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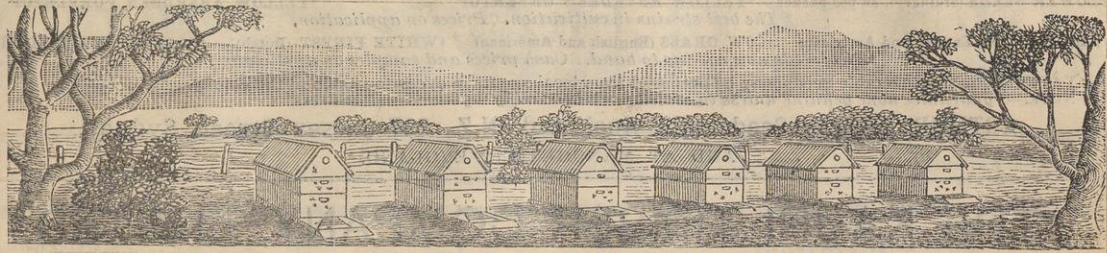
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R. J. Gibb 9/12/88

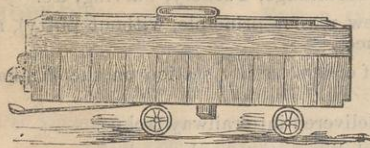
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THE AUSTRALASIAN

BEE JOURNAL



No. 6. Vol. II.] AUCKLAND, N.Z., DECEMBER 1, 1888. [PUBLISHED MONTHLY SIXPENCE.



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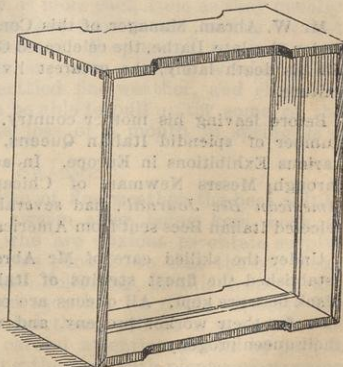
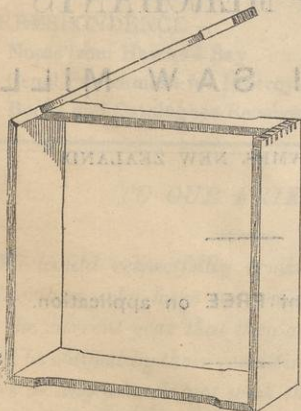
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COMPANY.

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OFFICE, 312 GEORGE STREET, SYDNEY,

S. MACDONNELL, Secretary.

Mr W. Abram, Manager of this Company, served his time under the late Dathé, the celebrated German naturalist, and, till his death lately, the greatest living authority on bee culture.

Before leaving his mother country, Mr Abram secured a number of splendid Italian Queens, which took prizes at various Exhibitions in Europe. In addition, the Company, through Messrs Newman, of Chicago (publishers of the *American Bee Journal*), had several colonies of specially-selected Italian Bees sent from America.

Under the skilled care of Mr Abram, the Company has established the finest strains of Italians. No hybrids nor black bees are kept. All queens are carefully tested in every case for their worker progeny, and when time allows, for their queen progeny.

Price lists of Bees, Hives, Queens, etc., posted on application to the Manager or Secretary as above.

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THE AUSTRALASIAN



BEE JOURNAL

No. 6. VOL. II.] AUCKLAND, N.Z., DECEMBER 1, 1888.

[PUBLISHED MONTHLY.
SIXPENCE.

The Australasian Bee Journal.

Editorial.

PUBLISHED MONTHLY.

I. HOPKINS EDITOR AND PROPRIETOR.

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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.

SEASONABLE OPERATIONS FOR DECEMBER.

UNFORTUNATELY we cannot congratulate ourselves on the continuance of the fine bee weather we had up to about five weeks ago. Since last writing most wretched weather from a beekeeper's point of view has prevailed throughout New Zealand, throwing the bees and apiary work back a long way. Here in the Auckland district scarcely a drop of nectar has been gathered during the past month, and the bees have had to fall back on what food they had in store to feed themselves and the brood. In many cases there was very little to fall back upon, as the grand weather during August and September induced brood rearing to so great an extent that the stored food supply had not increased very materially. Weak colonies have suffered severely, and where food was not given many of them have died out. Drones have been killed the same as though the winter months were approaching, and larvæ have been dragged from their cells. In our own case we have had to feed about 2cwt. of syrup. Some little time previous to the bad weather setting in we had broken up several colonies to form nuclei for queen rearing; these nucleus colonies were unable to obtain a living and had to be fed the whole of the time the bad weather lasted. The same with some swarms that issued early in October. Queen rearing has been thrown back considerably; queen cells were torn down in colonies preparing for swarming, and many young queens were lost while on their "wedding flight."

Speaking of young queens, we have noticed a remarkable result of the bad weather upon some reared this season. Some that were impregnated before the bad weather came on did not commence to lay until nearly four weeks after, while under ordinary circumstances they would have been laying in one week. On three occasions we set eggs for queen cells, and instead of the bees building twenty or more each time as they usually do, three was the most they constructed, and as the rest of the eggs (some hundreds) disappeared, the bees must have eaten them, we suppose. While writing there seems a prospect of settled fine weather, and should it last the bees will soon be able to pull up for some of the lost time, though the loss of a month in spring is a serious matter.

SWARMING.

With a week or two of fine weather the bees will be strongly disposed to swarm after being kept back so long, so that those who are anxious to obtain surplus honey instead of swarms should see that the top boxes are put on in good time, following, in this respect, the instructions given last month. No doubt directly the weather becomes settled there will be a strong flow of honey set in, when careful attention should be paid to the matter of providing the bees with plenty of working room. If the surplus boxes are allowed to get too full the bees will swarm just at the time we require the full

working force of each colony. During a good honey flow is the time everything that can be done to prevent swarming should be done.

COMB FOUNDATION.

We frequently hear complaints, especially from beginners, about the number of drones reared in their hives. In all cases we have found it to be the result of the niggardly use of comb foundation. Perhaps but a half or a third of a sheet, and in some cases only a strip, is used instead of a full sheet. Now there cannot possibly be a greater mistake in beekeeping than to be so sparing over the use of foundation. It is false economy which ends in a big loss. The comb foundation is purposely impressed with the bases of the cells of such a size as to give us, we may say, complete control over the breeding of drones, but if we only use a portion of what we should do, and allow the bees to construct a large proportion of the entire combs (they are bound to build a great deal of drone comb), we deprive ourselves of one of the greatest factors to success. We are not speaking in the interests of those who make or sell foundation, but giving facts which will be admitted by every experienced beekeeper. The saving of time to the bees, and the advantage of keeping down the breeding of drones by using full sheets of worker foundation, would more than pay the difference in cost between strips and sheets many times over. We must also impress upon those who raise section honey, the necessity of using full sheets of foundation in the section boxes. It is distressing to see the unsightly comb honey that often finds its way into the markets. Sections about three parts filled, weighing three-quarters of a pound, instead of a full pound, with pop holes down each side and along the bottom. This is again the result of using strips instead of full sheets. A pound of thin foundation will fill about 70 sections—about a halfpenny per sheet—yet, in saving a farthing's worth of foundation to each section, they lose at least 2s. per dozen when they market them.

SURPLUS HONEY.

We would strongly advise all beekeepers who can raise honey that will extract to do so in preference to raising comb honey, more particularly honey for market. In the first place, extracted honey is much the cheapest to raise as there is no destruction of combs. In the next place, nearly or quite double the quantity of extracted compared with comb honey, can be secured with less risk of swarming; and in the third place, which is perhaps the most important of all, it can be kept any length of time without deteriorating and can be transported any distance with very little risk. It is also more saleable. There are districts where it is almost impossible to raise extracted honey owing to the flora yielding a very thick nectar which cannot be thrown from the combs after being stored. Much of the native flora of New Zealand yields nectar of this kind, and in such cases the beekeeper is compelled to raise comb honey. Nectar from the same flora differs greatly in different seasons, but as a rule, there is some part of each season when honey will extract, even in the worst districts, if taken in time.

