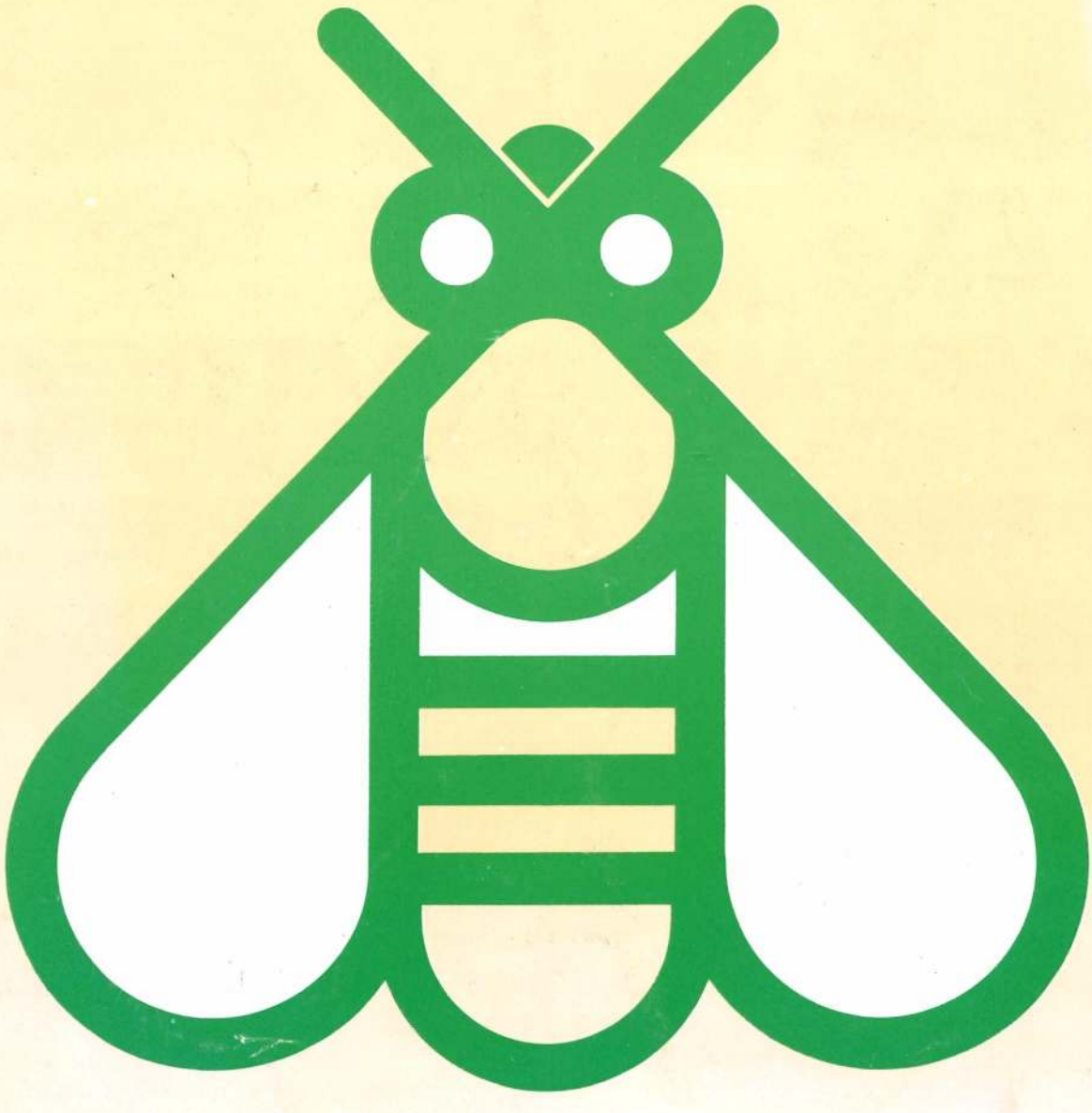
THE NEW ZEALAND beekeeper



MARCH 1979

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THE NEW ZEALAND BEEKEEPER

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Index

Conference now in Christchurch

IF YOU have made travel arrangements for an Oamaru conference this year, you will have to make a few amendments.

The 1979 conference and annual meeting of the National Beekeepers Association of New Zealand will now be held in Christchurch.

We at the "Beekeeper" are not sure of the details, but apparently the North Otago branch was having some difficulty meeting the programming requirements of the NBA executive. Fortunately, the Christchurch branch proved willing to host the conference at relatively short notice and matters are now under control.

If you haven't made travel plans, now is the time. The conference is a grand opportunity for beekeepers to socialise, plan the course of the industry and to discuss matters of common interest. We hope to see you there.

The dates: MAF seminar, Tuesday July 24, followed by conference July 25 to July 27.

Advertising

For those of you who regularly or occasionally advertise in the Beekeeper, the address for advertising material and bookings is now the same as the editorial address – Box 176, Carterton. The advertising manager has also changed, from Alyson Mackey to Alison Woolley.

The advertising deadline is the second Monday of the month preceding publication. We can't undertake to publish anything which arrives after this deadline unless we have prior warning. It's the reason your magazine always comes out on time!

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Commercial Rates (per insertion)

Full page $120 (4 insertions $100), Half page $65 (4 insertions $55), Quarter page $35 (4 insertions $30), 1/8 page $20. Special locations $20 extra. Colour $60 extra. Production charges will be made for all new advertisements where special production work is needed. Classifieds $5 a col./cm.

Beekeeper rates

Advertising at these rates is available to registered beekeepers advertising products or services directly relating to their beekeeping enterprise only. In cases where the appropriate rate is in doubt, the editor's decision will be final.

Full page $90, Half page $50, Quarter page $25, 1/8 page $15, $2.50 a col./cm. Production charges will be made for single insertions of a minimum of $5. (This does not apply to classified advertisements.) No deduction for contracts. Colour extra.

Subscriptions

The NZ Beekeeper is distributed free to all beekeepers owning more than 49 hives who, after paying their compulsory hive levy, automatically become members of the National Beekeepers' Association of New Zealand (Inc).

Beekeepers owning less than 50 hives, will pay an annual subscription of $9.00 which includes the cost of a subscription of the NZ Beekeeper.

KING BEE

(WHERE THE NBA HAS ITS STING)

Base Price decision deferred

At the time this issue of NZ Beekeeper went to press, no decision had been made as to the Base Price for the 1978/79 honey season. The decision to defer a decision was the result of a prolonged dispute between the industry and the Treasury as to the market worth of honey and of the need for the industry to have an effective stabilisation scheme during periods when sales were particularly profitable.

Plans were that representatives of the HMA and NBA would meet with those of the Treasury in late February in an attempt to solve the impasse.

No queen incentive — no replies from breeders

A request by the NBA executive for an export incentive for queen bee exports was turned down last year with a request for further information. As a result the executive secretary sent out a circular asking breeders to provide him with any information which they considered would be useful in formulating the association's case.

No breeder replied to the association's circular.

Honeydew survey underway

Honeydew, a type of honey exuded by a scale insect feeding on the sap of beech trees, will be the subject of a resource assessment by the Ministry of Agriculture and Fisheries. Announcing this last November, the new associate minister of agriculture Mr Jim Bolger said the aim would be to assess South Island beech honeydew resources, and current and potential utilisation by beekeepers.

The project follows representation by the Association of Honeydew Producers and recommendations from a honeydew seminar held in Christchurch last August. "MAF will estimate the size and potential of the honeydew resource and determine the factors likely to limit its production by beekeepers."

About 200 tonnes of honeydew were exported during the past year, and the prospects seem bright for a significant increase in production.

Beekeeping course postponed

Massey University's "Introduction to Beekeeping" course has been postponed indefinitely, due to the absence overseas of the course director Mr E. Roberts.

When the new dates are set the information will be published in the "NZ Beekeeper".

Pesticide Bill Okay

Following a meeting with an officer of the Agricultural Chemicals Board to discuss the implications of the Pesticides Bill, the executive of the National Beekeepers Association is to prepare submissions which will by-and-large support its provisions. The executive is particularly pleased with the wider definition of a pesticide.

One omission from the bill which the association's submission will endeavour to change is the absence of any requirement to label toxic pesticides as being harmful to bees.

MAF Coromandel trial

The Ministry of Agriculture and Fisheries is currently running a 200-hive trial in the Coromandel restricted area to see if a better management system than the current blanket ban can be devised. A progress report is expected at the April meeting of the executive.

National Diploma in Apiculture

The Royal NZ Institute of Horticulture has approached the NBA with a proposal for the establishment for a National Diploma in Apiculture. Executive member Ivan Dickinson is to investigate the cadet scheme and Mr Beard is to investigate the new proposal and both will report to the April meeting on their findings.

Health boss talks

The NBA executive has discussed changes in the Food and Hygiene Regulations with Mr Martindale of the Health Department. These changes have been explained in previous issues of the NZ Beekeeper and will have the effect of bringing honey houses within the scope of the regulations.

As a result of the meeting the editor and Mr Martindale will co-operate in the production of a simple brochure for commercial producers explaining the regulations and how they will apply to honey houses.

