65 the following line occurs—

"O, how shall summer's honey breath hold out!"

which is the only instance I know of where the word is made use of in any of the minor poems.

The only allusion I find to the nature of the hive then generally used, is an indirect one, but points to the ordinary straw "skep." It is in the poem called A LOVER'S COMPLAINT, where the "fickle maid's" hat is described as—

"A platted hive of straw
Which fortified her image from the sun."

And the only mention made of metheglin or other honey drinks is in THE MERRY WIVES OF WINDSOR, where the Welshman, *Evans*, in summing up the weakness of *Falstaff*, says that he is

"Given to taverns, and sack, and wine,
And metheglins, and to drinkings, and swearings,
And starings, pribbles and prabbles."

Act V., Scene 5.

There is a curious passage in KING HENRY IV., *Part II.*, which would seem to refer to the incident mentioned in the Book of Judges of Samson finding the honey in the carcase of the lion which he had killed some time previously—

"'Tis seldom when the bee doth leave her comb
In the dead carrion."

Act IV., Scene 4.

And another in the WINTER'S TALE, which leads one to suppose that Shakespere must have had in his mind some instances, mentioned by historians, of honey having been used for purposes of torture; as in the case of the murderers of

Xerxes in the fifth century before, and in that of the Venerable Bishop of Arethusa in the fourth century after the Christian era. It is where the rogue *Autolycus* frightens the shepherd's son by describing to him (without pretending to know to whom he is speaking) the imaginary fate that is in store for him—

"He has a son who shall be flayed alive; then, 'nointed over with the honey, set on a wasps' nest; then stand till he be three-quarters and a dram dead; then recovered with aqua vitæ or some other infusion; then, raw as he is, and in the hottest day prognostication proclaims, shall he be set against a brick wall, the sun looking with a southern eye upon him, where he is to behold him with flies blown to death."

Act IV., Scene 3.

It may be gathered from all these quotations that bees and honey were very familiar subjects for thought in England three hundred years ago. They afford some means of judging of the then state of knowledge of apiculture as compared with that of the present day, and give, perhaps, some grounds for a justifiable pride on the part of the beekeeping community in being able to proclaim the immortal "Bard of Avon" as an amateur follower of the gentle craft.

Correspondence.

[*These columns are open for the discussion of all matters connected with Apiculture, but the Editor does not hold himself responsible for the opinions expressed by his correspondents, who will please give their name and address, not necessarily for publication. When referring to any previous communication, please quote month and page.*]

NOTES FROM SOUTH AUSTRALIA.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—I like your *Journal* very much, and see by it that the bee fraternity of New Zealand are troubled with foul-brood. I hope you will succeed in getting the Act passed. I introduced the disease into my apiary by getting a colony of Italians that were infected, and had it three years, but last spring I made a determined effort and succeeded in stamping it out. I transferred the bees on its first appearance in a hive, and there was not a sign of it all the summer and autumn. I increased this last season from thirty to one hundred colonies and took 1¼ tons of honey, and left the hives well stocked with food for winter.

Next mail, if I have time, I will give you my experience with foul-brood, and try to dispel some popular errors. It is, without doubt, a most infectious disease, and is chiefly propagated and spread through carelessness. Some go farther than Darwin's theory and argue that the germs are created, that is, spontaneously generated, but whether or not, by united action it might be as easily kept in check as many other germ diseases are. I enclose my subscription for twelve months.—Yours, etc.,

Millicent, South Australia. H. HART.

[We shall be glad to have an account of your experiences.—ED.]

FOUL BROOD PETITION.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL, HON. SECRETARY N.Z. BEEKEEPERS' ASSOCIATION.

SIR,—I enclose copy of the foul-brood petition, which was sent me for signatures, and am sorry the list of names is not larger. As it was I had to get beekeepers' signatures on the spot, wherever I met them.

All the beekeepers I spoke to were in favour of the petition, and signed it at once. One box-hive man remarked that though they (box-hive beekeepers) would suffer the most from the working of a Foul Brood Act, being unable to detect or cure the disease so readily, still he would rather not keep bees at all than be an annoyance to his neighbours.