PREPARING HONEY FOR MARKET.

Extracted honey should be allowed plenty of time to get thoroughly ripened after it is taken from the combs, and before it is put into close vessels for market. If put up too hastily, before the surplus water in it has evaporated, it is sure to ferment, when of course it is valueless in the market. If to be sent to market in bulk to be tinned, then casks holding about 400 lbs are the cheapest kind of vessels, or if but a small quantity 60 lb tins are handy and cheap, and make a very good package when two are packed in a case.

Sections should not be taken from the hives until the combs are completely sealed. They should then be freed from all propolis, and be stored for a few days in a warm airy room before being packed in crates for market. When packing them care should be taken that the sections cannot move in the boxes or they will get damaged, and one broken comb would be enough to spoil a whole crateful. A large label, plainly stating the nature of the contents, should be pasted on each crate.

The main sowing of buckwheat should take place this month.

DISSOLUTION OF PARTNERSHIP.

AN advertisement notifying the dissolution of partnership between ourselves and Messrs. Hayr and Co. recently appeared in the Auckland papers, which we have had embodied in the following circular for distribution among our customers and friends:

DISSOLUTION OF PARTNERSHIP.

The Partnership hitherto existing between I. Hopkins and Hayr & Co., trading as "HOPKINS, HAYR & Co.," Apiarian Supply Dealers and Honey Merchants, has this day been Dissolved by mutual consent; and I. Hopkins, having bought the interest of Hayr & Co. in the late firm, will discharge all liabilities and receive all accounts due to the firm.

I. HOPKINS.
HAYR & CO.

November 12th, 1888.

P.O. Box 386,

Auckland,

1888

Mr. _____

Dear Sir,

While thanking you for past favours, I beg to state that I have bought the Stock-in-Trade of the late firm, and am therefore in a position to execute all orders entrusted to my care as heretofore. The business of the late firm having been directly under my control, I am acquainted with the particular requirements of the various customers, and will do my utmost to give satisfaction.

Trusting to receive your favours in the future,

I am,

Yours respectfully,

I. HOPKINS.

Address—I. Hopkins & Co.,

P.O. Box 386, Auckland.

We need scarcely state that the *Journal* will go on as before, and though we feel deeply grateful for the assistance given by many of our old subscribers since we appealed to them, we do hope that every one who can lend a helping hand by securing a new subscriber will do so. We intend to considerably enlarge the *Journal* as soon as it is paying its way, so that our readers in assisting us will be helping themselves.

BOGUS HONEY IN MELBOURNE.

OUR readers will remember that we gave an account of the prosecution of a Melbourne tradesman for selling adulterated honey, but as he had sold it in the original package in which he purchased it, and had not offered any for sale after being warned, the Magistrate considered that little or no blame attached to him, and dismissed the case. It appears that this so-called "Honey gathered from Orange Blossoms in the Mountains of Los Angeles"—for so it was styled on the label—was imported from America by the "Red Cross Preserving Company" of South Yarrow, Victoria. Now, it is just possible, but not very probable, that this company may not have known that they were importing spurious honey. All the same, they were as culpable for vending it as pure honey as though they had put it up themselves. It was certainly the duty of the company to know what they were importing and selling as pure honey; if they did not know they were to blame for their remissness and richly deserve any loss that may be incurred through their neglect. The company are also deserving of censure for trying to make the public believe that the adulteration of honey with glucose is a necessity. The same old stereotyped excuse was given in this case as has been made by every one when found out, viz., "that the glucose was added to prevent the honey from granulating." It was not for extra gain, oh dear no! but yet, when we know that glucose can be purchased in America for less than half the price of honey, we beekeepers are so uncharitable as to believe that it is done for gain, and for gain only.

Our friend Mr Kendall, who, as our readers are aware, when warmed to the point, can make a vigorous attack, with the true instincts of a genuine beekeeper "went for" the adulterated honey in the Melbourne *Herald*, which brought forth the following reply from the importers:

GLUCOSE IN HONEY.

TO THE EDITOR OF THE HERALD.

SIR,—Referring to Mr Kendall's letter in your issue of 13th inst., he doubts that pure honey contains 66 to 74 per cent. of glucose. We will only say that it was from a report of Mr Sydney Gibbons that we quoted. If Mr Kendall had only read our letter more carefully he would have seen that we said the best honey contained that quantity—there are other varieties containing less. We will not occupy your space in going over the garbled statement of Mr Kendall, and will now close by attaching Mr Sydney Gibbons's report, which will show that Mr Kendall must really have a bee in his bonnet.—
Yours, etc.,
WARD, SMITH, FELSTEAD.

[Copy.]

HONEY.

I have had under examination samples of honey from the "Red Cross" Preserving Company. Natural honey contains from 66 to 74 per cent. of glucose, the famous Narbonne variety having the most. It is thought that the more glucose it con-

tains the more it is calculated to remain limpid; and there is ground for this belief, because granulation is caused by crystallisation of the other sugars that fill up the percentage. Hence the practice of adding a little glucose to ensure the preservation of clearness. I have a sample so prepared nearly two years ago, which is as clear as at first, even in the present cold weather. It appears that the public goes for clear honey, although a connoisseur would probably prefer the other.

(Signed) SYDNEY GIBBONS.

Melbourn, 9th July, 1888.

To the Red Cross Preserving Company, South Yarra.

FURTHER REPORT.

DEAR SIR,—In reply to your inquiry I have the pleasure to quote the following analysis of honey:—
Glucose in honey per cent.—1, taken from the comb, 71.66; 2, Californian, 68.52; 3, Narbonne, 74.04; West Indian, 69.34; 5, Transylvanian, 66.57.—Yours faithfully,

(Signed) SYDNEY GIBBONS.

Of what value is the so-called report of Mr Sydney Gibbons so far as the honey (?) sold by Ward, Smith and Felstead is concerned? None whatever. Not a word is said about its constituent parts. It is easy to guess the reason, when an official analysis showed that it contained "40 per cent. of glucose, cane sugar syrup, lime, and other ingredients." To lead the public on the wrong scent a great deal is made of the fact that pure honey contains a large percentage of glucose, but Mr Sydney Gibbons is very careful to suppress the fact that it is not the ordinary glucose of commerce. Levulose and dextrose, which form the great bulk of pure honey, are two forms of glucose, but quite distinct from ordinary glucose, which is starch converted into sugar by the aid of sulphuric acid at a high temperature. We explained the whole matter in detail in a letter published in the Melbourne *Herald*, which, Mr Kendall said, "quashed" all the other side had put forward.

Though, apparently, no one has been punished for vending the fraudulent honey, the publicity given to the matter has done the legitimate honey producers no end of good, and if a strict watch is kept on future importations importers will not find it worth their while to send to America for glucosed honey, especially when the pure article can be obtained in almost any quantity in one or other of the Australasian Colonies.

ERICA ARBorea FOR SHELTER AND BEE FOOD.

THIS is a most useful plant for the apiary. Grown as a hedge it affords good shelter for hives, and belonging to the heath family is sufficient to recommend it as a bee plant.

We have made arrangements by which we can supply large plants, well balled, at 6s. per doz. or 35s. per 100. Smaller plants 25s. per 100, with 1s. 6d. added for packing case.

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

NEW ZEALAND BEEKEEPERS' ASSOCIATION.