Wasps not agricultural pests

Wasps are not pest within the meaning of the Agricultural Pest Destruction Act, but nevertheless the Agricultural Pest Destruction Council is willing to encourage destruction board employees to destroy wasp nests encountered within the normal course of their work.

No joy for wasp killers

MR B.J. DONOVAN, a DSIR entomologist, has brought back some good news on biological methods of wasp control from a recent trip overseas. However practical results will take some time.

"Part of the trip involved an investigation of the biological enemies of wasps in North America and England," he told NBA secretary Graham Beard. "To summarise my findings, North American researchers consider that wasps there are very little affected by biological enemies. They think that no North American wasp enemy would seriously affect wasps if introduced to New Zealand.

"In England some nests of the German wasp are seriously damaged by a parasitic ichneumonid wasp. This wasp has never been recorded attacking any insects other than social wasps."

This parasitic wasp is not usually common, but Mr Donovan hopes to attempt to arrange a search for these parasites by an English colleague next northern spring. Hopefully, permission will be granted for these parasites to be imported to N.Z. to establish breeding populations under quarantine conditions, with a view to eventual field release.

"I agree with Mr Grahame Walton," said Mr Donovan, "that attempts to introduce biological control agents for German wasps would have much greater significance than work on possible disease transmission. If wasp populations could be reduced then any disease transmission would also be reduced."

RBFC still says "NO!"

REPRESENTATIONS by the NBA to the minister of agriculture regarding the desirability of hives being accepted by the Rural Banking and Finance Corporation as security for loans to beekeepers have not brought any policy change.

Firstly, while the Chattels Transfer Act 1924, may not specifically refer to hives, section 2 of the Act defines "Chattels" as "any personal property that can be completely transferred by delivery" and accordingly any hives which could be so transferred could be secured under the Chattels Transfer Act.

CORRESPONDENTS

PLAYING SILLY BILLYS

Dear Sir,

The colour of honey significantly effects the livelihood of NZ bee-keepers.

In order to determine the true colour of honey, the best quality of light is required. In order to read tiny graduations on scientific instruments, the best quality of light is required.

When I asked for the room in which I test your honey to be repainted white, it was painted a glowing yellow. When I complained that yellow is not white, the significant areas were repainted fawn. When I complained that fawn is not white, the significant areas were repainted cream.

I can only say, dear fellows, that if your honey happens to be white and I happen to grade it extra light amber, then I will not accept responsibility for the errors.

Yours,

C.G. Rope (N.D. Ap N.Z.)
Apicultural Advisory Officer
(Quality Standards),
MAF,
Auckland.

STORM TAKES BEES

Dear Sir,

I think it may be useful for reference purposes to note the effect of the Southland storm on bees in our district. Very little has been recorded.

During the storm, there were high winds in the South Canterbury areas and temperatures rose to 90 deg F. The hot temperature made the bees go outside and the wind blew them away.

I lost, in one apiary, so many bees that there were not enough left to keep the brood warm. I had to take out sealed brood and introduce it to the hives that were protected from the wind. That is a most unusual happening.

Yours,

Chris Dawson
Timaru

FRIEND IN NEED

Dear Sir,

Through your column, I wish to extend my personal and sincere thanks to fellow bee keepers who have so kindly given or offered their assistance in so many different ways since the honey house fire in September.

The assistance given to me has been greatly appreciated. It has made the task of re-establishing Glass Bros Ltd so much easier. The new factory plant should be back into production early March.

Yours,

Tony Clissold
Waikaka

TREE BEES

Dear Sir,

Overheard from an evening discussion at the A.I. Course, Flock House.

"The best feller I find for the honey dew is a half-caste. The black bee is used to the trees.

"If I take my bees down to the flats, they fly over the fields of clover straight for the macrocarpa trees. They are so used to getting their honey from trees, that is all they know."

I hope that you can find a place to publish this – at the time the gentleman concerned had us in fits of laughter. They were a great bunch of people.

Yours,

R.B. Hargreaves
Palmerston North

FERMENTING HONEY

Dear Sir,

Is it fact or fiction that hundreds of drums of honey are standing in the open fermenting at Hornby, and that a large ship's container of creamed honey sent to the American market melted and leaked out of the containers by the time it arrived, because an ordinary ship's container was used instead of a freezer one, and delivery refused?

If this is correct it greatly affects us on the West Coast and beekeeping in general.

Yours,

Peter Lucas
Hari-Hari

HMA General Manager, Curtis Wicht, replies:

"The Honey Marketing Authority had honey, about 150 metric tonnes, stacked outside awaiting shipment. The honey was Kamahi and Rata, which has now all been sold and shipped.

"We have no knowledge of any shipment to the U.S.A. being troubled and the Honey Marketing Authority have had no problems regarding shipping, or storage of honey."

PROVE IT!

Dear Sir,

Recent advertisements in New Zealand Beekeeping publications have offered queens of disease resistant type for sale. This implies to me that this particular strain of bee has been shown to be resistant to American Brood disease.

A look at the myriad claims for queen bees in American beekeeping journals will show where such light regard for veracity can lead. Perhaps the gentleman in question would care to substantiate his advertised claims.

Yours,

Nick Wallingford,
Rotorua

The "NZ Beekeeper" has not cleared this advertisement for publication. There are **other** NZ beekeeping publications?

"The Dominion" 14.2.'79

However, the minister, Duncan MacIntyre, has been advised by the Rural Bank, that hives, because of their portability and rapidly depreciating value for security purposes, coupled with the difficulty in identifying particular hives as to ownership, have not usually been acceptable as security for a term loan. In a letter to the association, he says the bank's normal security requirement for a loan is a mortgage over land. Although occasionally when lending to a beekeeper where the margin of security available in the land has been very small, the corporation has taken collateral security over hives purely to provide a more adequate lending margin in the short term.

Mr MacIntyre made no reference to any possible change in this policy.

Honeydew Seminar papers notable

by Chris Dawson

SO OFTEN publications considered for inclusion in the library or submitted for review are mediocre; offering the same old story written in a different dialect.

Just occasionally, something exciting arrives because a new subject is being explored; a new discovery about bees or beekeeping has been made, or somebody with imagination probes the possibilities of development in fields unexplored.

In the exciting category, the NBA library has just received the "Papers Presented at the Honeydew Seminar." John Smith, MAF apiary instructor, Canterbury, gathered nine scholarly experts to prepare papers on nine subjects relative to honeydew. These lectures are presented in language that the average beekeeper understands.

They cover the subjects in such a way that the reader is challenged to think about this field of comparatively undeveloped potential.

The harvests of honeydew that can be gathered are considerable and the overseas market has an insatiable demand at prices that, to say the least, are most attractive.

The "Papers" give a survey of NZ history, overseas production, life history of the honeydew insect, resource survey (of one area) and so on.

I am certain that these lectures are going to be studied and referred to in many ways for years to come and the information makes a considerable contribution to the details that progressive and onward-looking beekeepers in some areas will be looking for.

Because they are going to be so useful for reference by future beekeepers, the "Papers" should be produced in the form of a book and not on foolscap sheets as at present.

When the book is produced, I hope it will include some instruction on "Honeydew Farming", by some of those who are so successful in it today. The seminar stretched to a full day, but an evening session addressed by some of the knowledgeable honeydew farmers would have attracted the biggest audience of the day. Perhaps John Smith has this up his sleeve for his next successful project.

Also, when the book is published, I hope the theme of the introduction to the seminar will be displayed. The motto "We don't know what we don't know about honeydew" was an excellent basis for beginning to learn.

All participants in the seminar received an identification badge made from an angular slice of a beech branch complete with bark and suitably inscribed. It's a badge to keep.

"Papers Presented at Honeydew Seminar," *Christchurch, August, 1978 – 80 pages – Advisory Services Division, Ministry of Agriculture and Fisheries, Christchurch. Reviewed by Chris Dawson.*

A new look at spring management

by Cliff Bird, Matamata

OVER THE years we have tried many methods of management which seemed so good, but have failed. We tried autumn queens, but some were queenless in the spring or disappeared in November.

For the last two years we have been using a method which helped with some of our problems and while many parts are standard practice, the variation has worked very well in getting all colonies with a good vigorous young queen when the flow starts.

Stage I is quite simple, but wants to be done as early as possible. It is to split hives in the normal way with the queen in the bottom section, and a nuc with a cell in the top, as a third box over a division board.

Stage II is when you have these nucs with young laying queens and sealed brood, that you find hives that have hatched a virgin or has cells under way. When you find the hive that has hatched a virgin, shake all the bees out of the bottom box, then transpose a nuc with the box with bees and virgin. This gives the nuc the extra field bees, so that it then builds up to a good hive.

The box with the virgin is then the nuc and in a short time will have a laying queen, so that you keep up the number of nucs in the apiary, and when the need arises can be useful as the previous nuc was used.

This method you keep up the number of nucs in the yard rather than using these all up and finding you needed more than you had. You will find that queens will pack-up right to the flow, and that this continuous supply of nucs is most valuable.

Any spare nucs left can be joined to the hive below with two sheets of newspaper and an excluder as a standard two queen hive.

