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F. A. Fahy

The New Zealand Beekeepers' Journal.

VOL. 6. **MAY 1st, 1922.** No. 5.

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"Who's afraid of Bees."
Mr. Urich's Apiary at Mangapeehi, Main Trunk.

ISSUED MONTHLY

FOR

THE NATIONAL BEEKEEPERS' ASSOCIATION OF N.Z.

STONE, SON & CO., LTD., PRINTERS, DUNEDIN.

The New Zealand Beekeepers' Journal

The Official Organ of the
National Beekeepers' Association of N.Z.

No. 5 | Vol. 6 | 7/6 Per Annum.

National Beekeepers' Association of New Zealand.

The object of the Association is the improvement of the Beekeeping Industry and furthering the interests and prosperity of the Beekeepers throughout the Dominion. Membership is extended to any Beekeeper who is in accord with the aims and objects of the Association on payment of fees as follows:—1 to 15 Hives, 5/-; 16 to 50 Hives, 10/-; 51 to 100 Hives, 15/-; 100 to 200 Hives, 20/-; every additional 100, 5/- extra.

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All matter for publication must be in the Editor's hands NOT LATER than the 20th of the month previous to publication. Address

FRED C. BAINES, Kati Kati, Bay of Plenty.

CONTENTS.

EDITORIAL.

Elsewhere in this issue will be seen a copy of a letter received from the Minister of Agriculture (the Hon. W. Nosworthy) on the matter of the proposed registration fee being placed on apiaries. It will be seen that the Government cannot see its way to go on with the proposal at present. This is rather an unexpected decision, as the Minister had stated his willingness to go on with the matter when it had been fully decided by the National. We have no doubt that the question and its alternative will be discussed at the Conference.

* * * *

We must congratulate the Directors of the H.P.A. on their latest achievement in the purchase of the business of the Alliance Box Co. Ltd., Dunedin, which is practically the only firm making bee supplies in the Dominion. There can be no doubt that the recent change of management is

resulting in renewed activity in all matters connected with the best interests of the beekeepers of the Dominion, and the event now recorded is another instance of this. It is particularly gratifying to us to see the interest taken in our co-operative concern by beekeepers in other countries, who recognise the soundness of the lines we are working on.

We learn that the directors of the H.P.A. have signified their willingness to give a whole month of their time to propaganda work, each in the particular district in which he resides, and such work is bound to produce beneficial results. We would again point out that these gentlemen are not giving this month's work for their own particular benefit; it is for the benefit of the whole of the beekeepers in the Dominion, and we sincerely hope that their efforts will be handsomely rewarded in the shape of a considerably enlarged list of shareholders, and a stricter sense of loyalty amongst the present members.

* * * *

We want all our readers to take particular notice of the alteration of the date of the Conference, which is now fixed for WEDNESDAY, 31st May. The Otago Winter Show opens on 30th May, and it was thought that as a great number of people get to Dunedin for that function, it would be wise to hold the Conference at the same time, as many would take advantage of the cheap railway fares that are available for the Winter Show, and attend both that and the Conference. By holding to the original date fixed (June 7th) many who had attended the Winter Show would probably not feel inclined to go to further expense to attend the Conference.

* * * *

It is our intention to try and get the next issue of the Journal out by about the 20th of May, so that all may get it before the date of the Conference. Will all those wishing to have any matter to appear send it on to the Editor immediately on reading this.

* * * *

Last month in the "District Reports" we made an error in heading the account of a Field Day at Inch-clutha as "Clutha Valley" instead of "Balclutha." There is mention made in the report "that foulbrood was prevalent in the district." This was particularly rough on the Clutha Valleyites, and Mr. Goodman in particular, as it is a fact that through his work and the Government inspector you cannot find an inch of foul-brood to the square mile of Clutha Valley. Sorry, friend G., to have maligned your district, but what with Clutha Valley, Inch-clutha, and Ballyclutha we got **mixed**!

Market Reports.

The market is steady, and there is a good Home trade enquiry. The following sales have been made:—475 barrels Pile X at 50/- per cwt.; Pile 1, at 44/- per cwt.; Pile 2, at 40/- per cwt.; Pile 3, at 35/- per cwt.; No Pile, 32/6 per cwt. Arrivals to date are 384 barrels per s.s. "Renaico" and "Pear Branch." The Continent is not interested over 25/- to 26/- per cwt. c.i.f. for new crop.

Beeswax.—The market is quiet. African and other descriptions are offering at low prices. The value of Chilian is about £6 to £10 per cwt., as in quality, and a small sale of 15 bags has been made at £8 5s. to £8 10s. per cwt.

TAYLOR & CO.

Liverpool, February 4th, 1922.

The Director of the Horticulture Division has received from the apiary instructors the following reports concerning the honey crop prospects:—

Auckland.—The honey crops throughout the Auckland district have not come up to expectations owing to the exceptionally wet weather during the gathering months of January and February. Prices remain unchanged, but beeswax shows a decline, 1/6 per lb. being offered.—G. V. Westbrooke.

Wellington.—The bulk of the season's honey crop has now been gathered and apiaries are in course of preparation for winter. Contrary to earlier expectations, the quantity is disappointing, due to the abnormal climatic conditions. Quality also has suffered to some extent on account of the same cause, which has, through a moisture-charged atmosphere, made the ripening process difficult, resulting in samples being thin and watery. Beekeepers would do well to extract no unsealed honey this season. Prices have slightly declined for bulk lines on the open market. Comb honey is firm, and beeswax is quoted at 1/6 per lb.—F. A. JACOBSEN.

Christchurch and Dunedin.—There is little fresh to report. Beekeepers are busy putting their bees into winter quarters. Where extracting has been delayed bad weather has interfered with operations. Generally the returns are below normal.—E. A. Earp.

Canterbury Tales.

By E. G. WARD.

The forthcoming Conference is now the chief object in my mind, and although up to last month's issue there was not much indication of what the visitors were to expect in the way of papers of interest, I am content to believe that our southern

friends want to spring a surprise on us in the shape of something real good, and are "keeping it dark." At any rate, I intend to be present, and am looking forward to the usual enjoyable time these Conferences afford. The H.P.A. annual meeting, too, is one I always like to attend, as it is the only chance we get of the "personal touch" with all the directors and fellow-shareholders.

As far as Dunedin attractions are concerned. I can promise everyone will be delighted, provided weather conditions are favourable. I may be told that the chief object of attending a Conference is to learn something about the industry. That is true, but a few extra days spent in roaming round the delightful Town Belt and hill suburbs will be found well worth while. I lived there a good many years, and I "ken."