THE regular monthly meeting of the Committee was held at the office of the Secretary on Friday, November 22nd, at 2.30 p.m., Mr. G. L. Peacocke in the chair. The minutes of the former meeting having been read and confirmed, the Chairman read the following report from the Sub-Committee:—

GENTLEMEN,—Your sub-committee appointed at the last meeting to interview the manager of the Steamship Companies and railway authorities *re* reduction of fares to beekeepers travelling to and fro to attend the proposed Convention in March next, have the honour to report that they waited on Messrs Henderson and Ransom, Managers of the Union and Northern Steamship Companies, and Mr. C. Hudson of the Railway Department. They were met in a very liberal spirit by each gentleman. The two former at once offered to issue return tickets at single fares to *bona-fide* beekeepers, while the latter viewed the matter in a very favourable light, and promised to lay it before the head of his department, and use his influence in the desired direction.

F. LAWRY,
Chairman.

The Committee expressed their satisfaction at the very handsome manner in which the Association had been treated by the manager of the Steam Shipping Companies, and instructed the Secretary to forward the thanks of the Association to these gentlemen for their liberality. The Committee anticipated the same liberal concession from the railway department.

The Secretary reported that he had written to the Registrar-General *re* having a honey and bee column inserted in the Agricultural Statistics papers, and had received the following reply:—

Registrar General's Office,
Wellington, November 8, 1888.

SIR,—I have to acknowledge the receipt of your letter of the 3rd inst. requesting that annual returns of honey and beeswax raised in the colony may be published in the Agricultural Statistics.

In reply I have to state that I fear this could not be done without largely increasing the cost of taking the Agricultural Statistics, as bees are kept on small holdings of less than an acre, and on holdings where there is no agriculture—some of the holdings in towns. This would necessitate the collectors making so large an additional number of visits, for until almost every house had been visited they could not tell who does and who does not keep bees, that the cost of collection would be disproportionately enhanced. I do not think, therefore, that the request can be complied with.

I have the honour to be, sir,

Your obedient Servant,

W. R. BROWN,
Registrar-General.

I. HOPKINS, Esq., Lower Queen Street, Auckland.

The Committee expressed a hope that some way could be arranged to get over the difficulty, and after some discussion it was suggested that the Government should make the returns of bees and honey in the Agricultural Statistics from the large holdings, and leave the Association to deal with the smaller ones. It was thought that the Association would be able, with the help of those interested in the progress of beekeeping, to get fairly correct returns from those not visited by the Government enumerator, and the Secretary was instructed to

communicate with the Registrar-General and ascertain whether he would agree to the suggestion.

The following letter from the Secretary of the Horticultural Society, in reply to one sent by the Association, was then read:—

The Royal Horticultural Society of Auckland,
November 8, 1888.

MR. I. HOPKINS,
Hon. Sec. N.Z. Beekeepers' Association,
Lower Queen Street.

SIR,—In answer to your letter of the 3rd inst., I am instructed to inform you that the Society will provide space for the exhibits of your association on condition that all expenses in connection therewith are defrayed by you.

I remain, sir,

Your obedient servant,
W. OSBORNE, Secretary.

Address: City Market.

As the Committee did not know what was meant by 'all expenses' it was considered advisable that a deputation from the Association should wait upon the Committee of the Horticultural Society at their next meeting and ascertain, and the President and Secretary were appointed a deputation.

The Secretary stated that several beekeepers communicating with him privately hoped that there would be a convention and show, and Mr. Brickell, of Dunedin, had very kindly offered to assist in making up the prize fund. It was believed with the cheap travelling fares and an attractive programme for the convention, that a good number of our progressive beekeepers would be induced to meet together in Auckland in March next. The programme for the convention, it was suggested, should be put in form at the next meeting, and the Secretary offered to draw up a rough draft of one which could be submitted to the Committee.

The Rev. Father Maddan suggested that the discussion on marketing honey should be postponed till the next meeting, which was agreed to.

A vote of thanks to the chairman concluded the meeting.

VENTILATION OF HIVES.

By T. J. MULVANY.

THE articles and correspondence which have appeared in this *Journal* upon the above important and hitherto rather neglected branch of scientific apiculture, especially those under the signature of J.R.M., must have given subject for reflection to many beekeepers, and caused them to ask themselves the practical question, "May not something be gained in the way of rendering the result of our labours more certain and more profitable, by a better understanding of the principles, and a more careful attention to the regulation of hive ventilation?" The credit of having started this inquiry belongs entirely to the respected contributor above designated, and to him will be mainly due the thanks of all beekeepers, not only in this, but in all quarters of the globe, for any practical benefits or increase of real knowledge of the subject which may arise from the discussion, and from the experimental investigation which he has suggested. We must all be glad to learn that

he has now, fortunately, both leisure and opportunity to carry out those experiments under the most favourable circumstances; we shall all, no doubt, await with great interest his report of the results, and we may then, with advantage, return to the consideration of the principles involved. In the meantime I shall here only refer to a few points which have been raised since I last took part in the discussion, and not because I have any desire to prolong a controversy upon theories and matters of minor importance in which I am not quite agreed with J.R.M., but because I feel myself in a manner bound to do so, in consequence of the very obliging terms in which he noticed and replied to my former remarks, and has invited a further expression of opinion.

The chief thing to which I originally took exception, was the assumption that a high wind, even if blowing straight in front of an ordinary hive, must send a current, the size of the bottom opening, through the hive in such a way as to change the whole body of air in the interior, say once every minute, replacing it with air of the same temperature as that outside the hive. I must confess myself still unconvinced on this point by anything which has been urged in reply. At page 25 of this second volume, reference is made to the action of the steam injector, the hydraulic ram, and the hydraulic press; but I cannot admit the applicability of those illustrations. The first instance is one in which confined steam at high pressure comes into operation, and the two others depend upon the hydrostatic pressure of water at rest in confined pipes. They therefore appear to me to offer no analogy to the action of unconfined air in free motion. I still believe it would be very difficult to determine what quantity of air would pass through any given opening, even in a simple board exposed directly to winds of different velocities. The quantity would certainly vary greatly in openings of equal area, but of different shapes; it would be less in proportion with higher velocities, because the disturbance caused by the air compressed against the flat surface, deflected across the opening, and thereby obstructing the free passages through it, must increase with the velocity. The difficulty is still greater in the case of an opening into a confined chamber filled with heated air. Besides, as W.F. justly remarks (at page 77 of this volume), the velocity of the wind within some six inches of the ground, where the entrance to an ordinary hive is generally placed, must always be much less than at a higher level, owing to surface friction; and it may, I think, also be assumed, that any strong current of air impinging on the slanting alighting-board usually attached in front of the Langstroth hive, must be deflected upwards so as to pass *over* the bottom opening and to strike the front of the hive *above* it. In no case, as I conceive, would an arithmetical calculation, grounded upon the area of the opening and the velocity of the wind, give a correct solution of the question, and what deductions should be made for the disturbing causes cannot well be determined except by experiment and observation in each case.