The excluder should be removed on the first extracting round.

We find that if you split quarter of the yard you usually get enough nucs and may even be able to use some in other yards, as some seem to need more than others. At a later stage you can make more nucs if you want to, but this method of continuous nucs, rather than just using them up, has worked very well for us, giving that extra supply of young queens.

Hive levy increase

THE ASSOCIATE minister of agriculture has fixed the rate of hive levy for 1979 at 17.5 cents per hive. The rate was gazetted on November 30 and copies of the gazette extract are available.

The minister also approved the authority's budgeted hive levy requirements for 1979 and authorised payment to the authority, from the Hive Levy Account for 1979, of amounts not exceeding $10 700 in total, as funds are available in the account.

The minister has also authorised payment from the Hive Levy Account for 1979 to the association's accounts, of amounts not exceeding $20 000 in total, as funds are available. If the association's budget for 1979 remains unchanged from $20 000 there will be no need to seek any further authorisation from the minister for the 1979 year.

New club at Golden Grove

TWENTY-FIVE keen apiarists both commercial and amateur in status attended the first field day of the recently farmed Whakatane-Opotiki Amateur Beekeepers Association at Bruce Stanley's "Golden Grove" Apiary on September 23, 1978.

For some of the members it was their first experience of attending an apiary club field day although they had kept bees for some years. The theme for the field day was spring management which was ably demonstrated by apiary instructor, Mr Doug Briscoe.

Doug Briscoe with frame explaining technique of searching for queen. Michael O'Leary, secretary, in white veil hat.

Minister suggests voting changes

AGRICULTURE MINISTER Duncan MacIntyre has suggested that the Honey Marketing Authority should change its current weighted voting system. He has written to the National Beekeepers Association with the comment that the present system unduly favours the larger operator.

The association, at its December meeting, endorsed the minister's views on the voting system. It has since sent a copy of the minister's letter to all branches and hive levy payers, along with some comments made at the December meeting.

Points made by the executive in its letter include a suggestion that an extra member from outside the industry should be appointed to the board. The minister agrees, though he suggests that this member should be a producer.

The association executive has also suggested that the adoption of a four-ward system of voting would ensure a better geographic spread of board membership.

The matter will be further discussed by the executive at its April meeting and hive levy payers and branches have been asked to forward their comments.

In his letter dated October 25, the minister of agriculture advanced two proposals. They read as follows:

"As a result of various representations made to me concerning the voting system at Honey Marketing Authority elections, I would like to raise with the industry the possibility of some changes to the present weighted voting system.

"Concern has been expressed that smaller beekeepers are outvoted, and it is my feeling that the present requirement for a beekeeper to have 2500 hives before he is entitled to the maximum of 100 votes, may be too high. The primary purpose of a weighted voting system is to ensure that part-timers or hobbyists, who are often in greater numbers than the commercial operator, do not have an undue say in the affairs of the industry with which they are associated.

A weighted voting system ensures that anybody who is not involved full-time in the industry has a lesser voting strength. In the honey industry, however, a man with 800 or so hives is fully dependent on beekeeping for his livelihood, and yet has only one-third the voting strength of the beekeeper with 2500 or more hives. The principle of one-man one-vote applies in the national elections; and similarly, in most of our primary industries the full-time commercial producer have either equivalent voting strength, or else a ratio of two votes for the smaller commercial operators and three votes for the larger commercial operators.

"The present spread of voting in the honey industry does tend to unduly favour the larger producer, and I suggest the industry re-examine the present weighted voting system with a view to adopting a more simple system. A fairer system might be to have one vote for every 100 hives or part thereof, with either a maximum of 10 votes for those with 1000 or more hives, or a maximum of 12 votes for those with 1200 or more hives.

"Such a system would be simpler for the returning officer and would ensure that all commercial beekeepers dependent on beekeeping for their livelihood would have a more equal say without undue voting strength being given to a few of the larger producers.

"Another amendment I would like to suggest is the addition of a further producers' representative to the present board of the Honey Marketing Authority, to make a total of five producers' representatives. This number would ensure that the government representative is not in the position of having a deciding vote in the event of an evenly divided board, as has occurred over the last year or so.

"I should be pleased to learn the industry's views on those two proposals in due course."

Robert Davidson moves into the big time

Robert Davidson comparing his own gearing system (left), to the original (right) concrete mixer gearing system.

A TIMARU beekeeper turned inventor has been hailed as a genius. He has invented a gearing system which is believed to be an 'original movement' – on a par with the wheel, the screw and the ratchet.

The man is Robert Davidson Jr, a member of a long-established South Canterbury beekeeping family. Success as an inventor has, however, meant that he now spends most of his time as a machinery manufacturer and little time with bees.

Because of the radically new principle behind Mr Davidson's invention he has had no success getting finance or encouragement from New Zealand government or business agencies. However, a British firm has poured nearly $500,000 into researching the development and has been negotiating manufacturing rights with Mr Davidson.

These rights are believed to be worth millions of dollars in the longterm.

The gearing system is applicable to a wide range of applications from farm machinery and concrete mixers to automotive gearboxes and precision tools. It is lighter, stronger and more flexible than conventional gearing system, cheaper to manufacture, does not require lubrication and will allow for ratio variations from less than one in two, to more than one in 10,000. It can also change the speed or direction of a moving shaft.

According to The Timaru Herald, one of the spin-offs of the system has been a constant velocity universal joint – something not yet achieved by any other mechanical system.

The new gearing system – known as Theta – has been installed in a number of trial applications in New Zealand. However, it was first installed on a honey uncapping machine which he invented.

The uncappers are attracting increasing export sales and he has said that it is almost a fulltime job manufacturing the new gearboxes for local industry alone.

According to an article in The Timaru Herald of 21 December 1978, Mr Davidson intends to retain the world-wide patent for the Theta system, while negotiating manufacturing rights for its various applications.

BEEKEEPERS TECHNICAL LIBRARY

P.O. Box 423, Timaru
Chris Dawson, Hon. Librarian

Donations received

XXYIth International Congress of Apiculture of Apimonda, Adelaide 1977 — Proceedings 615 pages. Presented by Stephen James Lyttle of Orari, South Canterbury.

Papers presented at Honeydew Seminar, Christchurch, August 1978, 80 pages. Presented by MAF, Christchurch.

Bees and Honey by Joy Lau — 64 pages, 1976. An Australian industries booklet. Presented by John Vague of Titirangi.

These gifts are appreciated by your library.

Library books are available to members of the National Beekeepers Association. Send stamped addressed envelope for list of books and rules to:

Hon Librarian:
Chris Dawson,
P.O. Box 423,
Timaru.

A FRESH START

Queen rearing for amateurs

by David Williams, our hobbyist adviser

THERE'S NO point in simply going through the mechanics of queen rearing without giving a reasonable background, which I hope the first two articles have done, and some pros and cons, which part 2 certainly did (I got quite a few comments back on that one, all interesting and some highly informative – keep it up).

In this article I hope to shock a few purists by taking two separate but parallel cases. Right, lets have a bit of heresy!