Just a few words on the subject of Hubam sweet clover may, perhaps, interest some readers. After the experience I have had with the small patch I sowed in the spring, I am quite satisfied it is worth while to grow. Of course, one-sixteenth of an acre does not make a great showing among a hundred colonies of bees, but if you could have seen the bees working that patch in suitable weather, you would feel as enthusiastic as I do. They were on it from daylight till dark, and the hum was like the sound of a combine in the distance. To sum up the history of the experiment in a few words, the following data will meet the case. The seed was sown broadcast at the rate of about 8 lbs. per acre on 18th October. It showed above ground on the 26th—eight days. The first blooms appeared on January 10th, when the plants were about 2 ft. high—eleven weeks from date of sowing. There were a few blooms as late as April 8th, so that it bloomed continuously for over twelve weeks, and the bees never failed to visit it when the weather permitted. I have seen the statement somewhere that it is the only crop that will pay for cultivation for bees only, and I should think that is true. There are other advantages claimed for it which I shall not enumerate here, but I may possibly say something on the subject at the coming Conference, if time permits.

That last contribution by Mr. Burrows on the foul-brood question has "knocked my can right in." Fancy anyone saying that foul-brood is a "blessing," and that if it were not for foul-brood the bees would only gather enough for themselves. I've heard of some "cranks" in my time, but ——! is he "pulling our legs?"

While the subject of disease is under review, the following comes in useful:—

The Apiary Division of the Department of Agriculture has received information of an outbreak of paralysis amongst bees in the Taranaki district. It is not regarded as a serious malady, but the present outbreak appears to be of a more virulent type than has occurred elsewhere. Prompt measures have been taken to deal with it.—Lyttelton Times, March 31st, 1922.

Professor Hawruss writes as follows:—"You have no doubt noticed that paralysis among bees is very prevalent in the Taranaki district just now. It may not, however, be known to your readers that this disease is also being found in the South Island. During the past few weeks I have more than once been struck with the number of unfortunate insects being wheeled about in bath-chairs. I came across a particularly sad case only last Tuesday. A fine upstanding young bee—a very earnest worker, I may say—was struck down in mid air, and fell heavily at my feet, wholly unable to move a limb. Scientists are at variance as to the cause of the outbreak. One authority went so far as to attribute it to fermented clover-heads, but I can only characterise this as a dastardly attempt to cast odium upon a sober and hard-working community. My own personal opinion is that the complaint is nervous prostration, brought on by anxiety concerning a rumoured Honey Pool."—Christchurch Star, 1/4/22.

It is always refreshing to read anything which appears in appreciation of the usefulness of the honey-bee. The following item of country news shows that the writer understands his subject:—"If the apple yields have not been altogether satisfactory this season, the trees have developed considerably, and should, under anything like ordinary conditions, bear handsomely next season. For pollinating blossoms and consequently promoting successful crops, bees play an important part in fruit culture, and disappointment after a promising show of blossom less frequently happens if strong healthy bees are busy."—Loburn item, Times 28/3/22.

I don't know if all orchardists are alive to the advantages of having plenty of bees, but I read of a case some time ago when a beekeeper was paid a good sum to move his bees into a large orchard while the fruit trees were in bloom. I mentioned it in one of my "tales" some months ago, but it is worth while referring to it again.

Who has not heard the expression, "Hands across the sea?" When I read that letter in last issue signed Geo. Handley, I felt as if a hand had been extended to me personally. Why? Well, because I lived in Birmingham when I was a boy for two years, and although at that time I hardly knew a bee from a blow-fly, it carried my memory back to the time which we all wish we could live over again. Although I don't know King's Heath, I know the names of many places in and around Birmingham. Well can I remember the summer evenings when we used to fly our kites on the vacant land near the Monument. All built on now, I suppose. I speak of the years 1875 and 1876. Brother Handley, I'm really pleased to meet you!

I have received by courtesy of the secretary of the National Dairy Show, the prize-list for the twentieth annual show, to be held in June. I notice honey is to be judged by the old standard—that is if the printed schedule is adhered to. I fancy that that must be an oversight, but I refer to the subject just to suggest that there is an opportunity for the H.P.A. to make a display, which I hope I may be pardoned for drawing attention to. Probably competition will be confined to North Island producers, but if anyone cares to show what the South can do, I have no doubt he would be welcomed, and a copy of the prize-list would be sent on application to the secretary. There is also another chance to gain honours, as detailed on page 63 of last month's Journal. Here again may I be forgiven for saying "Please make a note of."

The Editor's announcement that he will reprint Haber's work on the honey bee will be welcomed by all lovers of the bee, I feel sure. Technical works, as a rule, are "dry," but there is something so wonderful about the bee (to a bee crank at any rate) that personally I welcome the news. When I started beekeeping, I "devoured" everything I could lay hands on, and among the number was Cheshire's "Bee and Beekeeping." Although technical in the highest degree, it was most fascinating. I look forward to a treat in instalments.

District Reports.

HAWKE'S BAY.

The honey harvest is over, and no one is pleased with the results. There is no end of disappointed beekeepers hereabouts. A large number are quite put out about it, but some still have heart enough to hope for a good yield next year.

A very good show of honey was made at the local A. and P. Society's Autumn Show. Every exhibit looked well, but although the entries were fairly numerous, the number of competitors was far too few. We would like the H.B. beekeepers to realise that a good honey competition at this show would add to the interest, not only of all beekeepers, but also of the exhibitors. As it was, however, it was good to find groups of beekeepers discussing the merits of the exhibits.

There has been little enough done this season, and little enough doing this month, so nothing more to report.

J. P. BOYLE.

April 17th, 1922.

AUCKLAND PROVINCIAL BRANCH.

The annual general meeting of the above Branch will be held in the Baths' Hall, Hamilton, on May 16th, at 10.30 a.m. Will members please make a special note of this meeting, as I shall be away from home for a week or two, and will not be able to send out the usual notice cards. Please make an effort to be present.

A. H. DAVIES,
Secretary.

Conference Items.

The date of the Conference has been altered to MAY 31st, JUNE 1st and 2nd, and as the Prime Minister (the Hon. W. F. Massey) is opening the Otago Winter Show on May 30th, we are asking him to favour us by opening the proceedings of Conference.

We have had no indication that the suggestion made last month by the Taieri Branch of a competition of honey between the Branches is being acted upon.

The following papers have been promised:—

"The Necessity of Keeping Better Bees."
R. S. HUTCHINSON.

"Hygienic Requirements in the Extracting and Storing of Honey."—
J. RENTOUL.

"Working Methods."—T. E. CLARK.

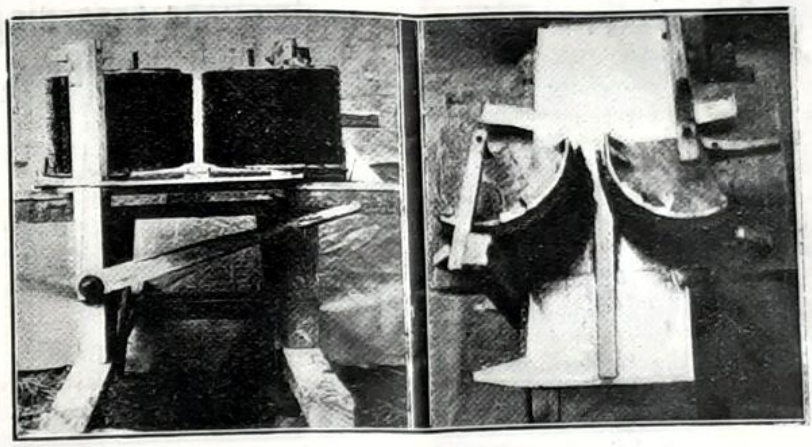
"Eradication of Foul-brood."—H. N. GOODMAN.