I may mention that, many years ago, as a civil engineer engaged in works of drainage and navigation, I had frequent occasion both to calculate and to

measure the actual discharge of water through channels and apertures of various forms, through the openings of bridges, etc., and in that way to become practically acquainted with the difficulties of arriving at correct results owing to various causes—such as the differences in the velocity of running water in different portions of any given section of channel or aperture, the disturbances caused by chance obstructions, by eddies, deflected course of the current, etc., and consequently to be convinced of the caution necessary in applying mathematical formulæ to calculations in individual cases; also, in later years, in the management of extensive collieries, where the ventilation of the workings have to be measured and controlled with great care, I have had opportunity to make use of the anemometer or wind-gauge referred to at page 38 of this volume, and to learn the difficulties of measuring the true volume of air travelling through any given aperture or passage way. The anemometer tells, with great approximation to truth, the velocity of the air at the spot where it is held suspended; but if the speed so ascertained, say in the very centre of the opening, were simply multiplied by the number of square feet in the whole section, the result would be far from an accurate representation of the actual volume of air passing through. The instrument referred to could not possibly be applied to measure the velocity of air passing through the small openings at bottom and at top of a hive; and I am not aware of any instrument which could be used to measure the *quantity* of air passed in a given time through such openings, as, for instance, a gasometer does in the case of gas supplied at any given point. A simple pressure gauge, such as that described at page 37, might, no doubt, be used with advantage to ascertain the increase of pressure, if any, exerted on the inside of a hive cover by any change in the direction or force of the wind outside of the hive front. If it should be found (which I must still doubt) that there is any danger of the hive cover being displaced or blown off by such a cause, it would not be difficult to devise a simple sort of hook-and-eye arrangement by which the covers could be fastened down to the back and front of the hive. I must confess, however, that I am so opposed to anything which involves an extra appendage to the hive, and which must add, in some degree, to its cost, and interfere, however little, with the ease and simplicity of manipulation, that I would not be disposed to adopt any such expedient, except upon strongly proven grounds of utility. I have indeed, on more than one occasion, experienced such an occurrence as that the cover of the Langstroth hive has been displaced, and even blown off altogether, by a strong wind, or one of those little whirlwind eddies which are not uncommon in this climate, acting upon the projecting eaves of the roof; but such cases are so rare in a fairly sheltered apiary, and the result generally so little harmful, when the cover is readjusted within a reasonable time, that I should never think, on that account, of applying fasteners to the roofs.

Mr. W. C. Brown, at page 27 of the *Journal*, draws attention to the fact that bees, if left to themselves, are disposed to stop all upward ventilation by closing the apertures at the top of the hive with

propolis, and he argues from this fact that the natural course is to leave them to effect their own ventilation downwards, and by the aid of fanning. We should, I think, be very slow to reject any argument furnished upon accurate observation of the natural instinctive action of the bees; and it would seem too, that the practice in America, where they are obliged to keep their hives in cellars during the winter, is rather in favour of stopping all upward ventilation under such circumstances. But this may be all right in the case of a single story hive, and especially with a reduced stock of bees when made up for the winter, and it may be, and I believe must be, all wrong during the working season, when we, in our artificial mode of management, add story upon story to the hive at our discretion. Mr. Brown also alludes to the fact that carbonic acid gas, which is what we want to get rid of, is heavier than atmospheric air, and concludes that it may therefore be better carried off by a downward ventilation. It is true that pure carbonic acid gas is heavier than air, and where there is a very defective ventilation, or none at all, it will settle down in the bottom of the space where it may be generated, just as water will lie in the bottom of a vessel under oil; but in that state it is a deadly poison, and it is thus that such destruction of life is often caused by the "after-damp," or "choke-damp," as it is called by miners, accumulating in the lower portions of the passages and workings in a colliery after an explosion of gas, and when the course of the ventilation is stopped. But the carbonic acid gas given off by the bees in homœopathic quantities mixes, as generated, with the surrounding air, and, according to Mr. Cheshire, must not be allowed to mix in a greater proportion than five per cent, without injury to the bees. In that proportion it will not make the heated air as heavy as the outer and cooler atmosphere, and therefore can scarcely check the upward ventilation, if any such be established in the hive. If it were left to poison the interior air until it became so heavy as to fall to the bottom, it would of course be destructive to the bees, and they prevent this, when left to themselves, by fanning, so as to cause a downward current to the entrance opening. We ourselves give off carbonic acid gas with each expiration, and a smoker does so with each puff of smoke; but it is so mixed with heated air and vapour, that both our breath and the tobacco smoke ascend rapidly in the open air, as is so apparent when we breathe in cold weather, and at all times when we smoke.

Whatever difference of views may exist upon such points as those alluded to above, there can be but one opinion as to the great value of carefully made experiments such as are now intended to be carried out, especially those relating to the interior temperature of hives under different conditions of outward temperature, action of winds, etc.; and with the varying state of the stock of bees, as to strength, tendency to swarm, breeding, comb building, and storage of honey. These are points upon which we have actually very little reliable information at present, and every well attested and clearly noted experiment which adds to our knowledge in this respect, will assist in furnishing data for a just appreciation of the principles upon which the ventilation of hives ought to be regulated.

JOTTINGS.

By LAMH DEARG ERIN.

I was glad to see in the last number Kendall's article on "How it Works." These are the sort of articles that ought to stir up our beekeepers to fresh energy. Had it not been for the *Journal* we should never have started the Association, and had it not been for the Association we should never have taken steps towards "doing something" for the eradication of foul brood; and if we can only make the proposed Convention a success, it will be the crowning point of our labours towards placing apiculture in New Zealand on a firm basis. We want the *Journal* to go ahead and the Association also, but to do this we want more co-operation, more hearty support, and less apathy amongst beekeepers in general. All honour to those few indefatigable members who are doing their best for the cause, and no one wishes to see the convention "boom" better than I do, so, beekeepers, if you want to learn a few wrinkles, attend the convention if you can possibly manage it, and in the mean time "take notes" for future reference both for your own good and for the good of beekeeping in general. Remember we can always learn something new every day.

I note J. A. Moreland's results *anent* foul brood, but I would ask him, does he find the combs which have been subjected to the brine treatment as *strong* as those which have not? If I mistake not (I am open to correction) I think he mentioned some time ago that after the combs had been immersed in the brine solution, that the small web which the nymph spins previous to attaining its pupæ stage, comes clean away from the comb. Should this occur of course the germs come away with it, which is the result one wishes for; but, on the other hand, it is in the *strength* of the old brood combs that the value lies for extracting purposes. If the web is detached, the comb is weakened and is to all purposes useless for extracting from, that is to say, if the honey is thick like it was last year. Does the immersion in brine make the combs brittle? Still, Mr. Moreland has clearly shown that brine is a useful germicide for foul brood.

With regard to the corrosive sublimate, I note the Editor's reply. I have used it for the last eighteen months and so far have never experienced any ill effects arising from its use. The proportion used is of such an infinitesimal quantity, and that, too, spread over ten or twelve superficial feet of comb, would do no harm either to the brood, bees, or human beings. It might, if the dose were repeated often over the same space, but in my experience I have found that *one thorough* spraying has been sufficient to check the evil.

I note W. F.'s query, "How long will combs and hives diseased with foul brood remain infectious?" From what I have seen of it (and I speak feelingly) a year's exposure to sun, wind, and rain will not obliterate the germs. I am now experimenting with an "old coffin" which has had a two years' airing and in which I have put a swarm to see whether it will develop foul brood. The result will

be duly chronicled. But the ANSWER to this query should be: WHEN THE FOUL BROOD BILL IS PASSED, *Foul Brood in a neighbour's hives* will NOT BE INFECTIOUS AFTER TWO WEEKS.

[Re the convention, if it does not eventuate the fault will certainly not lie with the N.Z.B.K.A., for it will be seen in the report of its proceedings that the committee have already done a great deal towards inducing beekeepers to attend.—ED.]

VICTORIAN EXPERIENCES.

BY CHARLES FULLWOOD.

THE outlook is better than was the case last season. Farmers are complaining that there has not been sufficient rain; last year there was too much rain to suit beekeepers, and everything was backward. This year the bees have been able to work many more days during fruit blossoms, hence swarming has been earlier, and stocks generally are more vigorous, and apparently less foul-brood among them.