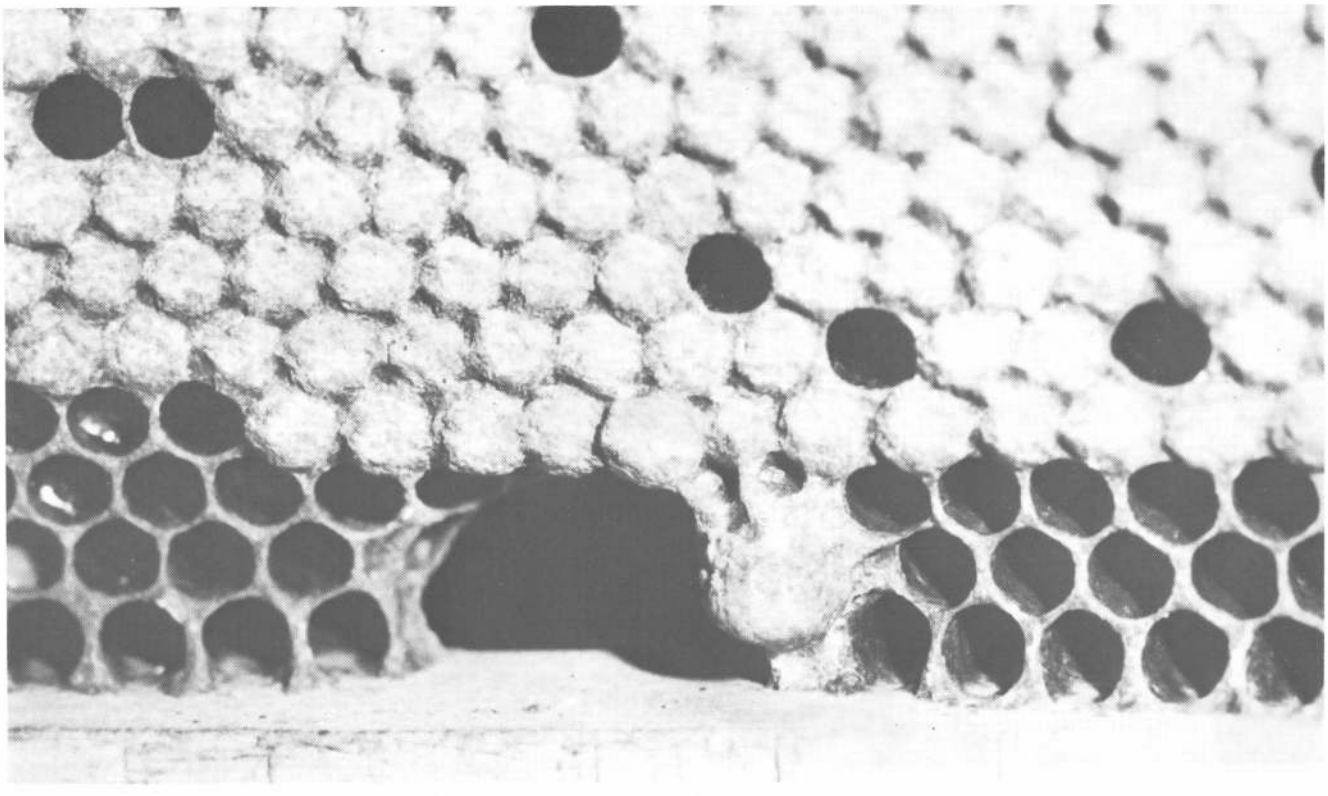
The One-Hive Man

If you only have one hive and want to re-queen it yourself:-

1. in mid-September, remove queen and all sealed brood frames with adhering bees to a site 3 metres away in a fresh box and plug entrance with grass
2. leaving half bees and all unsealed brood in original hive, which will also be rejoined by some of field bees from the queen-right half
3. and make sure you have plenty of stores in both
4. leave both for six weeks
5. check new queen has emerged and is laying in first half
6. meanwhile gradually move old queen's half closer and closer to original – just shift it 30-40cms, closer every time you happen to wander past
7. after 6 weeks two halves are right alongside each other
8. kill off old queen
9. move new queen's hive temporarily sideways
10. put queenless half on original site
11. with perforated half sheet of newspaper on top
12. put queen-right half on top
13. you have now requeened your hive
14. Congratulations!

If you want two hives instead of one proceed as far as (iii) above, then inspect queenless half after 10 days, check there are half a dozen or so queen cells there, handling frames very gently, taking out outside one or two frames first to allow moving subsequent frames away from rest before lifting for examination – queen cells protrude and are easily damaged so remember – lift clear first. Then, having established presence of sufficient queen cells:-

1. Find old queen in her half and kill her.



An inconspicuous queen cell – but just as deadly!

2. Take one easily removed, large, fat queen cell from the new hive, remembering cells will go right back to mid-rib.

3. Place it gently between tops of mid-frames in freshly queenless half.

4. Or, if one frame has only one queen cell on it, use that in toto by simply transferring it over,

5. while removing that queen cell knock remaining cells back to perhaps two of the biggest and best

6. and check very quietly in one week to see queens have emerged

Note: that by doing this early in the season any slight risk of swarming is greatly reduced and that, although the weather may prove unkind, this is irrelevant after the original sub-division.

Also the bees now have sufficient time to build up again before the honey flow, whether as one or two hives.

Unwanted queen cells

Now let us take the equivalent case where, whatever your hives' histories, the sun is shining, birds are singing, everything in the garden is beautiful and you look through your hives and – horrors! Queen cells!!! What do you do?

You face up to the fact that they are now in the mood to swarm and will go on being in that mood unless allowed to follow through. So you have to accomodate them in spite of the fact that it makes the garden untidy for a while.

Go through sequence 1 to 15 for each hive involved as though that's what you meant to do all the time and hope to do better next year.

You have acted drastically and decisively, which is just what was needed. Note that any advice about going through every week or 10 days is irresponsible nonsense for the amateur.

You aren't going to stop that hive or those hives from making queen cells and, sure as God made little green apples, there will be a time when you delude yourself into thinking it safe, or all over, or you just haven't time and are prepared to take a chance, or the weather has turned nasty so they won't swarm.

They will, you know! The first hint of pale, watery sunshine and they'll be up and away. Act first, relax later.

Naturally you will make quite sure that no queen cells go with the queen. I would knock the queen cells in the other half down to only one, just to make sure.

The literature makes it quite plain that any hive that has gone through the traumatic sequence of events leading up to the making of queen cells and other preparations for swarming will not produce as much of a honey crop as those hives which have not, and this certainly seems to be so from my experience. So – prevention is not only better than cure, it also gives you more honey

And I hope to get on to queen rearing proper in my next article.

Until then, keep smiling.

HIVE LAUGHTER!

About time we introduced more humour into real life. Let me start.

Was discussing how to get school kids interested in bees and buy them gear and suggested the Jaycees might be talked into helping.

"Don't talk about Jaycees to me," said one big, buxom wench who could have broken my arm with one love tap. "It was the Jaycees convention that finished my marriage."

The mind boggles!

*****

Then there's this misprint from that beekeeping curiosity, the ABC and XYZ of Beekeeping.

"Parthenogenesis – some inbreeding from the Scottish Beekeeper."

Perhaps the strain of beekeeper is more important than the strain of bee!

*****

I came across a delightful little paragraph in one of those crank flying saucer books the other day (Ancient Astronauts – a time reversal? by Robin Collyns, for those interested) in which the author claims that "Bees have an extraordinarily developed sense of E.S.P."

This explains why the little beggars always know what I'm going to do with them – and get in first!

*****

Move queen – right portion(s) away and stuff entrance with grass.

THE RAMP

by David Williams

THE SLOPING ramp leading up from ground to landing board is an integral part of my beekeeping, small as it is.

Primarily it is there to prevent unnecessary deaths of heavily laden bees landing below the landing board and being too chilled or exhausted to take off again – and I was amused to read in Taylor's "Joy Of Beekeeping" that bees rarely miss their landing – either he has a different bee or he hasn't confirmed his statement by observation – mine would spend half their time renegotiating a take-off into the hive if it wasn't for the ramp.

The ramp just gives em that lift to get into the hive, but that isn't the only benefit.

My hive examinations are usually made using spare floorboard and box, transferring frames as I examine them. I then move the newly filled box and floorboard to the original spot, place the ramp up to the new floor, and there you are.

Which means that, at the end, I am left with a now empty brood chamber and floorboard, with dozens and sometimes hundreds of bees clinging to them.

A quick tap onto the grass in front of the hive, they fall off, and can march steadily up the ramp and back into the hive.

Similarly with a queen excluder, which I usually want to scrape clean – tapping off the bees, scraping and replacing is so simple.

Or wanting to shake bees from a frame e.g. so as not go get drones above an extruder.

By having the ramp:-

- The bees do not have to fly, so avoiding a cloud of re-orienting bees hovering around at the time you are there.
- Young bees go up with rest and are not left scrabbling in the grass.
- If by any chance or neglect weeds grow up in front of the hive, or you want to go off on your annual holiday, the ramp will ensure a certain clear space for entry and exit – its amazing how fast weeds will block an entrance in late Spring – I've seen bees forced to land on grass and crawl through to the hive. Its also amazing how a ramp helps to protect them from this.
- But the main aim remains that rocket-assisted aerodynamic lift. The ramp is the field bee's best friend, even though the fringe benefits such as making it easier for house bees to remove debris and rubbish from the hive and around the hive are not to be despised.

The ramp in use.

The ramp should of course, be of unpainted, untreated wood as should the actual floorboard itself, easy to obtain, easy to replace.

It should not be too wide, or it will cup too much under the fierce exposure, with a hot side and a cold side – I find 200 mm or so about the best, and often give it a bit of weathering before putting it into service.

It should be unpainted (as, of course, should the floorboard) because, if painted, emerging and landing bees become waterlogged in the condensation night and morning and lie there, helpless, until they die off or dry off.

Many die, which is unwanted, but even if they do not, imagine the effect on the morale of the hive to have a dozen or so distressed insects lying there right in the outlet every morning.

If unpainted the condensation soaks in and spreads, so being rendered less lethal. Please remember – UNPAINTED RADIATA FOR FLOORS AND RAMPS.

You will decide the best length of ramp for yourself, but 200-250 mm will give 45 deg angle if your hive is on 100 mm bearers, which is a reasonable height above ground level.

The ends are chamfered to rest square on the ground and square against the outer edge of the landing board, and the bottom edge is held in place by a couple of zinc-coated or otherwise plated nails (ordinary nails rust too rapidly) and it is surprising how well they work.

If you don't use them, you should. If you do, you know how useful they are. Nobody would expect the commercial beekeeper to use them on his hundreds of hives. I expect you to use them on yours. Please the bees!

FROM THE COLONIES

SOUTH WESTERN

With the honey flow more or less finished throughout our South Western districts, the crop would appear in places to be a little below average to almost a crop failure in others.

This type of season following on the heels of the 1978 crop brings everyone down to earth again and shows the importance of, like the "bees", putting a little away to carry us over the bad times.