It has been decided to omit this year the supper and social evening, which is usually held on the evening of the second day. It is felt that as the Winter Show will be on, most of the visitors will want to spend a certain amount of time there, and as the evening of the first day will be taken up with the usual informal meeting for free and easy discussion, if we took up another evening there would be practically no time left to see the Show unless one was making a prolonged stay.

The Conference will be held at the Y.M.C.A. Hall, opening at 10 a.m. May 31st.

As may be expected, Dunedin will be crowded with visitors, and accommodation will be very difficult to obtain. All those who expect to attend the Conference are advised to write the Secretary Citizens' Committee, Dunedin, stating fully what the requirements are, length of stay, &c., who no doubt will be able to arrange the matter. The Citizens' Committee secured accommodation for 2,000 visitors last year over and above the usual channels of accommodation.

Address enquiries, Mr. H. H. Divers, Secretary, Citizens' Accommodation Bureau, Dunedin.



1. The appliance with nail faces open ready for receiving honey comb.

2. Showing the construction of the nail faces; looking from above. Iron tray and guide at bottom.

Mr. D. Franke's Appliance for Extracting Thick Honey

(Patent No. 45970.)

This appliance is an improvement on the one demonstrated by Mr. Franke at Auckland last year, as it means very much quicker work. As will be seen by the photographs, there are two semicircular faces on which the nails are projecting the length of the cells. The nails are heated by means of steam passing through the back of the sheet of metal holding the nails. The steam is circulated three times across the back; it enters at the top, passes across one-third of the 7½-inch depth to the far end, then returns taking another one-third, and finally returns to the far end, where it passes into a drain-tube carrying it away.

The one nail face carrying the handle is stationary, while the other is brought closer, or is by means of a hand lever made to shift the nail face away to allow the frame of honey to be placed between, and then to give pressure to force the nails into the comb, and the comb against the other nails. The handle on the stationary nail face is then brought round, thus drawing the honeycomb and the other nail face round and embedding both sides in one operation.

The iron tray at the bottom has a guide for the comb to run in, and is provided with lugs to catch the honey drip from the nail faces. The whole platform is slightly out of level, being a little lower at the front, so that gravity fetches the circular nail faces back for the next frame of honey.

The steam is generated by a Primus lamp and small boiler.

Beekeeping in Canada and U.S.A.

By T. J. MANNEX.

Last Winter, having some spare time, I had a ramble back to Canada and U.S.A., and whilst there had a good look round the beekeeping sections in the West.

BEEKEEPING IN WESTERN CANADA.

There are very few bees kept in British Columbia. The largest beeman I was told of ran 100 colonies. The climate seems to be against successful honey production. It is rather cool and foggy, and at times has a very persistent way of raining.

In the Fraser Valley I saw plenty of white clover and fireweed, which is a very good honey plant, and in the fall they have a good lot of goldenrod and aster. The scenery in Canada is very depressing—the same old pine trees wherever one goes.

IN CALIFORNIA.

California is some place for bees, climate, scenery and boosting. The beekeepers there reckon they produce 55 per cent. of the honey raised in the United States of America, but as Mark Twain would say, that's "slightly exaggerated!" Beekeeping is carried on in the Golden State in a very large way; one firm is running 12,000 hives, and selling queens as well. Some of the others last year sold four to five tons of bees, as well as selling thousands of queens. With the sunny weather, and practically all crops being irrigated, they get several honey flows, and having paved highways many practise migratory beekeeping, moving the bees to catch the different flows. But with all the moving, I am doubtful if it pays now with prices of honey back to pre-war rates, and particularly as one is not sure of the plants yielding.

California is the place for queen and bee raising, there is such a long season; but for honey production one would have

to go some to beat New Zealand. The best place for honey in the United States is in the Western part, in the irrigated alfalfa and sweet clover districts. With the small rainfall (some places have less than 5 in. a year) and bright sunny weather, most every-day beekeeping conditions are practically ideal. The alfalfa (or lucerne as it is called here) starts to yield with a temperature of 90 or over about April 15th in the Imperial Valley, but that place is 200 ft. below sea-level. At a higher altitude it is June or even July. Some of the Western valleys are 4,000 and 5,000 feet altitude, and with the white sweet clover blooming in August, there is a medium flow for about two months. One hundred hives to the yard is the usual number, although I have seen 500, and in a fair district they average much about the same as here. A whole lot of the beemen go in for sections and the strange part is they have no bother with swarming. I guess the clear weather has something to do with that!

The beemen of the States have several advantages over us:—Paved highways everywhere; machines and trucks only half the price they are in New Zealand; benzine 1/- a gallon. In the more thickly populated States a good lot of farmers' stuff is sold at roadside markets thus getting the middlemen and retailers' profit as well.

MARKETS.

One thing that struck me particularly on arrival at Vancouver was the amount of "Imperial Bee" honey sold in all kinds of stores and even meat shops. Considering the size of Vancouver (population, 200,000), I feel sure the Company must sell more honey per head there than anywhere else. But this is what got my "angora": with all the stuff they sell there, it is not considered worth while advertising it; but in Suva, where they are mostly niggers, they run an advertisement in a paper published three times a week!

Western Canada is one of the best markets in the world for honey. There is practically none raised there, and most of it is imported from New Zealand in 2 lb. tins, or from California in bulk. The 2 lb. "Imperial Bee" brand is retailed at 65 cents to 70 cents (about 3/-), and the Californian honey is bought at 8-12 cents, and put up 1 lb. and 2 lb. glass jars. I think it would be a good stunt if the Company could bottle the honey in Canada and have it liquid (the Canadians are prejudiced against it being in tins and candied), and at the prevailing prices do much better than selling in England. At the present time there is a duty on New Zealand honey entering Canada (2 cents per lb.), and it is up to the National to get that removed next time the tariff is being adjusted between the two Dominions.

Restrictions regarding the Removal of Bees.

Wellington, 12th April, 1922.

Mr. F. C. Baines,
Sec. National Beekeepers' Assn.,
Kati Kati, Bay of Plenty.

FIREBLIGHT.

Dear Sir,—

Herewith I am forwarding you three copies of extract from New Zealand Gazette, Notice No. 2156:—Regulations under the Orchard and Garden Diseases Act, 1908, prohibiting the removal of certain plants and bees from portions of the Taranaki and Wellington Land Districts.

Yours faithfully,
J. A. CAMPBELL,
Director of the Horticulture Division.

Regulations under the Orchard and Garden Diseases Act, 1908, prohibiting the Removal of certain Plants and Bees from portions of the Taranaki and Wellington Land Districts.—Notice No. 2156.