I quite anticipate that this disease will be a continual source of trouble to us. We may master it for a season when everything favours vigorous work, but with bad seasons will re-appear disease and destruction, more especially where we have the careless box system in operation around us with the thieving black bees carrying infection to all apiaries within their reach.

I have had several new experiences since coming to Victoria not at all favourable to the pursuits of the beekeeper. I had a singular case of disease in one of my stocks during this past winter. Apparently healthy full-bodied young (well, not old worker) bees would come out and lie about the entrance and die by the score, until the stock was reduced to a most miserable minority.

The queen is a young fine-looking queen, but crossed, as all my young queens are. I carefully examined the dying and dead workers, but failed to discover any cause of death. The honey they had was good, so far as I could judge. The box was kept dry, etc. Still they died. Since spring was ushered in I have built them up from other stocks with sealed brood, and now they are lively and strong, and doing well.

I have been, unfortunately, prevented by pressure of engagements and domestic bereavement, from making experiments, or attending beekeepers' meetings to acquire information. I am quite convinced that to make beekeeping a success in Victoria, it will require great care, watchfulness, and study.

Besides the fact that diseases are common and destructive, the beekeeper who tries to make a living by his honey has the most unscrupulous dishonesty of professional honey-makers to combat, who trade upon the stupid prejudices of the people by supplying the market with a syrup that does not become sugary, and that in the names of "Pure Garden Honey," "Pure Orange Blossom Honey," etc. Precious little honey in it!

I was rather disappointed with the display of honey implements, etc., at the Melbourne Exhibi-

tion I did anticipate a grand show; possibly something better may have arrived since I took a run round. I will have another look and report.

I am pleased to observe that Mr. Cusack, of Queensland, Secretary of the Beekeepers' Association, has undertaken to report upon Queensland matters, and to note progress. I hope this will be continued.

I am half inclined to join issue with you, Mr. Editor, upon the British Beekeepers' Association. I, perhaps, may look upon the matter from a different standpoint. The *British Bee Journal* was not intended so much to aid professional beekeepers who make this their sole business, as to assist amateurs, and those who adopted beekeeping as a means of assistance, such as poor curates, etc., whose income was and is meagre. Of course, beekeeping has changed with the progress of time, and we may expect that those who make it a business will not care for too many to enter it, even in a pettifogging way. Is not the effort of the well-to-do apiarists of England to assist the cottager and others to augment their income and enhance their pleasure rather commendable?

To whom are we indebted mostly for modern advancement, if not to such men as Woodbury, of England, an ex-clergyman, and Langstroth, of America, another of the same class; and D'Zierzon, of Germany, an ex-priest, all of whom took up beekeeping as a pastime and study? I merely mention these three as representative men. Many more might be added who have done yeoman service to our fascinating pursuit. This paper is getting too long, so I cut it short just here.

Melbourne, November, 1888.

[We take it, friend Fullwood, that the *British Bee Journal* is as much a commercial speculation as any bee journal now in circulation, and that it has chosen the course it now pursues as the one that pays best. That it has done a deal of good we have already admitted, but that it is now doing harm to the honey trade of Great Britain, by encouraging all and sundry who have but a "meagre" income to keep bees, we are fully convinced. We have only to turn up the back volumes of the *British Bee Journal* for the past few years and we can find any number of letters from disappointed beekeepers, from men who were tempted to start by the glowing accounts of the profits to be made out of the business by those who have conducted the journal. They found, however, after their trouble and outlay in setting up an apiary and raising their first crop of honey, that they either had to eat it all themselves, or part with it for next to nothing, hence their disgust. We contend that the *British Bee Journal* has been at the wrong end of things; for while encouraging in every possible way increased production, with all its influence it has done little or nothing to increase the demand for honey. It never even quotes the price of the article. Some four years ago we asked the editor to quote the price of honey periodically, but our request was ignored. Beekeepers certainly, in the present state of their affairs, cannot afford to be so generous as to wish

others, because they are no better off than themselves, to come into competition with them. As well might we say we must all turn parsons and priests to help out the meagre income from our apiaries. The result of the policy of the *British Bee Journal* is, that those who have spent years and invested their all in establishing themselves in the beekeeping business, find their living gradually but surely slipping away from them in spite of themselves, and it will be a very strange thing indeed if these people don't soon turn round upon their representative (?) journal and compel it to run on different lines.—Ed.]

BEE GOSSIP.

BY O. POOLE.

WATER FOR BEES.—During dry weather, a spell of which may be shortly expected, bees frequently suffer from want of water; in fact it is surprising the quantity they use when it is to be got both for brood and comb building, and the lack of it must prove a great inconvenience to them; therefore a plentiful and *never failing supply* should be found in every apiary. A good means of supply is to allow it to drip from a cask on a piece of rough sacking placed over an earthenware pan or large flower saucer which should be placed in some shady spot in the apiary. The sacking prevents the drowning of the bees, and a handful of salt occasionally thrown into the cask will be greatly appreciated.

* * * *

BACKWARDNESS OF THE SEASON.—I believe the present to be one of the most backward seasons experienced in the Auckland neighbourhood for some years. Cold and heavy rains with rough winds have prevailed for some time past, and in most cases the bees have been scarcely able to gather enough food for their daily requirements; consequently supers have been neglected, much to the disgust of many amateur beekeepers who, disheartened at their first failure, are talking of giving up the whole business. People however who never look at a bee book nor take in a bee journal, but expect the bees to look after themselves, cannot expect to succeed. Last year bees kept in the suburbs of Auckland did nothing until Christmas, when they gave a fair harvest of honey from the blossom of the pohutukawa.

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EARLY SLAUGHTER OF DRONES.—Looking over an apiary at Ellerslie on November 12, I was surprised to find that the slaughter of the drones was rapidly being proceeded with; there were plenty of bees in the hives but the stores were very short and no honey coming in, and the bees had evidently made up their minds to have no useless members of the community in the hive. I noticed that the white clover in the paddocks adjoining was just coming into flower, so that with the fine weather we have been having these past few days should soon put things all right.

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ITALIAN BEES AND RED CLOVER.—MR. L. H. Pammel, of the Shaw School of Botany, in an

interesting article in the *American Bee Journal* on the pollination and perforation of flowers, writing on the above subject, says:—

“In the summer of 1883, in the vicinity of La Crosse, Wis., I noticed large numbers of honey bees on the flowers of red clover, and wondered whether they made perforation or what they were doing. In some cases they obtained pollen, but in a vast majority of cases nectar was collected through perforations made by some other insect. Among beekeepers there is a notion that the Italian bee is able to get nectar from red clover. I doubt whether this is true, for in my experience I never found them collecting nectar in the normal way; they seem to collect only through perforation made by some other insect. It is a well-known fact that the amount of nectar secreted by a plant varies according to season and locality. There are periods, as I have had occasion to observe, when hive bees cannot collect enough to supply their young, and they then freely use the perforations made by *Bombus* and other insects, but when there is an abundance of nectar they will pass over fields of red clover, and when *Monarda punctata* is in flower and has a good supply of nectar, they will pass over fields of white clover and fly some distance to fields of wild bergamot.”

The above, Mr. Editor, I think goes some way in proof of my contention that the introduction of the humble bees will prove a real acquisition to apiarists, as by their aid many flowers now inaccessible to the hive bees will be opened up by them and the precious nectar made available to all; it also proves, I think, that no dependence can be placed upon the Italian bee for the successful fertilization of the red clover.