There is a question connected with the proposed Act which has been put to me on several occasions when presenting the petition, but which I could not answer. It is this:—"How much time would be allowed beekeepers to cure diseased colonies before extreme measures were taken under the Act?" I should like to be in a position to answer this query. Pray inform me if you can. The querists signed the petition, nevertheless, feeling sure that they could safely trust our committee to draw up an Act fair and just to all parties, and in no way hurtful to the industry.—Yours, &c.,

C. BARHAM MORRIS.

Fernbrook Apiary, Otago.

[Many thanks for the trouble taken to secure signatures. There is something reasonable in the view taken by the box-hive man you quote. In the draft of the Act there is no limit to time within which diseased colonies must be cured. So long as the proper remedies are applied immediately, which will be the duty of the complaining beekeepers to see properly carried out, nothing more is asked. There are penalties for non-compliance with the instructions of the expert within a certain time. As we have already stated, the owner of diseased colonies is fairly protected and fairly dealt with. We shall publish the Act as soon as our President gives us permission.—ED.]

NOTES FROM NEW SOUTH WALES.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—I received the pamphlets all right, with thanks, and I am very pleased with them; they are exceedingly well got up and interesting. Re the honey market here, I am very sorry to inform you that at present it is glutted, the ruling price being for wholesale lots 3d. to 4d. per lb., and I heard of a lot, through a friend of mine who is in one of the largest firms in Sydney, that was bought at 1½d. per lb., real good honey. The retail price is from 5d. to 6d. per lb., unless put up in fancy clear glass jars, when it fetches a bit more. Honey has been very plentiful in this colony this season and the markets have been rushed with it in consequence. I have considerably over a ton on hand now. I will have a couple of queens from you next season and I will send the money over when I am sending my subscription for the *Bee Journal*. I would like to get them as early in the season as possible. Wishing you every success, I remain, yours truly,

A. J. LURCOCK.

Kent Apiary, Narara, near Gosford,
May 7th, 1888.

NOTES FROM HAWKE'S BAY.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—Have just received the May number of the *Journal* and read friend Brown's article on foul-brood legislation. There is one part I don't agree with in any way. Friend Brown thinks the best way to wipe out careless beekeepers is to keep our own apiaries clean and let the careless ones die out in rottenness. Now, this is the part I can't digest, and I cannot for the life of me see why he made such a statement. It may be all very well with him, but I am sure it won't suit careful beekeepers; it will cause them lots of trouble if they try to eradicate the disease in this way. Friend Brown, I am of opinion that, instead of getting rid of the disease by your method, it would be just the thing to rid us of our bees. Mr. Brown don't believe in a Foul-brood Act, the majority of us do, and it is just a question whether Mr. B. is right and all the rest of us wrong, or *vice versa*.

Foul-brood is raging in this district, for, go almost where you like, you will find bees and combs rotten with disease. It will take a long time, and the most stringent measures will

have to be adopted, before the disease in this district will be sufficiently under control for beekeepers to work along comfortably. I intend giving another lecture shortly and shall be pretty rough on careless beekeepers.

What does beeswax fetch in Auckland just now, and what price is given for wax in large quantities?

This is a rather short contribution, but I will, however, "chip in" regularly and give you all the news I can.

Yours, etc.,

A. H. PARKINSON.

Hampden Apiary, Hawke's Bay.

[The price of wax in large or small quantities in Auckland ranges from 8d. to 9½d. per lb., according to quality. That's right, "chip in" with news.—ED.]

BEE ENEMIES IN SOUTH AUSTRALIA.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—We send you, per favour of Captain Smith, some new bee enemies which we should like you to examine and report upon. They are playing the very mischief with our bees.—Yours, etc.,

FIEBIG & SON.

Adelaide, April 21st, 1888.

[We handed the flies over to a naturalist to examine, and he reports that they are new to him, but belong to the same sub-family of diptera as the house-fly, but in the absence of a special work of reference he could not name them.—ED.]

APIFUGE.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—I should like to mention, for the benefit of others, the advantage of using your "Apifuge" when manipulating bees. For some years past I had worn india-rubber gloves to protect my hands, but found them very inconvenient. I at last decided to try the Apifuge, and procured a bottle of your own brand which I have tried and found an excellent protection. I went through all my hives about a month ago, and did not receive a single sting. Some of the bees went straight for my hands but were subdued in an instant. I think you will have a large sale for it when it becomes better known.—Yours, etc.,

F. STEPHENS.

Auckland, May 24th, 1888.