JELLICOE, Governor-General.

ORDER IN COUNCIL.

At the Government Buildings, at Wellington, this 20th day of March, 1922.

Present: The Right Hon. W. F. Massey, P.C., Presiding in Council.

WHEREAS in terms of the Orchard and Garden Diseases Act, 1908 (hereinafter termed "the said Act"), the Governor-General may prohibit absolutely, or except in accordance with regulations under the said Act, the bringing into any specified portion of New Zealand from any other portion or specified portion of New Zealand of any specified plant, fruit, fungus, parasite, insect, or other thing which in his opinion is diseased or is likely to spread disease:

And whereas the unrestricted bringing of plants and bees from the area hereinafter prescribed into other portions of New Zealand is likely to spread the disease known as fireblight (Bacillus amylovorus):

Now, therefore, His Excellency the Governor-General of the Dominion of New Zealand, in pursuance and exercise of the powers and authorities conferred on him by the said Act, and acting by and with the advice and consent of the Executive Council of the said Dominion, doth hereby make the following regulations governing the bringing of plants and bees from the area defined in the said regulations into any other portion of New Zealand.

REGULATIONS.

1. In these regulations "prescribed area" means all that area in the Taranaki and Wellington Land Districts, in the Counties of Patea and Waitotara, bounded by a line commencing at the mouth of the Manawapou Stream, and proceeding thence along the north-western, northern, and eastern boundaries of the Patea County as defined in the New Zealand Gazette, 1920, page 3207, to Pakira Trig. Station at the easternmost corner of Section 11, Block XIV., Omahaki Survey District; thence along a right line to the source of the Kai Iwi Stream, and down that stream to the sea; thence north-westerly along the sea-coast to the place of commencement.

2. No plant or portion of a plant of any variety of apple, pear, quince, or cratægus shall be sent or brought from the prescribed area into any other portion of New Zealand:

Provided that nothing in this regulation shall apply to the sending by an officer of the Department of Agriculture under proper safeguards, of plants or portions of plants of any of the above-mentioned kinds from the prescribed area for the purpose of the identification of disease.

3. (1.) Every package of trees or shrubs, or portions of trees or shrubs, sent from the prescribed area to any other portion of New Zealand must be accompanied by a certificate, in the form set out in the Schedule hereto, signed by the consignor, that no plant or portion of a plant of any variety of apple, pear, quince, or cratægus is contained in the package.

(2.) The certificate shall be endorsed on a tag or label securely attached to the package in a prominent position.

4. No bees shall be sent or brought from the prescribed area to any other portion of New Zealand.

5. Every person who does or omits any act in contravention of these regulations commits an offence, and is liable on conviction to a fine not exceeding £20.

SCHEDULE.

CERTIFICATE TO ACCOMPANY PACKAGES OF PLANTS.

I, the undersigned, hereby certify that no plant or portion of plant of any variety of apple, pear, quince, or cratægus is contained in this package.

Place: Signature:

Date: Witness to Signature:

F. D. THOMSON,
Clerk of the Executive Council.

The Honey Producers' Association.

A meeting of the Executive of the H.P.A. was held in Auckland at the beginning of April.

The most important business transacted, and one which will have far-reaching effect, was the decision of the Executive to exercise their option to purchase the Alliance Box Company's business in Dunedin.

One weak spot in connection with the H.P.A. in the past has been that the head office of the Association, having been established in Auckland, has been too far away from the southern shareholders. By purchasing the Alliance Box Company's business, practically the sole manufacturers of beekeepers' requisites in the Dominion, and by opening up a packing depot in Dunedin to pack honey for the South Island market, will do away with the weak spot, and will greatly consolidate the position to the Company in the Dominion, and will therefore put the industry on a very much firmer footing.

The H.P.A., which was inaugurated in 1914, has been making very rapid progress, and the purchase of the Alliance Box Company's factory in Dunedin proves that the Board of Directors are very progressive, and that they have added another milestone towards progress. This extension, on top of their opening their own packing depot in London in February of this year, will greatly enhance the prospects of the beekeeping industry.

The date of the annual general meeting was fixed to be held in Dunedin on TUESDAY, 30th May, when the shareholders will be advised fully in regard to above-mentioned undertakings.

April 7th, 1922.

Nectar-Bearing Flowers.

By F. W. PEARMAIN.

Every district has its own characteristic flora, whether native or introduced. The chief interest of a flower to the apiarist is the question of its nectiferous qualities, and whether the nectar is conveniently available to the bees. The latter depends a good deal on the position of the nectar and the facility with which the bee can approach it; but this may form the subject matter of a future paper. Meanwhile it may be profitable and interesting to the readers of our Journal to indicate the names of the plants which the present writer has found in his district specially productive of nectar, assuming that this nectar is easily obtainable for honey-

production by the bees. I trust this will be an incentive to other apiarists to follow suit from all over the Dominion, so that we may consolidate a heap of ill-defined knowledge for scientific and practical purposes. Some years ago a writer living on Banks Peninsula (Mr. Bray) wrote in eulogistic terms of the Red-hot Poker (Kniphofia or Tritoma) as being one of the most productive of nectar-bearing plants. An American botanist, who should have known better, while agreeing with him, pointed out that owing to the long tubular corolla the bees would find it impossible to reach the coveted sweet. This is not the case. My own bees tunnel their way with comparative ease right to the end of the cul de sac, where the nectar is found. Sometimes on returning they split the corolla, thus making entrance easier for the next-comer. The flower indeed is extremely nectiferous, blooming in the autumn after extracting time, and providing an abundance of winter stores.

The next best source of nectar in my garden is the Coronilla (C. emerus), a divaricating, bushy shrub, one of the Leguminosæ, with a multitude of pretty little yellow papilionaceous flowers; it can stand pruning well, and blossoms more or less during the entire circle of the nectar year. This I consider the best plant I possess for continuous nectar-bearing purposes. A hedge of Coronilla can easily be obtained, as it strikes readily from cuttings. The bees simply haunt it "from early morn till dewy eve."

I grow also some 30 species of Veronica or Koromiko, which are easily struck, but some are disappointing, inasmuch as the flowers are too evanescent.

I have much more satisfaction from different varieties of Flowering Currant (Ribes), which yield well in the early spring, and the blossoming can be prolonged by planting cuttings with varying aspects to the sun. As garden escapes many bushes are growing among the rocks of the neighbouring hills. Then I have a hedge of Escallonia (E. macrantha), which flowers profusely twice a year, and yields a great harvest to the bees.

A little bush called the Moustache plant (Caryopteris mastacanthus), propagated by cuttings and adorned with light lavender flowers, is strongly nectiferous, and the same may be said of the common Rosemary, which finds its appropriate nidus even in dry localities. These are the principal plants which I grow specially for the bees. They are all near the apiary, and owing to this proximity the bees are induced to venture a visit even when inclement weather forbids a longer flight.