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THE QUEENSLAND BEEKEEPERS' ASSOCIATION.—I notice with much pleasure the progress made by this plucky association, the members of which seem to be going to work in real earnest, and have latterly been employed in framing and getting out a new set of rules; they are also endeavouring to bring honey under the “Adulteration of Foods Act” which it appears will cost some £25 to accomplish. I trust that beekeepers in all parts of Queensland will come forward with subscriptions for this object, as it is most necessary that this pernicious practice should be put a stop to as soon as possible. They are also about to issue a pamphlet on honey as food and medicine, that issued by the New Zealand Beekeepers' Association not proving suitable for Queensland, as it has no mention of the medicinal properties of the Eucalyptus honey. I notice also that Mr. Lambert, M.L.A., has helped the beekeeping industry very much by securing, along with Mr. Allen, M.L.A., a 3d. duty on imported honey, also 10s. per cent. on glucose instead of the 5s. proposed. Well done, Queensland, I wish you every success.

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SPURIOUS HONEY TO TEST.—The following recipe for testing spurious honey was lately communicated to the Victorian Beekeepers' Association by Mr. Field, chemist. I have not given it a trial, but it looks so simple that it seems really worth while to do so.

“Add a little pure alcohol to honey or its imitation dissolved in an equal volume of water. This solution, when shaken up with alcohol, remains nearly clear and limpid in the case of honey, but in the case of imitation it at once becomes opaque like dirty milk, due to the deposition of dextrine from starch sugar.”

FOUL BROOD.—MR. W. M. LAIN, in a report of

some experiments in apiculture to the American Commissioner of Agriculture, gives the following remedy, which he says he has found to be a specific, and by the use of which he has cured hundreds of cases, many of which seemed hopelessly incurable.

"In three pints of warm soft water dissolve one pint of dairy salt. Add one pint of water boiling hot, in which have been dissolved four tablespoonfuls of bi-carbonate of soda. Dissolve quarter of an ounce of pure salicylic acid (the crystal) in one ounce of alcohol. Add this to the salt and soda mixture, then raise the temperature near to the boiling point, and stir thoroughly while adding honey or syrup sufficient to make the mixture quite sweet, but not enough to perceptibly thicken, and leave standing for two or three hours, when it is ready for use. An earthen vessel is best. I have tried other acids and alkalies in other forms but the remedy prepared as directed and applied warm is that which I prefer."

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TREATMENT OF BACILLUS ALVEI.—"Upon removing the cover (mat) from the hive, thoroughly dampen the tops of the frames and as many bees as are exposed by blowing a copious spray of the mixture from a large atomiser. Beginning with the outside, lift a frame from the hive and throw a copious spray over the adhering bees on both sides of the comb, shake off part of the bees into the hive and spray those remaining; then shake and brush these into the hive, then blow a copious spray of the mixture over and into the cells on both sides of the combs sufficient to perceptively dampen both comb and frame. In like manner treat all the frames *seriatim*, returning them to the hive in order. From combs containing very much pollen the honey should be extracted and the combs melted into wax."

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Mr. M'Lain states that the bees and combs should be thoroughly sprayed with the remedy until cured, three treatments after the first being generally sufficient, also that the bees should be fed with medicated syrup or honey while they are convalescing. The honey or syrup should be fed warm, two ounces of the remedy to each quart of food. To prevent the bees from going abroad for supplies he makes a thin paste of rye flour and bone flour, three parts of the former to one of the latter, adding the medicated honey or syrup. Spread this over a small area of old comb or feed in dishes on top of the hive. The bone flour is prepared by burning dry bone to a white ash and grinding the softest and white parts in a mortar, and sifting through a fine sieve made of fine air cloth.

* * * *

DANGER IN EXPOSING SUSPECTED COMBS.—Speaking of foul-brood I would again warn my readers of the danger attending the keeping of old combs about, especially those from suspected colonies. It was only a few weeks ago I was asked to examine an apiary a few miles north of Auckland, which had got into a queer condition, several colonies having died out or deserted their hives although they still contained stores. In one corner of the garden I found a large pan containing the combs and honey from one of these hives for the purpose of being cleaned out by the other bees, absolutely rotten with foul-brood, enough to contaminate every hive and spread death, ruin, and destruction for miles around, and yet Professor and Mrs. Aldis

have the impertinence to write to the daily papers and denounce the "Foul-Brood Bill," and its promoters as "Jacks in office." For my part I fail to see why a man, who perhaps has spent hundreds of pounds in establishing a large apiary, should be ruined through the ignorance of one who is too indolent to take proper care of his bees. If taken in time, with due care and proper precautions, the disease may be comparatively easily eradicated; and persons who will not take this trouble should not keep bees at all. They are as useless to themselves as they are a nuisance and danger not only to their immediate neighbours but to the bee-keeping fraternity at large.

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RIDDING WAX OF BACILLI.—In reply to a query in the *Canadian Bee Journal*, whether wax rendered by the solar extractor would contain the germs of foul-brood, or whether it should be melted in a vessel of boiling water and kept at that temperature for half an hour to destroy the germs, Messrs. J. Heddon, H. D. Cutting, A. B. Mason, Enrigh, Professor Cook, A. Pringle, Dr. Miller, J. E. Pond, and G. W. Demaree are all of opinion that the wax should be well boiled. The Editor says: "We are of opinion that the heat of the sun would not be sufficient to destroy the spores. It takes a temperature at boiling point for some minutes to destroy the germs. The heat at which wax is kept for sheeting in foundation making is, we think, sufficient to destroy all germs, and if the wax is used for foundations no danger may be apprehended."

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AN AUTOMATIC UNCAPPER.—The American bee paper *Gleanings*, for September, contains an illustration and description of a machine for uncapping both sides of a comb at once, taken from Gravenhorst's *Bienen Zeitung*, and is said to be the invention of Mr. Peter Wagner, of Krentz-Statzen, Germany. It is almost impossible, without the aid of an engraving, to give a lucid description of the machine; but the idea is to pass the combs to be uncapped between rapidly revolving rollers, which can be adjusted to a greater or lesser distance apart, according to the thickness of the comb. The torn-off bits of cappings and honey are thrown into a receiving box placed below. The machine uncaps one side as well as both sides of thick combs, as the rollers have only to be put further apart. So rapidly do the rollers revolve that they are said to make a perfectly clean cut, and leave the combs as perfect as if they had been operated upon with a knife, at the same time the operation is much more quickly performed.

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Mr. Root, the Editor of *Gleanings*, a well-known and practical apiarist, speaking of the invention, says:—

"We illustrate the machine more because it represents an idea than because we think it will be anything that will come into practical use. We believe that uncapping can be done in the manner described; but after taking into account all the machinery we seriously doubt whether more uncapping could be done with it than with a keen-edged properly warmed un-capping knife."

NEW EXTRACTOR.—The same periodical also gives an illustration of an extractor, the invention of Mr. Buhne-Lauhan, of Germany, for extracting honey from both sides of a comb without reversing. Speaking of this Mr. Root says:—

“It contains a principle which it may be worth while for us Americans to develop. You will observe that the combs are put in the pockets (*extractor basket*) in a horizontal position, and in that position the honey is whirled out from *both sides simultaneously*. The centrifugal force, as the combs revolve in a horizontal position, throws the honey in that side of the cell nearest to the sides of the tub, at the same time flinging away the honey from that side of the cell nearest to the centre of revolution. The honey is thus forced up the perpendicular side of the cell. When it reaches the top edge it flies off striking the side of the tub. To prove that honey could be thrown out in this way, we took some sections—sections of thickly capped honey—uncapped them and placed them down in the basket of the extractor horizontally. The honey was thrown out at both sides at once as clean as could be done with an ordinary extractor. But we noticed that it required a much higher motion.”

Mr. Cowan, editor of the *British Bee Journal*, exhibited a somewhat similar machine in England in 1874; and he reports that it worked admirably, and both sides were extracted at the same time, but that it was only safe to extract from old combs.