Reports.

FROM TARAHERU APIARY.

Report for Season 1887-8.

TO THE EDITOR OF THE AUSTRALASIAN BEE JOURNAL.

SIR,—At the time of my last communication in spring foul-brood had reduced the number of my stocks to seventy, mostly very weak. The season opened very cold and wet and the prospect looked gloomy. As it turned out it was for the best, as it retarded the blooming season and gave the bees a chance of recovering and getting strong when the clover came into flower. Extracting began on 15th December and the flow lasted without a break till the middle of February. The swarms came off in December, a month or more later than usual, and I took as many as I could get, increasing to 130. The yield was about 8,000lbs. extracted and 500lbs. comb honey, being 120lbs. per hive, spring count. This is the best return I have had since I commenced beekeeping. Contrary to your experience in Auckland, I have found a better demand for my honey than in previous years, having sold, not only my own crop, but 3,000lbs. more which I bought. I put it up mostly in 60lb. tins, for which I get 3¾d. I also sold a ton in casks at 3½d, casks extra. As regards the slow sale and poor prices for honey in Auckland, I am inclined to think that the principal reason is the second-rate quality of most of the honey. I have been told by a leading grocer there that the demand is nearly confined to Matamata honey, which is from white clover, whereas, I have no doubt, a good proportion of the honey placed in the market is from bush, which, in our district at any rate, we don't think much of. I often sell honey to bushmen who tell me they would rather give 4d. for my clover honey than eat bush honey which they can get for nothing. I read a paragraph in our local paper the other day stating that a Tauranga gentleman had received a promise from one of the largest Auckland brewers to use honey for brewing if he could be guaranteed a sufficient quality. Now, here is the very thing wanted, an outlet for the darker grades of honey not suitable for table use. Then, again, with your tons of fruit selling for next to nothing, if not going to waste altogether, why not make fruit wine? One of our beekeepers makes as much as fifty casks in a season and sells it at a capital price. If there are Maoris in the neighbourhood they will buy any amount of it. I find people very fastidious about honey. They won't have it unless it is of first class quality, when it commands a ready ale.

The foul brood discussion in the May *Journal* is lively and interesting. There is a good deal that at first sight looks reasonable in Mr. Brown's view of allowing nature to work its own cure on the careless beekeeper. For two seasons I had apiaries of 300 and 150 hives within one and a-half miles which I knew to be badly infected. Finally, last winter wiped them out altogether, whereas by attending to mine carefully I succeeded in rescuing a part of my bees. On the other hand, while nature takes two or three seasons to complete the job, the passing of the Act would enable us to proceed in a more expeditious way, and for that reason I am in favour of it. This is the view of the principal beekeepers of this district, who have all signed the petition.

Another problem remains to be solved. If, with foul-brood destroying our hives, so many of us have a difficulty in disposing of our honey, how will it be when we have succeeded in destroying the enemy and the production becomes doubled?

GEORGE STEVENSON.

Taraheru Apiary, Gisborne, 7th May, 1888.

[Your experience clearly shows the advantage of paying proper attention to one's bees, for while your neighbours have suffered a heavy loss through carelessness, your perseverance has met with its reward. You are mistaken as to the cause of the low price of honey in Auckland. You must remember that Auckland, being one of the chief cities in the colony, produce is sent to it from all parts, hence the market is sometimes glutted with particular kinds. This was the case with honey for a long time, and it is only now that the price is advancing from the low condition it reached in consequence of the glut. There is no better honey in the world than the bulk of that raised in the Waikato districts and other places near Auckland. The least said about the making and selling wines the better for those who are now selling them. Only the other day it cost a poor widow in Auckland £7 for selling home-made wines that she had made herself, and now she has eighteen large casks on hand that she does not know what to do with. The laws relating to this matter must be altered before it will pay to make honey fruit wines for sale in New Zealand.—ED.]

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Hopkins, Hayr & Co., Publishers, Auckland.

PRINTED for the Proprietors and Publishers, HOPKINS, HAYR, AND CO., of Lower Queen-street, Auckland, by HENRY BRETT, of Auckland, at his Printing Office, Shortland street, Auckland, June, 1888.