Many factors had their influence on the amount of honey produced this season. Firstly the long dry winter and spring which left us with a very low water table, with the rains we did get soon drying up before the pastures could benefit. Long rank grass was the result.

The strong westerlies caused havoc with hive strength and then there were the constant cloudy days through the critical honey-flow period. The bush crop was fair and it has been an exceptional year for thistle.

Here's hoping that when you finally finish extracting, the crop will be better than you expected.

Stuart Tweeddale
Taihape

WEST COAST SOUTH ISLAND

Old identities of the West Coast Beekeepers Association. From left to right: Jack Varby, retired instructor; Ralph Glasson, retired beekeeper; Blackball; Jack Glynn, former secretary, up from Balfour.

Beekeepers field day, Teramakau River, West Coast.

THE WEST COAST organisers of the annual field days, judging by the last two, have developed the art of picking the most beautiful spots, and they are not bad on the choice of weather as well.

The last field day, held on November 11, 1978, was at a scout lodge on the south bank of the Teramakau river.

A narrow winding road branching off the main highway at the Serpentine meandered along northwards, bordered on the left by farmland between the road and the sea, and on the right by a terrace clothed in native bush.

The lodge is on a secondary terrace overlooking a grassed parking area below, sheltered from the sea winds off the Tasman sea whose white curlers could be seen caressing the sandy beach on the far side of the river, while whitebaiters with their long poles and attached nets patrolled the river banks in an effort to capture the tasty morsels of fish.

Had those of other climes known of the beautiful setting and weather, maybe there would have been more than the moderate attendance of mostly locals.

Using a scale plan of an average honey-house, and cotton threaded around a drawing pin at each point of operation, for every journey made by the operator in extracting five supers of honey, **Peter Lucas Jr** gave a work study. The cotton was unwound and measured to the same scale as the plan, then used for another plan with operating points more judiciously placed. The length of cotton saved was measured to scale and a guessing competition held as to how much it was. **Gavin White's** estimate of ¼ less distance travelled, was the winner.

Rod Buchanan asked for comments re wide or narrow bottom bars. Discussion was varied, but it was generally agreed that it made no great difference either way.

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Alan Braid gave a demonstration of how he uses a stapling gun especially adapted to stapling frames, and saves much time.

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Mr Bushby senior, spoke on the making of pollen traps and the collecting and use of the pollen.

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Keith Detlaff gave an informative talk and demonstration on his method of queen rearing and requeening, which has proved successful and enabled him to create a strong extra hive for each two original hives. He

also explained his excellent blower, which is mostly his own construction.

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John Glasson talked on surplus and unsold kamahi honey held by H.M.A. and suggested that more thought should be given to feeding kamahi honey to bees in the spring, instead of sugar, to reduce the likelihood of further surplusses, perhaps selling some to other beekeepers for stores.

That there should be a surplus is a surprise to the writer, because, having sold honey at the door for many years, and without advertising, except for the word "honey" at the gate, sold mostly honey that graded kamahi except for the odd rata year when both grades would be sold.

We provided a "taste pot" of each honey and in lots more cases than not, the customer increased the order after sampling the so called kamahi.

There could be some difficulty disposing with the darker, stronger pure kamahi of the north as compared to the milder type of the south, but it is seldom that the honey is taken until the kamahi is blended down by the bees with blackberry, willow and many other forest sources of nectar.

Many of the public outside Westland and some inside are confused as to what rata honey is like. Instead of the white, mild, almondy flavoured honey, they expect a darker, strong flavour.

Obviously they have been sold some other honey as rata, not necessarily on the West Coast.

It would be better to sell the retail West Coast honey as "Fine White Mild" and "Light Amber Medium" flavoured forest honey and leave out the naming of a specific source, or name it of "Mixed Sources".

Another misconception that should be corrected is that icing sugar is added to honey. Many customers have called asking for "Pure honey, not the wishy-washy honey with icing sugar in it as sold by shops." Some take a lot of convincing that icing sugar is not used.

It was a pleasure to have Gavin White of the north and our old friend, beekeeper, and former secretary, **Jack Glynn**, all the way up from Balfour in the South, at our field day.

The season started off with some glitter but cold damp weather from Christmas on has very much tarnished the prospects of a good crop. Some estimates being as low as a third of what was anticipated.

Peter Lucas
Harihari

HAWKES BAY

A dry January has set beekeepers back on their estimate for this season's honey crop. The districts' pastures have ranged from being burnt out in some areas, where the bees will gather no more than winter stores, to other areas especially Northern Hawkes Bay and the high country where honey production has been much better.

Overall the crop is below average, and extracting should be over early this year.

Branch activities have been very quiet over the summer period with commercial beekeepers busy with the seasons crop. Hobbyists in the district have always found this a disadvantage as they like to get together and talk bees. Luckily Walter Watts of Napier has come to the rescue, and organised a group who meet from time to time at his apiary to discuss the season's progress.

A trend that has shown up in Hastings and Napier is the increased interest in keeping a hive or two of bees in the backyard.

Paul Marshall
Napier

NORTH OTAGO

Although winds have dried the area out a bit, North Otago Beekeepers should get an average crop this year. Clover and thistles are extensive. Had we had rain at the right time we would have had a bumper year.

The branch is getting geared up for our 50th anniversary celebrations in March. This will take the form of a dinner in Oamaru with Ivor Forster as our guest speaker. The evening should prove very enjoyable with a chance for renewing friendships with former members of the branch.

R.J. Irving

WAIKATO

WHEN I last wrote, the big question was "What will the weather do?" Well we now know to our sorrow, as on December 5 the rain started, and the wind took up the challenge, and it was quite nice being inside wiring frames. The results were that the early bush was very poor, pastures took off and became lush with bloat very prevalent in the dairy industry. Now bloat and nectar secretion don't go together, and clover honey production in Waikato has been very poor.

Big losses of field bees occurred and in many cases what nectar that was secured was stored in the brood nest thus retarding brood rearing.

Fortunately the weather was fine by Christmas but we have still had a lot of wind. Tawari in the Mamaku area flowered quite late and near average crops were obtained. Kamahi yielded quite well, and a lot of bees on clover country gathered a box quite a long way from the bush.

Clover has yielded very well in inland areas, and around Rotorua is still going well, although with the fine weather won't last much longer.

Much interest and debate on whether to stack on the supers or to keep the extractor going has taken place, and where there was a good flow the bees have come up well, but where there was a light flow they didn't come up, yet worked quite well if given a new box of wet combs and kept down to three boxes. Seems the loss of honey got them working, and the difference in production between those supered up, and those extracted out regularly was about a box.

I don't think we have even had such a bad year for queens going missing, and hives just dwindling away to nothing. Looking around the yards there seems to be newspaper everywhere where joining was done. Even some who had never experienced the loss of queens in the past had it this year.

On January 22, 1979, an informal social evening was held with Dr Tage Johansson being our guest speaker. This was a very enjoyable evening, and was much enjoyed by all.

C Bird
Matamata

CANTERBURY

The weather has been perfect for honey crops, with an abundance of sunshine in January and intermittent rain in December, the light land has proved exceptional for clover; however a series of hot dry Nor'westers in the latter part of January have brought the flow to a close leaving only the reliable thistle for the hives on the plains to work.

In mid-Canterbury between the Rangitata and Waimakiriri rivers, the foothills clover pasture has yielded below average.

The Beech Honeydew has not been very good over spring and summer but hopes are high for the inevitable Autumn Flow.

Our branch, has just discovered that we will be hosts to the 1979 NBA Conference and we will be doing our best in spite of short notice to make our guests stay in the Garden City an enjoyable one.

Tony Scott
Christchurch

Justice for amateurs!

a plea from the heart by David Williams

I HAVE just returned from the first Queen Bee Breeders and Artificial Insemination "seminar" at Flock House – the first because another is to be at Telford.

The seminar had a complete cross-section, from some of New Zealand's largest queen breeders to Dilyse Roberts who will be our first operator offering a commercial A1 service, to Stephen Bozi who produces most of New Zealand's honey dew, and right down to myself, the smallest in every way except height and, after those Flock House meals, girth.

However, it is not the seminar I want to talk about, successful though it was, but of the question of advice for the amateur.

It is obvious that we need men of the calibre of Murray Reid, John Smith, Kerry Simpson and Doug Briscoe (sorry, the rest of you – these are the ones I have met) full time on action for the amateur sector.

Yes, I know about Murray's activities in that direction and Doug's encouragement to clubs in the Bay of Plenty, but that is not enough. It is no fault of theirs that we amateurs are the victims of what could best be described as "benevolent neglect."

We amateurs outnumber the professionals by some 9 to 1 and it is not enough to say that the professionals add to the country's coffers and so get priority.

This is not the policy of the Min. of Ag. in any formal sense and may be so in practice simply because we amateurs are diffuse and dispersed and undemanding.

Any change would call for a dramatic reversal of working habits on the part of the apiary officers concerned. The amateur is most likely to be available evenings and weekends only for his couple of hives in the back garden, and the ideal would be that each amateur be visited privately at least once each spring and as many other times as seemed necessary, whether he belongs to a club or not.