Further distant I have planted a number of Tagasaste bushes and trees of Acacia, chiefly A. Baileyana. The former are useful, especially in the spring, when the gorse is blooming, but I am not greatly enamoured with its nectar-producing powers. Whatever the books may say, Bailey's Acacia, so far as nectar is concerned, is practically a complete failure. I am not writing in ignorance of the effect of locality and habitat.

I am surrounded by commercial orchards of stone and pip fruits, and in the neighbourhood are willows, poplars, oaks, manuka, eucalypti, cabbage palms, N.Z. flax, fuschias, and a few acres of alfalfa or lucerne.

This is chiefly a sheep country, consequently white clover is not over-abundant, and it is being further checked by its parasite the Broom-rape (Orobanche minor). The Cat's-ear (Hypochæris) and Dandelion (Taraxicum Leontodinum) are on the increase. The district is subject to hot, dry winds from the north-west, which stop the flow of nectar from the white clover, but in a much less degree from the Alsike variety.

Governor's Bay, Canterbury.

New Observations on the Natural History of Bees.

By Francis Huber.

(Published in 1808.)

TRANSLATOR'S PREFACE.

(Continued from last issue.)

The author advises the cultivators of bees to adopt something similar for their preservation, and to make the entrance to a hive of different sizes, according to the season and the operations that are going on. This may be done by adapting a small plank sliding in a groove and containing three different kinds of apertures which may be successively brought before the entrance. During the time of swarms, the passage should be left very free; but after that period it ought to be contracted, and when the bees are in danger of being pillaged by their neighbours, only two apertures at the highest part allowed, which will admit two or at most three of their number at once. When the season of the chief collection of honey arrives, the plank must be advanced along the groove until three openings are presented before the entrance of the hive, so constructed as to exclude the enemies of its inhabitants, particularly moths. Two of these openings must be above in semi-circular form, with the convexity downwards; and the third below, wide, but very flat, and numbers of bees will thus have liberty to pass.

Cultivators are also advised repeatedly to visit their hives. If they find them pillaged by moths, then the bees must be supplied either with honey or syrup of sugar, otherwise they will infallibly perish during winter. Honey is their proper food, though it has been said that syrup may be advantageously substituted for it; and, indeed, an equal quantity contains more nutritive matter. The author never succeeded in preserving his hives unless by giving them daily supplies;

he melted the honey in nutshells, and introduced it after sunset by an opening behind. Bees treated thus lived during winter, and produced swarms in spring.

The author has ascertained, by a series of interesting experiments, that bees produce wax from honey, and that the dust or farina of flowers, of which they make such abundant collections, is only used for feeding their young. On the 24th of May, 1793, his secretary lodged a swarm in a straw hive containing honey put into a vessel for feeding them, but no combs. In five days they found the honey consumed, and five combs of the finest wax suspended in the hive, of snowy whiteness and extremely brittle. The experiment was frequently repeated with the same success.

The author had remarked that the abundant secretion of honey in flowers is particularly promoted by electricity; and that the collection of bees is never greater, nor do they labour more actively in wax, than during a southerly wind, while the air is dry and warm, and a storm approaching. On the contrary, the secretion of honey is entirely suspended by too long protracted heat, cold showers, and particularly a north wind. Thus, swarms will die in the middle of summer, even though the country is covered with flowers, if the peculiar state of the atmosphere prevents the secretion of honey. Its presence in flowers is always indicated with certainty from the odour exhaled by the hives and the size of the bees. When they reach the hive in numbers, having the belly thick and cylindrical, then they are gorged with honey. The belly of the others retains its ovoidal form, and is not sensibly enlarged.

The author's secretary examined 65 hives on the 12th of May, and found the bees collecting wax. On the 9th of August it had not rained for six weeks, and after a short interval the drought continued until the end of that month. On visiting the 65 hives, he found that the bees had worked none in wax after the middle of July; that the honey of the old hives was much diminished; and the new swarms contained none; what they had at first collected having been consumed in making wax; but the whole had stored up a great quantity of farina.

On the 16th of July the author removed the queen from a hive, as also all the farina, and he substituted pieces of comb, containing brood and worms. The bees were confined to the hive. On the evening of the 18th great disorder ensued, the brood was abandoned, and, lest the bees might be injured from the excessive tumult, they were allowed to depart; however, they soon returned. The same was repeated next evening at the same hour. On the fifth day of their confinement all the eggs and worms had disappeared, neither was there any food in the cells; and two royal cells that had been begun were discontinued. Pieces of comb containing farina were then supplied, and also two young worms in place of those that had perished. The bees removed the farina and transmitted it, grain by grain, into their mouths, and those devouring it most greedily ascended the combs and insinuated their heads into the cells containing the young worms. All the other cells in which worms were afterwards found had jelly also. The hive was plentifully stored with honey and farina, and though the bees were confined, there was not the smallest disorder, nor did they attempt to escape. The author concludes that the old bees do not feed on the farina, but collect it solely for their young, and that it contains no principal of wax, but that this is derived from the saccharine part of honey by a particular elaboration in the stomach of the bees.

An experiment was repeated seven times on three swarms to ascertain the relative quantities of wax that would be produced from honey and sugar. One swarm was fed on the syrup of refined sugar, another on that of very dark coloured raw sugar, and the third on honey. The bees fed on sugar produced wax sooner and in greater quantity than those fed on honey. The coarse sugar, as also that from the maple, afforded twice as much as the refined of very fine white wax. Such are some of the author's more recent experiments.

Perhaps this is not the proper place to bestow an encomium on a treatise from which both entertainment and instruction will be derived. Other nations are fully sensible of its value; the French philosopher, Sue, justly remarks that "the observations are so consistent, and the consequences so true, that while perusing this work we feel as if we had assisted the author in each experiment, and pursued it with equal zeal and interest. Let us invite the admirers of nature to read those observations; few are of such excellence or so faithfully describe the peculiar properties and habits of the animals of which they treat."

It is a circumstance too remarkable to be overlooked, that the author laboured under a defect in the organs of vision, which obliged him to employ an assistant in his experiments. But this will not impair their authority; and perhaps it might contribute to divest him of those prejudices by which the works of many other naturalists are so strongly characterised. But, independent of these things, which certainly may not appear in the same light to everyone, the experiments are so judicially adapted to the purposes in view and the conclusions so strictly logical, that there is evidently little room for errors of importance. Besides, some ingenious persons in this country have of late adopted the particular form of hives recommended here, and in them have verified several interesting experiments. The talents of Francis Burnens, that truly philosophic assistant, had, for many successive years, been devoted to the author's service, when he was at length deprived of him by some peculiar incident. However, it has lately appeared that Burnens, though in a different quarter, has not forsaken similar pursuits, and that he still attends to those animals whose history was once the subject of their united researches.

The cultivation of bees forms a branch of rural economy which may be carried to a very great extent. It is infinitely to be regretted, that there is no general treatise engrossing all the facts already ascertained from undoubted observations. This would form a guide to those who would enter upon it as

an object of importance, because the real utility to which all animals may ultimately be converted depends solely on an intimate acquaintance with their nature.