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DISSOLUTION OF PARTNERSHIP.—No doubt the readers of this number of the *Journal* will be notified by the Editor of the dissolution of partnership hitherto existing between himself and Messrs. Hayr and Co. From a circular issued I learn that Mr. Hopkins has bought the interest and stock-in-trade of the late firm, and that he intends to carry on the business himself in future, and craves a continuance of the patronage accorded to the firm. Now, I am sure from what I know of Mr. Hopkins that he has conscientiously done his duty to those who have dealt with him in the past, and therefore his old patrons will be certain to give him all the assistance they can in his new venture. I hope he will not think I am flattering him in what I am about to say, because I have no intention of doing so. But having had the pleasure of a personal acquaintance with him almost since the day I landed in New Zealand, I can with truth say that a more practicable and able beekeeper, or one more devoted to the futherance of the beekeeping industry, it has never been my lot to fall across. Notwithstanding that it is to his interest as an apiarian supply dealer that there should be a constant accession to the beekeeping ranks, we know full well that he is using his influence on every possible occasion to prevent this in the interest of those already in the business. No man could do more than our worthy Editor is doing to place our industry on a firm footing, or to make honey a staple commodity. Let us then do what we can for him, and wish him every success in his undertaking.

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.

BEELOGICAL NOTES.

By G. A. GREEN.

“CAN honey become a staple commodity?” I have read with much interest Mr T. J. Mulvany’s able article on the above subject, and I consider he has fully made out the case for our product. Nothing more requires to be said than has been said by Mr Mulvany, to demonstrate that honey can—and no doubt before long will—become a staple article of commerce. All beekeepers have to do now is to raise and send along to friend Hopkins’ depot the requisite amount of honey required to supply the market with a staple, where it will be tinned, labelled, packed, and sold cheaper than you can do it.

* * * *

And who are the beekeepers who are to raise this honey? Seven years ago James Heddon asked:

“Who raises the honey? What do I mean by the honey? I mean the grades and styles wanted by the consumers, hence wanted by the retailers . . . hence wanted by us. I reply specialists. And what do we mean by ‘specialists?’ I mean the one who makes the business the absorbing theme of his mind. . . . The specialists have suffered more in the markets from bunglers, men who should never have touched the business and who now wish they never had, than from all other causes combined. This class will soon become a great annoyance in the field as well as in the market, if they are encouraged. . . . Let us do all we can to maintain prices and create demand by grading our honey and retailing only the best quality, leaving the ‘off’ grades to go into manufacturing purposes and sell at wholesale. Let us make the growth of our home demand our special pride. Let us, like our honey, be honest and ‘candid.’ If we add to the above a willingness to earn success, will we not get it, think you?”

* * * *

Here Mr Heddon has struck the right key-note, for there is no doubt that specialists, and specialists alone, must raise the great bulk of the honey that is put on the market in the future, if honey is to become a staple commodity. Here in Auckland we have suffered more in years gone by from pettifogging and bungling beekeepers (save the mark!) than from all other causes combined. They have done immense injury to the market by the amount of slovenly put up honey they have placed in the auction rooms to be sold for what it would fetch, generally a very low figure, but quite as much as it was worth. This caused a premature fall in prices, and now they cry out that raising honey will not pay. The sooner this class of bee-owners leave the business the better for themselves and the specialists whose trade they are now unknowingly doing their best to destroy. I believe many of these persons have already become disgusted with the business and left it, and there is, therefore, every prospect of success being achieved by us if we are but “honest and candid” and conduct our business on thoroughly sound commercial principles. We may yet see our product once more firmly established in its ancient place as an everyday necessity of life, and chief among health-giving sweets.

If our N.Z.B.K.A. is to work for the best

interests of beekeeping as a practical industry with the object of making honey a staple, it must work in the direction of developing the business as a specialty. I am glad to see that they are going ahead on these lines at present, and the true object of a practical go-ahead beekeepers' association must never be lost sight of, or our Association may drift into the mistake made by many similar associations in other countries of wasting their energy and doing more harm than good to the business by defusing broadcast the knowledge of modern bee-culture among all classes, whose cupidity was raised by accounts of the large sums of money to be made from a few hives of bees. I myself have seen it stated that 200 to 300 per cent. may be looked for from the first year's operations on the original outlay. But while we have men connected with our association like I. Hopkins, T. J. Mulvany, O. Poole, W. A. Neale, G. L. Peacocke, and last, but by no means least, our respected President, F. Lawry, Esq., M.H.R., we may depend upon it that the interests of our *bona fide* beekeeping specialists will be well looked after.

* * * * *

I have to record the hiving of an earlier swarm than yours of September 8. It was hived at Long Bay, about ten miles north of Auckland, on August 21. The swarm came out of a two story Langstroth hive on which the sections were left all last winter. This swarm was hived in a two story Langstroth hive and by October 31 they had finished the 56 one-pound sections. The gentleman owning this hive runs a large apiary for comb honey, and he always leaves the top stories on all winter, as he finds the bees come out in better condition for it. How does this square with general theory, friend Hopkins?

Dairy Flat, November 6.

[With regard to leaving on the top boxes during winter we have for many years practised the method with *strong* colonies, and in reply to a query at the annual meeting of the first N.Z.B.K.A. held in 1884, we recommended the plan. At Mata-mata the boxes were always left on till near the end of July, when we took them off in order to make the hive snug for breeding. We found the method to answer well. We know it is against the general practice, but we recommend beekeepers to try the plan.—Ed.]

LOSS OF YOUNG QUEENS AT MATING TIME.

Nor a single author of our standard works on bee culture has ever thrown any light on this subject, so far as I have seen. They all tell us that the young queens are lost by entering the wrong hive on their return from their wedding flight, or they may be captured by birds, etc. There is hardly a shadow of truth in the causes paraded to this day to account for so many missing young queens at mating time.

In the early part of May, 1884, I made up about twenty-five nuclei as a commencement of the queen-rearing season, and gave each of them a maturing queen-cell; but before the cells had

time to hatch out there came on an unusually cold spell for the time of the year, and the result was the loss of about fifteen out of the twenty-five queen-cells by reason of being chilled during the cold night. The weather continued cool for some days and there was delay in getting other cells ready, and this delay brought on an abnormal condition in the nuclei, by reason of the presence of too many old and indifferent bees. The sequel was many of these nuclei were an entire failure. They 'balled' every young queen given them—always at mating time, and this, notwithstanding they were supplied from time to time with hatching brood with a view to restore the nuclei to normal condition. Here I got my first clue directing to the real cause of the loss of young queens at mating time. The cause is the presence of old, cranky, jealous bees, not necessarily laying workers, for in the cases I have mentioned and in divers others since then, under careful observation, no signs of the presence of fertile layers could be discovered.

I have noticed that under these conditions the young queens are never disturbed till they attempt to seek a mate, and then the persistent spiteful 'balling' commences, and nine times out of ten results in the ruin or actual death of the young queen. By means of smoke and a close watch over such abnormal nuclei I have saved the lives of many young queens, but such rescued queens are hardly worth the time and labour bestowed on them, as they are generally maimed and cowed by the severe ordeal through which they have passed. The remedy is to give hatching brood to the nucleus, and when the young queen is three days old, or thereabouts, move the nucleus hive to a new location in the apiary. This will draw off the old bees, as they will go back to the old stand, and the young queen will be left to mate and enter upon her life's labours under the care of young friendly bees.—G. W. Demaree in *American Apiculturist*.

FUMIGATION WITH SULPHUR.

PERHAPS it is not generally known that after worms have obtained a good foothold, it is very difficult to kill them with sulphur.