This may call for the employment of extra staff with different qualities, if not training. Think small might be the motto for us amateurs and for our advisors.

Not only are we small, we are in all essential respects the class of beekeeper most needing help.

The commercial beekeeper has almost certainly had some – often many years – experience under some older beekeeper. The amateur usually has only another amateur as guru and they may both need help, while many amateurs start in total isolation and absolute ignorance.

The need is there. We need advisors who work odd hours, can out-argue any amateur (and he'll have to be pretty good – a more dogmatic, quarrelsome, argumentative lot I have yet to meet), is prepared to lay down the law, to give definite advice without any options, and to keep at it until he brings his clients into line.

A formidable undertaking, but just think of the vast improvement in beekeeping standards possible under such a regime – it would be well worth it.

There is another aspect to this. The amateurs now think of themselves as miniature commercial operators for equipment and technique.

It may well be that we need advisors, scientifically trained and with scientific discipline behind them, who can carry out research and development into those aspects of beekeeping of specific interest to amateurs.

Among these I could casually suggest:

- the use of a single large brood chamber eg. modified Dadant, square Langstroth, etc, so that only one layer of frames is to be examined. There are vast implications in this, but implications worth exploring
- If we can't get non-swarming bees, how about giving us amateurs late-swarming bees, say November when the weather is settled, hives better tempered, and swarm prevention easier? We can't expect queen breeders to do this – they have other priorities – so how about our amateurs' advisory officers doing it?
- Coupled, of course, with good temper, which we amateurs desperately need – and in our bees as well!

  There are two aspects to this. The first is the welfare of the amateur himself – he is likely to be clumsy, uncertain, and susceptible to stings. The other is the neighbourhood – nobody wants the neighbours upset and nothing upsets the neighbours more than a few stings.
- and a few thousand other things, from breeding to feeding, supers to supersedure, mead making to queen marking.

Let us make "Justice for Amateurs" our project for the year.

STUART TWEEDDALE - success in tough territory

by Frances Reynolds

COLD IS one thing that bees definitely do not like. That fact of life has stopped many potential beekeepers from trying to raise bees in certain areas.

But in Taihape, often called the coldest place in New Zealand, Stuart Tweedale has successfully kept bees for the last 30 years.

When Mr Tweedale began a rehabilitation programme after the Second World War he was given the choice of becoming a sheep or cattle farmer or a beekeeper. Having chosen the latter, he was then told he had the choice of going to central Otago or Taihape.

At this stage Mr Tweedale didn't know very much about bees even though he had just spent two years supposedly training.

The trouble was that though the 're-hab' men were usually keen as mustard, the people they worked for weren't. For many the re-hab men were just cheap subsidised slave labour.

Often the men would be kept on one job, like extracting, for six to eight months of their two year training. Not a very good way to learn.

And that's why, when he moved to Taihape, Stuart Tweedale felt a little like he'd been dropped in the deep end.

Nowdays keeping bees in Taihape isn't all that much easier, but having lived in one place for so long and having brought up their family, the Tweedales have no intention of moving. For the bees, it's a different matter.

To be a successful Taihape beekeeper, there's no alternative to a migratory operation.

The main season for the 2 000 Tweedale hives starts at the beginning of September. At this time the bees are shifted – the clover bees to land on the Napier/Taihape road and the bush honey bees, to the Wanganui river.

The bees are left in the higher country, between two and three thousand feet above sea level, for approximately two months. They are then brought back in a big hurry as the hives tend to deteriorate very quickly if left much longer.

The honey is taken off and stored for packing in mid-winter. That is the only time of year when there's time to pack and it is also a good time for granulation.

The honey is all pre-packed for sale and stored in an old railway wagon which provides very good refrigeration.

Stuart says that in Taihape there's just no letting up at all. "Once the season starts you're more or less living with the bees."

At present he has 360 hives for bush honey. This sells extremely well from the shop he has built onto his house. It also helps support his business if the clover honey intake is down. The country around Taihape is not good for clover because of the frosts and because it is closely grazed sheep country.

The bush honey is also a financial saving. The Tweedales blend it with clover honey to give it 'pep'. This, according to Mr Tweedale, compares favourable with Canterbury/Southland honey.

In the Taihape area there is plenty of flow off willow and Kowhai, but once that's finished there isn't much else until late in the year. However the future does look brighter as the local catchment board is planning to plant rubinia trees which flower around November.

In all aspects of his work Stuart Tweedale works on one thing at a time and doesn't start anything else until he's finished. He's also a strong believer in leaving his bees alone as much as possible. He says he used to manipulate his hives but has found over the years that bees are highly-organised creatures who give better results if just left alone.

Wasps are a major problem, but the Tweedales have devised a wasp bait which works particularly well for their area. With the terrain including so many valleys and deep river gorges, there is no way to find all the wasp nests but they have been pretty successful in containing the wasps within the area they want protected.

Stuart says there aren't any other 're-hab' men left in beekeeping in his area. Most of them have drifted into some other line of work over the years.

But he has continued on with a growing knowledge and interest. His two sons are now also beekeepers, so it looks as if the Tweedales will be in the industry for many years to come.

New Zealand beekeeping adviser Gavin hives with two of the project staff, Paul O

New Zealande his mark in PN

by Neville Peat, External Aid Divisi

IN A FAR-AWAY village in the Eastern Highlands of Papua New Guinea, New Zealand beekeeper Gavin McKenzie approached an old man and offered him a taste of the honey on a comb.

The old man backed away. Although he had seen a comb before he had never tasted its product. Honey was not traditional in his village – nor, for that matter – in any of the villages in the region.

The New Zealander persisted with his offer and at length the old man came forward.

He dug his finger into the sticky amber stuff, savoured it a while – then beamed.

"Aaah!" he said. "Em nambawan kai!"

In the Eastern Highlands and other districts the taste of honey is catching

Kenzie, of Waimate, inspecting Goroka (left) and Ian Mopafi.

makes

Ministry of Foreign Affairs

on as a New Zealand Bilateral Aid project spreads the word about bees and offers the expertise for management of the hives and their products.

Gavin McKenzie, of Waimate, has just completed a two-year assignment, leaving behind a project that has established the viability of beekeeping in a country which had only piecemeal experience with bees previously.

Mission stations introduced bees about 40 years ago but never set the country abuzz with them. A Japanese enterprise started keeping bees in a bigger way in 1972. In 1975 it closed down. Two years ago New Zealand responded to a Papua New Guinea Government request for assistance with a pilot project.

Gavin McKenzie left his beekeeping business in South Canterbury, which he shared with his brother, and answered the challenge of the New Guinea Highlands with his wife Evelyn and their two sons.

Between April and February last year 500 hives were established and as many queen bees – New Zealand bred Italians – were sent from North Auckland.

Remarkably, 480 of them survived the trip, the quarantine period and the rigours of a new environment.

In their second year the bees have really turned it on. In four months about 350 hives in the Goroka area produced 20 tonnes – double the New Zealand average.

And it was good-quality honey – pale amber in colour, of delicate flavour and low in moisture.

New Zealand aid funds have also provided equipment for a honey extracting plant at Goroka, run under the auspices of the Department of Primary Industries.

Honey has not been the only product, though. The 48 hives established in the vicinity of the extracting plant have produced over half a tonne of pollen, and for each tonne of honey about 16 kg of bees' wax is produced.

The queen bees are potentially an export earner, too, for they breed well in the Goroka environment.

Project director Vince Cook, of Oamaru, an apicultural adviser with the Ministry of Agriculture and Fisheries, says the sights of the project have been raised somewhat because of its success. He says the original aim to "evaluate the potential of a beekeeping industry" has been achieved, with four new exportable commodities identified – honey, pollen, wax and queen bees.

Gavin McKenzie believes the social climate is right for introducing bees: "There is a surge of interest in new things in Papua New Guinea. Everywhere we've been – Mount Hagan, Port Moresby, Eastern New Britain – we've found an enthusuastic response.

"The experience with the old man in the Highlands village where we established a 10-hive smallholder trial was typical," says Gavin. "The people really like the taste."

Project director Vince Cook, of Oamaru, checks on the pollen collected by hives at Goroka. With him is Ian Mopafi, most senior Papua New Guinean on the project. Mr Cook was making a brief visit to the project to assess progress.

Mr Robert Gibb - Southland Beekeeping Pioneer

MUCH OF the history of the early days of the New Zealand beekeeping is contained within the archives of the Ministry of Agriculture and Fisheries, early literature, journals of the National Beekeepers Association and several other small publications. Very little however remains of the actual equipment used by the pioneers in Apiculture.