Publishing the works of others is but a servile occupation, it is true, yet even this consideration ought not to restrain us from contributing to the dissemination of useful knowledge, more particularly when we reflect on the narrowness of our own individual attainments. It is vain to attempt the translation of any scientific work without being skilled to a certain degree in the subject of which it treats. Some parts of the original of the following treatise, it must be acknowledged, are so intricate and obscure, and some so minute, that it is difficult to say that no other interpretation could be given. But the general tenor, though not elegant, is plain and perspicuous, and such has it been here retained.

LETTER I.

ON THE IMPREGNATION OF THE QUEEN BEE.

Sir,—When I had the honour at Genthod of giving you an account of my principal experiments on bees, you desired me to transmit a written detail of them, that you might consider it with the greater attention. I hasten therefore to extract the following observations from my journal. As nothing can be more flattering to me than the interest you take in my researches, permit me to remind you of your promise to suggest new experiments.

The form of glass hives constructed on M. de Reaumur's principle is unfavourable to the observer, because their width allows the bees to build two parallel combs, consequently all that passes between them is concealed from his view. Long experience, of this, Sir, has induced you to recommend hives of a much thinner or narrower shape to naturalists, where the panes should approach so near each other that only a single row of combs could be erected between them. I, from having also felt the same inconvenience, have followed you admonitions and provided hives reduced to eighteen lines in width, in which I have found no difficulty in establishing swarms. There, however, bees must not be entrusted with the charge of constructing a single comb; they are taught by Nature to make more than one and all parallel to each other; and this is a law from which they never derogate, unless when constrained by some particular arrangement. Therefore, if left to themselves in these thin hives, as they cannot form two combs parallel to the plane of the hive, they will form several small ones perpendicular to it, and, in that case, all will be equally lost to the observer. Thus it became essential previously to arrange the position of the combs. I forced the bees to build them perpendicular to the horizon and so that the lateral surfaces were three or four lines from the panes of the hive. This distance allowed the bees sufficient liberty, but prevented them from collecting in too large clusters on the surface of the comb. By such precautions, bees were easily established in very thin hives, where they pursued their labours with the same assiduity and regularity; and, every cell being exposed to view none of their motions could be concealed.

It is true that, by compelling these insects to live in a habitation where they could construct only a single row of combs, I had, in a certain measure, changed their natural situation, and this circumstance might possibly have affected their instinct. Therefore, to obviate every objection, I invented a kind of hive, which, without losing the advantages of those very thin, at the same time approached the figure of common hives where bees form several rows of combs.

I procured several small fir boxes, a foot square and fifteen lines wide, and joined them together by hinges, so that they could be opened and shut like the leaves of a book. When using a hive of this description, we took care to fix a comb in each frame, and then introduced all the bees necessary for each particular experiment. By opening the different divisions successively, we daily inspected both surfaces of every comb. There was not a single cell where we could not distinctly see what passed at all times, nor a single bee, I may almost say, with which we were not particularly acquainted. Indeed, this construction is nothing more than the union of several very flat hives, which may be separated. Bees in such habitations must not be visited before their combs are securely fixed in the frames, otherwise, by falling out, they may kill or hurt them, as also occasion that degree of irritation that the observer cannot escape stinging, which is always painful, and sometimes dangerous; but they soon become accustomed to their situation, and are in some measure tamed by it. In three days we may begin to operate on the hive, to open it, remove part of the combs, and substitute others, without the bees exhibiting too formidable symptoms of displeasure. You will remember, Sir, that on visiting my retreat, I showed you a hive of this kind that had been a long time in experiment, and how much you were surprised that the bees so quietly allowed us to open it.

In these hives I have repeated all my observations and obtained exactly the same results as in the thinnest. Thus, I think, already to have obviated any objections that may arise concerning the supposed inconvenience of flat hives. Besides, I cannot regret the repetition of my labours; by going over the same course several times I am much more certain of having avoided error; and it also appears that some advantages are found in these lines which may be called Book or Leaf-hives, as they prove extremely useful in the economical treatment of bees, which shall afterwards be detailed.

I now come to the particular object of this letter, the fecundation of the queen bee; and I shall, in a few words, examine the different opinions of naturalists on this singular problem. Next I shall state the most remarkable observations which their conjectures have induced me to make, and then describe the new experiments by which I think I have solved the problem.

Swammerdam, who studied bees with unremitting attention, and who never could see a real copulation between a drone and a queen, was satisfied that copulation was unnecessary for fecundation of the eggs; but having remarked that at certain times the drones exhaled a very strong odour, he

thought this odour was an emanation of the aura seminalis, or the aura seminalis itself, which operated fecundation by penetrating the body of the female. His conjecture was confirmed on dissecting the male organs of generation; for he was so much struck with the disproportion between them and those of the female that he did not believe copulation possible. His opinion concerning the influence of the odour had this farther advantage, that it afforded a good reason for the prodigious number of the males. There are frequently fifteen hundred or two thousand in a hive; and, according to Swammerdam, it is necessary they should be numerous, that the emanation proceeding from them may have an intensity or energy sufficient to effect impregnation.

Though M. de Reaumur has refuted this hypothesis by just and conclusive reasoning, he has failed to make the sole experiment that could support or overturn it; which was confining all the drones of a hive in a tin case, perforated with minute holes, which might allow the emanation of the odour to escape, but prevent the organs of generation from passing through. The case should then have been placed in a hive well inhabited but completely deprived of males, both of large and small size, and the consequences observed. It is evident, had the queen laid eggs after matters were thus disposed, that Swammerdam's hypothesis would have acquired probability; and, on the contrary, it would have been confuted had she produced no eggs, or only sterile ones. However, the experiment has been made by us, and the queen remained barren; therefore, it is indoubted that the emanation of the odour does not impregnate queens.

M. de Reaumur was of a different opinion. He thought that the queen's fecundation followed actual copulation. He confined several drones in a glass vessel along with a virgin queen; he saw the females make many advances to the males; but, unable to observe any union so intimate that it could be denominated copulation, he leaves the question undecided. We have repeated this experiment also; we have frequently confined virgin queens with drones of all ages; we have done so at every season, and witnessed all their advances and solicitations towards the males; we have even believed that we saw a kind of union between them, but so short and imperfect that it was unlikely to effect impregnation. Yet, to neglect nothing, we confined a virgin queen that had suffered the approaches of the male, to her hive. During a month that her imprisonment continued she did not lay a single egg; therefore, these momentary junctions do not accomplish fecundation.