I have had combs in which the worms have abounded, from those of small size to those of full grown, and after subjecting them to a very dense smoke of sulphur for a long time, the 'fat old chaps' seemed to be none the worse for their smoking. Such combs, I think, I would not try to cure with sulphur. The cheapest and easiest way probably to dispose of them is to give them to the bees to clean out.

If it is not at a time when it is warm enough for bees to fly, the worms will not make much headway, and as soon as the worms are frozen, that is the last of them. If only a few worms are in a comb, and they are half-grown or larger, it is no very difficult matter to pick them out with a wire nail. But for the worms that are very small—and we never need wait for them to get large—the fumes of burning sulphur are very effective.

My experience has been almost entirely in fumi-

gating comb honey in sections, and for that purpose sulphur may almost be said to be preventive, rather than curative, for the worms should be killed when they are hardly large enough to be seen by the naked eye. If a section be fumigated within two weeks after its removal from the bees, and then two weeks later, I think there need be little anxiety about the worms.

Having used a good many pounds of sulphur during a number of years, I think I may speak with some authority upon the subject, and I trust that Mr. Pierce will take it kindly when I say that I think he is mistaken on two points; first, as to the difficulty of regulating the combustion of sulphur, and second, as to the necessity for burning sulphur in connection with some carbonaceous substance. With regard to the latter, I may say that I never burn anything in connection with sulphur, simply lay a lighted match upon the sulphur, and there is no difficulty about the dim, blue blaze continuing as long as a grain of sulphur remains.

As to the difficulty of regulating, especially when a large amount is used, let me give a bit of my experience in a previous year.

I had a lot of sections piled in a room about fifteen feet square, and concluded to smoke the whole room. So I lighted five pounds of sulphur early enough in the day so that I thought it would all burn before night, and kept occasional watch of it through a window. At dark it was burning apparently the same as when first lighted, and at bedtime the same. Although I thought it entirely safe, I never feel that I can be too careful about fire, so I concluded to sit up with it until it expired. I did not get to bed until after one o'clock.

My method of using was this: The sulphur was put in an iron kettle holding about a gallon. A common kettle holding three or four gallons was partly filled with ashes, and in this the smaller kettle containing the sulphur was placed, and over all a tin cover that did not fit closely. I suppose this cover allowed plenty of air to enter to keep up combustion, but made it burn slower than if entirely uncovered. Previous to covering, a lighted match was laid on the sulphur, and that was all the attention it received except the watching, and no doubt it would have burned just the same if I had been a mile away.

I do not think that roll brimstone would act just the same, but I suspect a part of it mixed with the powdered sulphur might answer. The cost is so little that I have always used it in the powdered form.—*C. C. Miller in Canadian Bee Journal.*

Correspondence.

NOTES FROM HAWKE'S BAY.

I MUST apologise for neglecting to forward you a few items for the *Journal* the last two months, and I hope you will excuse me.

I hived my first swarm of bees on the 11th October, weighing 5lb., and up to the end of October I have hived four more. I have also noticed several stray swarms flying over, and pasturage is pretty plentiful for them, the white clover being in full bloom now. Several old beekeepers have written to me asking for bees, but I am unable to let them have them, as I have very few hives left at present. The Waipawa Industrial and Art Ex-

hibition promises to be a great success, and I learn that several beekeepers intend exhibiting honey and bees, etc. I hope many of our local beekeepers will show up at this gigantic show, commencing 5th December.

The foul brood disease is, I am glad to say, gradually clearing out of this district, and careful beekeepers will be able to work along comfortably very soon. I am sorry the Foul Brood Act was not passed during the last session of parliament, but I hope it will pass next session.

A. H. PARKINSON.

Hampden Apiary, November 10, 1888.

CRUEL PUNISHMENT FOR DESTROYING OR INTERFERING WITH BEES.

In the territory of Lauenburg and Bütow, which was ceded by Poland to the Elector of Brandenburg in the year 1657, and incorporated by him with Pomerania, beekeeping at that time was carried on very extensively under the protection of an edict which dated from pre-Brandenburg times. This edict contained some very severe and even cruel punishments. Paragraph 16 states that, 'any one who wilfully takes bees belonging to others, or unlawfully deprives them of their honey, shall be condemned to death on the gallows.' Bees at that time were kept in decayed trees in the forests. A still more severe punishment was exacted in the following paragraph, viz.: 'Whosoever destroys an entire colony of bees, no matter whether they belong to himself or to anybody else, shall be handed over to the public executioner, who shall take out his entrails and wind them round the tree in which the bees were wilfully destroyed, and shall afterwards hang him on the same tree.' Thus protection was afforded to bees by this paragraph even against their own masters. There are other offences mentioned in this edict that were also punishable by death, minor offences by fines or otherwise.—*Translated from the 'Gartenlaube' xi. 1887.*

BOOKS AND CATALOGUES RECEIVED.

Hooker's Guide to Successful Beekeeping. By John M. Hooker, member of the Committee of British Beekeepers' Association. Published by John Huckle, King's Langley, Herts.

WE have received through the author's brother—Mr. S. Hooker, of Auckland—a copy of the above work, which has recently been published. The author's name will be quite familiar to readers of the *British Bee Journal*, wherein it has figured so largely in connection with the progress of English beekeeping. Mr Hooker is no novice in the art, for he was initiated into the business some 45 years ago by his father, who was an advanced apiarist in those days, and he was one of the promoters of the British Beekeepers' Association, of which he has been a continuous member of committee up to the present time. He is also identified with a number of improvements in apiarian appliances, so that it may well be imagined that a treatise on beekeeping by a person of his experience will contain valuable hints even to those already well up in the business, and such is the case. The work, which is a small one of 62 pages, contains a number of illustrations of hives and other appliances, some of which were invented by the author. It has been written specially to assist beginners, and the instructions, which cover the whole ground of modern beekeeping, are plain, fully up with the times, and as complete as it is possible to make them in so limited a space. The published price of the book is 9d., and we can assure those in need of a useful guide that the small outlay will prove a profitable investment.

Neighbour and Son's Catalogue.

WE have to acknowledge receipt of the above, which is quite a small book in itself, containing as it does 68 pages, fully illustrated, with all the latest apiarian appliances, manufactured and imported by the firm. Messrs Neighbour and Sons are well-known throughout the world as one of the leading firms in the above class of goods, and the quality of the latter may be judged by the number of

first prizes they have taken at shows in all countries since 1851 to the present time. The catalogue will be sent free on application to 149, Regent-street, London.

Association Rules.

We have received from Mr Cusack a copy of the Queensland Beekeepers' Association Rules. With a few very slight modifications the rules are the same as the New Zealand Beekeepers' Association have adopted, and they are printed in a very tasteful manner. We have no doubt, with the new rules to work under, the Association will accomplish a deal of good to apiculture in Queensland, and we wish the Association every success.

TELEPHONE No. 370.]

[TELEPHONE No. 370.

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TO THE MEMBERS OF THE
NEW ZEALAND BEEKEEPERS' ASSOCIATION
AND BEEKEEPERS GENERALLY.

IT has been decided by the Executive Committee of the New Zealand Beekeepers' Association to hold a Beekeepers' Convention at Auckland in March next, provided a sufficient number of beekeepers will promise to attend to make the meeting a success. The Committee request all who will attend to send in their names to the Secretary of the Association as early as possible.

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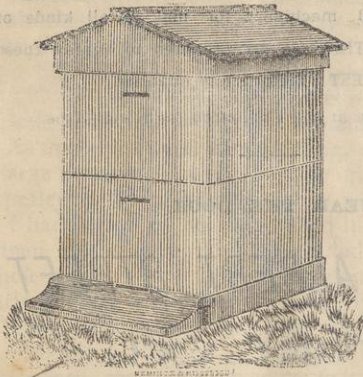
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