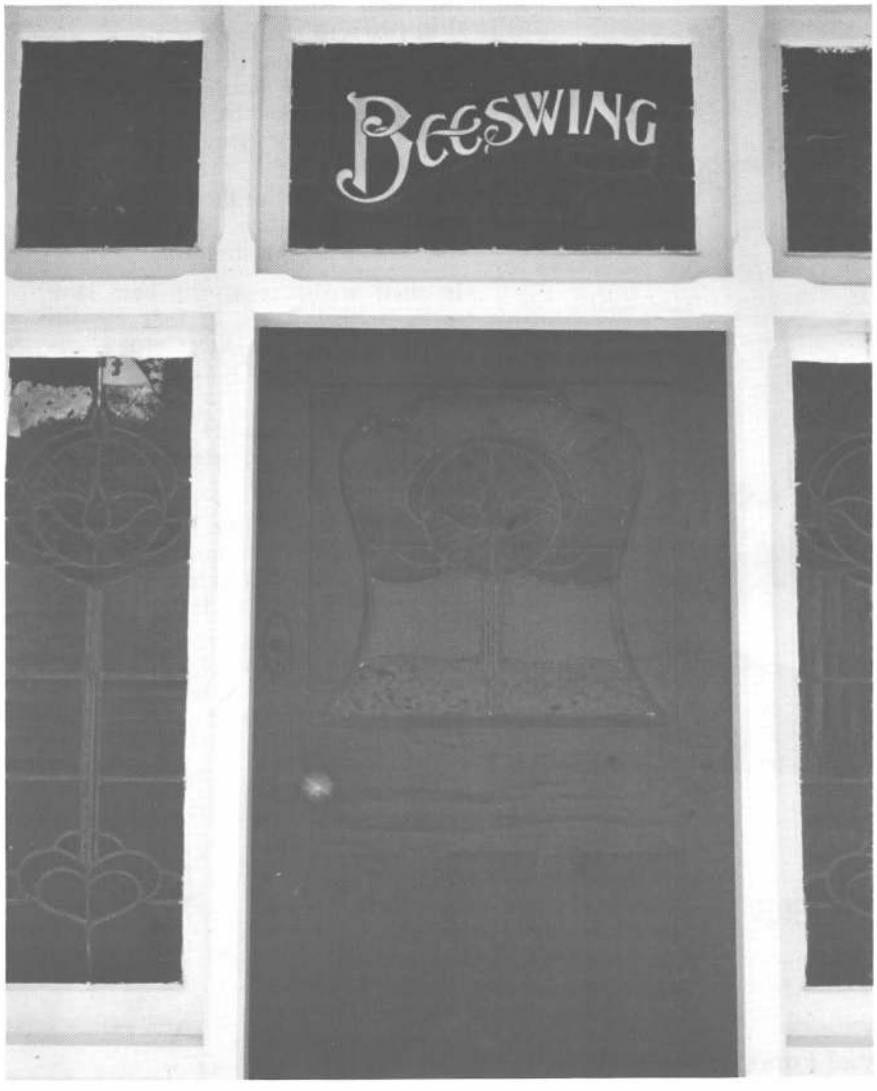
Most of the early box hives were burnt and much of the early extracting equipment, smokers and other paraphernalia has been destroyed over the passage of time. One example of the early endeavours of a prominent Southland Beekeeper still remains.

Mr Robert Gibb of Menzies Ferry built his home in 1918 on the proceeds of two very good honey crops. The house still stands today, and the property formerly owned by the Gibb family is now owned by Mr and Mrs J.W. Thompson who have maintained the house which is in excellent condition. The house was appropriately called 'Beeswing' (see photo).

The life of Mr Gibb is rather fascinating. He became a pupil teacher in 1891 in Invercargill and in 1902 transferred to Tuturau and from a friendship with a Mr James Allan, he stared beekeeping, and he became the first Secretary of the Southland Beekeepers Association in 1906. 1908 he moved to the North Island as one of the first Apiary Inspectors for New Zealand. He returned to Southland as a teacher in 1910 and finally retired from teaching in 1920 to take up farming. He purchased the property at Menzies Ferry, it is thought, in 1916 and the house was built in 1918.

The first seven years of Mr Gibb's beekeeping career were lean ones. They were however followed by seven very good seasons. The first which was reported in 1916. His crop in 1907 is recorded in statistics of a Meeting of Bee Masters held in Wyndham by the the 'Wyndham Farmer'. Mr Gibb started out in the spring with 28 hives increasing to 55 hives by autumn. He produced 2500 lb of honey, 25 lb of bees wax and 100 lb of comb were drawn.

In 1916 he reported his best ever season when 11 tons were extracted from 100 hives. Nine tons of this was gathered between January 23 and February 7. His next best crop during those seven good years, was when he produced 14 tons of honey from 150 hives.



In 1916-17 with the help of his family he melted the entire crop out of 60 lb tins on a coalrange into 2 lb tins which he exported to England and received the princely sum of one shilling per pound for the honey. Out of the proceeds he built his comfortable home which he named 'Beeswing', and also a model honey house.

While the house is still well-maintained and lived in, the honey house is now used to store hay. Mr Gibb also founded a Jersey Stud known as 'Beeswing' one of his cows winning a Royal Championship in the 1920's.

Mr Gibb was also an enthusiastic naturalist and archaeologist and while the family still has much of his collection of Maori artifacts, the finest pieces were given to various museums in the South Island. Most of his records have disappeared in the passage of time, but on a wooden panel in the back of a cabinet over the fireplace, there are many jottings and recordings on the running of the farm. Most of these concern the dairy herd. There is however, one reference to bees which states "Bees working white maple August 5, 1919". (More commonly known as the silver or soft maple).

Footnote: As well as having the honour of being the first secretary of a Beekeepers Association in New Zealand, he served several terms as president of the Southland Association, was a member of the national executive, president of the national body, and also a director of the Honey Suppliers Association. At the time of his death in 1932 he was preparing to make a trip to England on behalf of the honey industry.

Reference: Bees in Their Bonnets – W.J. Lennon, Benyon Printing Company Limited, Timaru 1948 8/9:24/27

Waitangi Treaty had links with first beekeeper

by Chris Dawson

"THE GOVERNOR and his retinue of 14 officers!" "To stay!" "Sleep and eat!" "How long?"

Mary Anna Bumby, New Zealand's first beekeeper, had a problem. The Treaty of Waitangi was being taken to the tribes around the Bay of Islands where the chiefs were invited to sign.

This party arrived at the Mission Station at Mangungu on Hokianga Harbour and were invited, as was usual, to stay at the Mission House. Mary Anna Bumby was the hostess and from the account written by Felton Mathew to his wife in Australia, she was as capable as she was charming and beautiful. Felton Mathew was New Zealand's first surveyor-general and was a member of the governor's retinue. Although he enthused over the hostess, he did not mention her bees or having honey for breakfast.

He wrote: "As we advanced the river becomes broader and in passing a place called 'Hourakee' (Te Horeke) belonging to McDonnell, who published the Chart of New Zealand, we were saluted from a battery of 11 guns, which are ranged in front of his cottage.

"About two miles below this and eight from the landing place, we reached the Station of the Wesleyan Mission (Mangungu), where our whole party was taken in and most kindly and hospitably entertained during our stay. The river is here about a mile wide, and the Mission House and Chapel are built on elevated ground a few hundred yards back from the shore. They are of wood, and the former is very comfortable and convenient, but our party being very large we were all compelled to quarter in one large room.

"We six of us slept very comfortably – His Ex. in a bed, of course, and his officers on sofas and mattresses on the floor around him. The head of the Mission (who is quite a young man) was absent at Adelaide, and the duties were most ably performed by our hostess, his sister, a very plump and a very nice, good-tempered girl, rejoicing in the unfortunate name of 'Bumby.'

"Nothing could possibly exceed the kindness and attention we received from her, and indeed from all of them, and that, too, under circumstances very trying to a lady's patience. For sitting down to dinner 14 every day, if five o'clock was named, we were never ready until seven or half-past.

"We all slept soundly, be sure, after our fatiguing ride, and were on foot early the next morning, prepared for the troublesome business of the day,

The 140 Anniversary of the arrival of Miss Mary Anna Bumby and the first bees on Wednesday, March 13, 1838 is commemorated in this issue.

which was of the same nature as that at the bay – meeting and negotiating with the chiefs. By nine o'clock about 2000 natives had assembled and a table and chairs having been placed under the verandah of the house, the natives were invited to approach and range themselves on the lawn in front.

"For some time they hung back altogether, and we began, to say the truth, both to look and to feel rather foolish. But at last they appeared to have made up their minds, and giving a shout they all advanced in a body to the front of the seat, where we were awaiting their approach.

"The ceremony was much the same as at the bay; and the same sinister influence had been at work to oppose us – but after long debating, during which much tact, good sense, and eloquence were displayed by the chiefs, our cause prevailed and they came forward to sign the Treaty and continued doing so with such zeal and earnestness that, excepting an hour allowed for dinner, the work was not finished until midnight.

"Thoroughly tired of it was I, and not being actively engaged in the business, Cooper and I took ourselves off to bed at an early hour. The following day we had arranged to go down to the heads, a distance of about thirty miles, to plant the Standard and look about us." †

From the biography of her brother, John Hewgill Bumby, who came as a missionary to the Wesleyan Mission in New Zealand, interesting details are related about John and his sister Mary to whom he was devoted. ††

In January 1838, John Bumby wrote from Yorkshire to his friends Mr and Mrs Hyde to acquaint them of his interest in missionary work and in March 29, 1838, he wrote from London to say that "it is now finally fixed that I go to New Zealand in August or September. . ."