In the "Contemplation de la Nature, you have cited the observations of the English naturalist, Mr Debraw. They appeared correct, and at last to elucidate the mystery. Favoured by chance, the observer one day perceived at the bottom of cells containing eggs, a whitish fluid, apparently spermatic, at least very different from the substance or jelly which bees commonly collect around their new hatched worms. Solicitous to learn its origin, and conjecturing that it might be the male prolific fluid, he began to watch the motions of every drone in the hive, on purpose to seize the moment when they should bedew the eggs. He assures us that he saw several insinuate the posterior part of the body into the cells and there deposit the fluid. After frequent repetition of the first experiment, he entered on a long series of others. He confined a number of workers in glass bells along with a queen and several males. They were supplied with pieces of comb containing honey, but wanting brood. He saw the queen lay eggs, which were bedewed by the males, and from which larvæ were hatched; consequently, he could not hesitate in advancing as a fact demonstrated, that male bees fecundate the queen's eggs in the manner of frogs and fishes—that is, after they are produced.

There was something very specious in this explanation; the experiments on which it was founded seemed correct; and it afforded a satisfactory reason for the prodigious number of males in a hive. At the same time, the author had neglected to answer one strong objection. Larvæ appear when there are no drones. From the month of September until April, hives are generally destitute of males, yet, notwithstanding their absence, the queen then lays fertile eggs. Thus, the prolific fluid cannot be required to impregnate them, unless we shall suppose that it is necessary at a certain time of the year, while at every other season it is useless.

To discover the truth amidst these facts apparently so contradictory, I determined to repeat Mr Debraw's experiments, and to observe more precaution than he himself had done. First, I sought for that fluid, which he supposes the seminal, in cells containing eggs. Several were actually found with the appearance of it, and, during the first days of observation, neither my assistant nor myself doubted the reality of the discovery. But we afterwards found it an illusion arising from the reflection of the light, for nothing like a fluid was visible, except when the solar rays reached the bottom of the cells. Commonly the bottom is covered by shining fragments of the coccoons of worms successively hatched, and the reflection of the light from these, when much illuminated, produces an illusory effect. We proved it by the strictest examination, for no vestiges of a fluid were perceptible when the cells were detached and cut asunder.

Though the first observation inspired us with some distrust of Mr Debraw's discovery, we repeated his other experiments with the utmost care. On the 6th of August, 1807, we immersed a hive, and, with scrupulous attention, examined the whole bees while in the bath. We ascertained that there was no male, either large or small; and, having examined every comb, we found neither male nymph nor worm. When the bees were dry, we replaced them all, along with the queen, in their habitation, and transported them into my cabinet. They were allowed full liberty; therefore, they flew about, and made their usual collections; but, it being necessary that no male should enter the hive during the experiment, a glass tube was adapted to the entrance, of such dimensions that two bees only could pass at once; and we watched the tube attentively during four or five days that the experiment continued. We should have instantly observed and removed any male that

appeared, that the result of the experiment might be undisturbed, and I can positively affirm that not one was seen. However, from the first day, which was the sixth of August, the queen deposited fourteen eggs in the workers' cells; and all these were hatched on the tenth of the same month.

This experiment is decisive, since the eggs laid by the queen of a hive where there were no males, and where it was impossible one could be introduced, since these eggs, I say, were fertile, it becomes indubitable that aspersion with the fluid of the males is not required to effect their exclusion.

Though it did not appear that any reasonable objection could be started against such an inference, yet, as I had been accustomed in all my experiments to investigate the most trifling difficulties that could arise, I conceived that Mr Debraw's partisans might maintain that the bees, deprived of drones, perhaps would search for those in other hives and carry the fecundative fluid to their own habitations for the purpose of depositing it on the eggs.

It was easy to appreciate the force of this objection; for the only measure necessary was a repetition of the former experiments, and confinement of the bees so closely to their hives that none could possibly escape. You very well know, Sir, that these animals can live three or four months confined in a hive well stored with honey and wax, if apertures are left for circulation of the air. This experiment was made on the tenth of August; and I ascertained, by means of immersion, that no male was present. The bees were confined four days in the closest manner, and then I found forty young larvæ.

I extended my precautions so far as to immerse the same hive a second time, to assure myself that no male had escaped my researches. Each of the bees was separately examined, and none was there that did not display its sting. The coincidence of this experiment with the other, proved that the eggs were not externally fecundated.

(To be continued.)

Correspondence.

[The publication of any letter does not necessarily imply our agreement with the subject matter, and we do not hold ourselves responsible for the opinions expressed by correspondents.]

(TO THE EDITOR.)

Sir,—I was much interested to read in "Canterbury Tales" this month an experience of Mr. S. Simmins telling how some of his hives contracted foul-brood from chilled brood. I had a similar experience this year. I have been fortunate in having my hives clean for several years, but at the end of this season found I had a bad attack from "the enemy." I thought it had come on in the usual way by my bees robbing from someone's foul-broody hives, as my affected hives were particularly strong. However, after reading Mr. Simmins' experience I thought it might interest you to hear of mine for the purpose of comparing notes, in case you may know of similar cases.

I returned two frames of chilled brood into each of two strong clean hives to be cleaned up by the bees, and about three weeks later found I had a bad attack of foul-brood. The brood when chilled varied from that about ready to cell to brood nearly ready to hatch. So far as I could tell, I do not think that the bees had made any attempt to clean up the chilled brood.—I am, &c.,

R. M. HANKINSON.

Wales st., Dunedin, 9/4/22.

* * * *

(TO THE EDITOR.)

Sir,—I notice considerable discussion in the N.Z. Beekeepers' Journal relative to the benefits as well as shortcomings of the New Zealand Honey Producers' Association. As usual, there are good men to be found on both sides, as well as all in between. As a lover of the bees and a member of the craft, will you allow a stranger a few words in your Journal in behalf of centralised and uniform marketing of apiary products. This is the main purpose of all such associations. The theory is sound in principle; it is practical and workable, and when properly conducted profitable. While I would not ask space to prove these assertions, or give reasons for my faith in such associations, let me give two illustrations in this connection which need no proof.

The acknowledged success of a number of State associations in this country encouraged the beekeepers of the United States to organise what is called the American Honey Producers' League. This organisation is just getting on its feet, having been operating a little over one year, yet it has accomplished wonderful things in this short period. If there are those who are not in full sympathy with this national organisation, they have not as yet made themselves known.

A few days ago I read in the news dispatches that a cargo of New Zealand butter was being distributed from the port of San Francisco. When it is realised that the dairy interests of the United States, if properly organised, could supply the butter market of the entire country north of the Panama Canal, it speaks well for New Zealand dairymen that they can use our markets for their products. Such enterprise makes nations great. What of apiary products? Can New Zealand beekeepers popularise their honey in the markets of Great Britain and other countries? The answer lies in what support you give the organisation formed for the purpose of marketing your surplus. Every pound of honey exported at a profit makes the home market that much the better. With best wishes,—I am, &c.,

S. D. McAULEY.

Waterloo, Iowa, Feb. 27th, 1922.

CONFERENCE ITEMS.

(TO THE EDITOR.)

Sir,—Under the above heading you complain in your last issue of the non-response to your appeal for papers to read at forthcoming Conference. I write as a member and ardent wellwisher of the National Association, and I have no hesitation in saying that the difficulty you have encountered is not so much due to the apathy of beekeepers as to the want of forethought, or, in other words, bad management by the Executive. To ask Tom, Dick, and Harry to furnish papers on some subject (connected with beekeeping, of course), as I have been asked previously, is an entirely wrong procedure. What is needed are papers dealing with the uppermost questions at the time connected with the management of the apiary, and the disposal of our honey; and the executive body in its wisdom should know which subjects are the most important at the time, and should set the tasks, and as far as possible select the writers from our most experienced men. Having had experience of the same procedure before, I know it is the only satisfactory method for obtaining the best educational papers such as we need.

Where the National has been lacking also in the past is that everything connected with the Conference has been left undone till the last moment. The subjects should be set and in the hands of the selected writers by the beginning of March, and returned early in April to give the Executive, or whoever is appointed to go through them (to edit them if necessary), time to publish the full programme at an early date—perhaps a month earlier in each case would be better. We have had many papers read in the past, some good, and others ——! Any beekeeper who had something important to communicate need not be shut out. An invitation to that effect could be given through the Journal, but all papers should pass through the executive hands to avoid overlapping, &c.—I am, &c.,

I. HOPKINS.

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PROPOSED APIARIES REGISTRATION FEE.

(TO THE EDITOR.)

Wellington, March 24th, 1922.

The Secretary,
National Beekeepers' Assn. of N.Z.,
Kati Kati, Bay of Plenty.

Dear Sir,—

With reference to the correspondence which has passed between us regarding the proposal that a registration fee should be placed on apiaries, and that the money obtained should be divided between the Association and the Government in the proportions of one-fifth and four-fifths, the Government's proportion to be used for the payment of the salaries of additional inspectors, whose travelling expenses would require to be borne by the Consolidated Fund, I now beg to inform you that after giving the matter the most careful consideration the Government regrets that it cannot see its way to go on with the proposal.

When, however, conditions return to normal, the Government will be pleased to give the matter further consideration in the light of the circumstances then existing.

Yours faithfully,
W. NOSWORTHY,
Minister of Agriculture.

Answers to Correspondents.

A. P. G., Heretaunga.—Many thanks for photos and expressions of goodwill.

"Uomo Salvatico."—Many thanks for help; please don't be silent for long.

Beekeepers' Exchange.

[Advertisements on this page will be inserted at the rate of 3/- per 36 words per insertion. Cash must accompany order or will not be inserted. Addresses care Editor 6d. extra to cover cost of postage of replies.]

Subscriptions Received.

[NOTE.—Should there be found any discrepancy, please write the Editor.]

A. E. Logan, Otahuhu, to March 23.
J. Wotherspoon, Waihi, to Feb. 23.
C. Langkilde, Kio-Kio, to March 23.
F. W. Cox, Bunnythorpe, to Feb. 23.
D. G. Farmer, Waharoa, to Feb. 23.
M. C. Richter, California, to April 23.
R. Waterworth, Marton, to March 23.
W. J. Osborne, West Oxford, to March 23.
C. Curtis (10/-), Te Hape, to Aug. 23.
W. H. McDonald, Palmerston, to March 23.
J. H. White, Tapanui, to March 23.
C. W. Kendon, Tahuna, to March 23.
F. T. Tate, Lovells Flat, to Dec. 22.
H. B. Owen, Inglewood, to March 23.
W. A. Nehoff, Tuapeka, to March 23.
W. D. Sinclair, Oamaru, to April 23.
A. Davies, Ngongotaha, to March 23.
G. Duncan, Willowbridge, to Feb. 23.
P. Martin, Umukuri, to Feb. 23.
W. Harrison, Hartville, to March 23.
D. Reynolds, Matamata, to Dec. 22.
J. Cooper, Menzies Bay (donation 15/), to June 23.
H. N. Goodman, Greenfield, to April 23.
M. O'Connell, Dunollie, to April 23.
J. B. Forbes, Mangapapa, to March 23.

Why Purchase a Bartlett-Miller Reducer?

Beekeepers need that the fact be emphasised again and again that the Honey Extractor is a boon and a blessing ONLY WHEN THINGS GO RIGHT, and even then only for healthy combs. One diseased comb in the Extractor, and——! There are several jobs around extracting time that the Extractor does not exactly make a botch of—it flatly refuses to tackle them at all! These jobs are by no means all of the same importance.

The least important of these "extractor-strike" jobs is the melting of cappings, and despite the fact that most producers imagine that job is the most important one which a Reducer is purchased to accomplish, IT IS NOT SO!

Any Reducer to be worthy the confidence and praise of its owner MUST POSITIVELY be able to reduce (both rapidly and without trouble) any old and solid waste every season to those who own one.

It is all very well to save the awful bugbear of the disposal of cappings, and for that job alone a Reducer saves its cost by the elimination of mess, worry and waste every season to those who own them.

S-T-I-L-L, many honey producers have allowed their minds to become obsessed by the idea that capping reduction is the be-all and end-all of a Reducer's existence but it was the result of our experience over thirteen years ago that led to the advertising of our invention as distinctly a COMB REDUCER. NEVER did we describe it as a Capping Reducer without the additional word "Comb," for unless a Reducer will handle the blackest combs that ever were taken from the worst clogged brood-nest (with pollen, that is), it will prove nothing better than a deceptive fair-weather friend at just the very time when you need a friend in the shape of a utensil that will see you through the stiffest problem of all one's beekeeping experience, and that problem is the saving in marketable shape (without danger of infection) of the wax and honey in combs from the brood-nest infected with foul-brood. Otherwise they must be absolutely wasted, and the amount of good wax and honey wasted every year through the lack of a utensil to conveniently handle the diseased combs would pay twice over for a Reducer for every Beekeeper in the Dominion. We have a letter from one of our purchasers which we expect to publish in next issue if permission is given us to do so, stating that the owners saved seventeen pounds in reducing comb from box hives, purchased by two friends, the other one of whom saved the bees but burned the combs. Each party took half of the Maori-owned boxes, and our correspondent bought a "**BOOSTER**," and saved his £17!

Of course, the Bartlett-Miller Reducer is specially constructed to handle F.B. combs with safety. The solid matter is lifted by the operator into the front tube space as it accumulates in the other melting spaces, and here it is allowed to remain until all liquid has run from it that will run, only a little wax remaining with the slumgum; then the patented fall-down bottom is tripped, when all matter drops on to whatever the operator has held there to catch it, and it is carried to the wax-supply cask utterly free from any honey to carry disease again by being robbed. By this means no amount of solid matter worth considering goes with the liquified honey to the separator, although the melted wax does, and is there separated from its liquid partner.

While the one space containing the solid matter is draining its honey, the rest of the Reducer is quietly going on with its job of melting cold combs. The fall-down bottoms are adjusted by means of screw nuts to whatever runaway space the operator desires—from wide open to quite shut.

ORDER IF YOU SO WISH BY ORDER ON THE H.P.A. AGAINST THIS COMING CROP. THE H.P.A. ARE OUR ONLY AGENTS.

The Thoroughwork Apiaries, Kihikihi

New Zealand Beekeepers' Journal.

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