Preparations to depart were completed and "one important particular in those arrangements was, that his sister Mary should accompany him." They boarded the good ship "James" about noon on Thursday, September 20, 1838.

† The Journals of Felton Mathew, first surveyor general of New Zealand.
†† The life of John Hewgill Bumby by Alfred Barrett).

John kept a diary of the journey to New Zealand. On November 23, he writes: "Today, between 20 and 30 of the passengers were ill with salt-fish at breakfast; through some means it had become bad. I was ill for 10 hours. Poor Mary was in a sad way, as I was insensible. The following day, thank God, I was better."

November 27: "Today, one of the apprentices fell overboard when the vessel was going at the rate of seven miles an hour, but, being a good swimmer, and the boat being let down immediately, he was soon picked up and brought safely on board."

The diary does not include the arrival at Mangungu but it would be about Tuesday March 12, 1839. From other sources it has been established that the "James" arrived off the Misssion Station on Wednesday March 13, and no doubt the beemistress would be ashore with her straw skeps of precious bees as quickly as possible.

Another glimpse of the beemistress is given later in this biography when it says: "Miss Bumby, his amiable and excellent sister, managed the little household at Mangungu allotted to him, took charge of the Mission stock, and provided, as far as possible, for his domestic comfort; but she too was subjected to great annoyance and trial from waywardness of native servants."

Also quoted in the biography is this extract from the diary of the Rev. John Waterhouse on May 14, 1840: "We breakfast at nine and dine at four, so that our mornings are long. Miss Bumby has to provide daily for 20 of the Missionary party: she does it with great cheerfulness and in a manner highly to her credit.

"The floor was to be our bed; and living in good fellowship, each man used his discretion in the selection of a place; I, as the senior, being allowed a mattress. Being young travellers, we had taken no blankets with us, and, our coats and cloaks being wet, we were a little at a loss. Mrs Warren kindly lent me a flannel sleeping-gown; and being in the posture in which persons usually repose, we looked for 'tired nature's sweet repose' but the buzz of mosquitoes gave the alarm and the black jumpers made our bodies a place of merriment.

"Nor did the solemn hour of midnight remain undisturbed: The goat, feeling the cravings of nature, pushed at the back door which was supported by a piece of wood. It fell, and without ceremony she came to eat the Indian corn on which one of the brethren slept, and then retired."

"The New Zealand Methodist" of 1891 records the recollections of one who knew Miss Bumby intimately:

"The third of our missionary heroines was the sweet sister of the Rev. J.H. Bumby. We speak with proud enthusiasm of Florence Nightingale and scores of others of England's daughters who have gone as ministering angels to the help of the wounded and dying; we applaud their devotion and self-abnegation, and our heart throbs with admiration when we hear of noble deeds and womanly succour in times of fearful peril. But this is nothing new in the world; woman, Christian woman, has been the same in all ages, and the church may well be proud who can number amongst its most energetic and cheerful workers such a woman as Mary Anna Bumby.

"Shall I attempt to describe her? To my childish imagination she was a vision of delight. Soft brown hair, worn in ringlets after the fashion of that time, a complexion that entitled her to the name of the 'Bonny English Rose', and a smile that lighted up gentle hazel eyes, out of which beamed only loving thoughts. Was it any wonder that all the children loved her and wept with her when the sorrowful tidings reached us that her brother, for whom she had given up her home in the Motherland, had perished in the waters of the Hauraki Gulf!"

The Rev. John Hewgill Bumby was tragically drowned near Tamaki on June 26, 1840.

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"IN 1751, John Wesley, while travelling in the North of Yorkshire, halted awhile at Osmotherley. Among his hearers were William Hewgill and some others who had walked twelve miles from the village of Hawnby to hear the venerated preacher.

After the service they persuaded Mr Wesley to visit their village and when he fulfilled his promise, he found a "society" formed and one member was Mary Hewgill, daughter of William Hewgill. In 1803, after the death of both her parents, Mary Hewgill was married to John Bumby of Thirsk.

"On November 17, 1808, a son was born and named John Hewgill Bumby. In 1811 a daughter was born and named Mary Anna Bumby. These two travelled to New Zealand as before stated on the ship James which bore a far more valuable cargo than any of them realised. These first bees were the foundation on which the lush clover pastures of New Zealand were built. ††† In the "New Zealand Journal" of 1843, it is recorded: "Since bees were established at Wellington, clover seeds all over the settlement which it did not before." This same fact is recorded in several localities.

From an unpublished manuscript by C.G. Hunt, some glimpses of the character of Mary Anna Bumby are given. "Mary Anna Bumby was born at Thirsk, Yorkshire in 1811 and in 1838 set out for New Zealand with her brother John Bumby, who was to become the new superintendent of missions in that country. Her diary covering the period from the day she left her Yorkshire home to the time when her eldest son was born in New Zealand has been preserved by a descendant and makes fascinating reading.

††† New Zealand Journal, Volume 4, 1843-4, November 25. (From Alex Turnbull Library)

"Leaving her home on August 16th 1838, she and her brother embarked on the sailing ship "James" at Gravesend which left for New Zealand on September 20, 1838. The vessel reached the Hokianga River on March 18, 1839 and the diary gives a graphic account of Miss Bumby's first impressions of the country in those early days.

"As mentioned earlier, the "Triton" arrived in May of the following year bringing among others a young single missionary named Gideon Smales. On June 1, Miss Bumby made this entry in her diary:

"Had a note from Mr S. offering me his hand and heart. Know not what to think of it, as I don't wish to make any engagement of that kind."

"At this time her brother was on tour of southern mission stations and Miss Bumby appears to have been very concerned for his health and safety. She must have had some premonition of impending disaster because, on June 9, she made this entry:

"About two o'clock this morning I was awoke by the voice of my brother calling me by my name. I feel very unhappy about him as I am afraid all is not well with him. I thought I saw him standing by my room door but the moment I looked up he was gone. This appears very strange to me. I hope the Lord will be his keeper and that he will come back in safety."

"As mentioned previously, the Rev. John Bumby was drowned on June 26, and Gideon Smales had the painful task of accompanying the Rev. John Hobbs to Waitemata in an effort to recover the body, but they were unsuccessful. Miss Bumby was grief-stricken and, under the sad circumstances, it is not surprising that she did not give Gideon Smales his answer to a proposal of marriage until December 22, when she made this entry:

"Well I have made up my mind after much consideration and prayer to become a Missionary's wife. My

soul is deeply humiliated at the thought of the responsibility of such a situation."

And so, on December 19, 1840, Mary Anna Bumby was married to Gideon Smales by the Rev. J. Waterhouse at Hokianga. The young couple were posted to the mission station at Pakanae and, on October 21, 1941, this entry was made:

"By the blessing of God I was safely delivered of a son. Mr S. and Mrs Young were my only attendants. Mr S. sent for a doctor who lives about ten miles off but he was two hours behind time. I had no nurses for the first three days except Mr Smales and then I had Mrs F. White who spent a week with me."

"There is only one more entry in the diary relating to a friend who was taking letters to England and then the diary ends, though the book is only a quarter filled. Apparently the care of children and the work of a Missionary's wife left no time for the keeping of a dairy.

"Mrs Smales served her church, her husband and her family faithfully for 21 more years and died at sea on her way to England on March 22, 1862.

"Their eldest son was christened John Bumby Smales and accompanied his parents to Aotea where he received his early education at their hands. A boy of some talent, he painted in 1855 a very clear little water colour of the buildings at his parents' mission station. This painting is still in the possession of a descendant and is probably the only picture of that station in existence. Later, John Smales went to Cambridge University and graduated a Master of Arts, which was a remarkable achievement for a lad brought up in the wilds of early New Zealand. He died at Whitby, Yorkshire, on September 16, 1869."

An interesting conjecture – although the oil painting of Mary Anna Bumby (photograph of which appears with this story) is not signed, I cannot help wondering if it was painted by her son just mentioned. The picture is in a perfect state of preservation and is treasured by one of her descendants.

Inquiries over a wide field have failed to locate the dairy kept by Miss Bumby. It was read by Isaac Hopkins, New Zealand's most famous beekeeper, as recorded in his "Illustrated Australasian Bee Manual" fourth edition published in 1906.

Isaac Hopkins hoped that he had forever slain the dragon of incorrect claims of various people to having been the first to introduce bees into New Zealand. Unfortunately some of these claims are quoted today as authentic, but Isaac Hopkins' own writings on the subject need to be restated:

INTRODUCTION OF BEES INTO NEW ZEALAND

"The difficulty of tracing the particulars of most circumstances where public records have not been kept has been exemplified in the matter of the first introduction of bees into New Zealand. I did my utmost when getting the three previous editions of my book ready for the press to obtain the true facts of the case, and each time was led into error. I have, however, at last managed to get what I feel certain is the correct information and which I am very pleased to be able to place on record.

"It is undoubtedly correct that Lady Hobson and the Rev. William Charles Cotton brought bees with them to this colony, the former from New South Wales in 1840, and the latter from England in 1842. But the first bees to land in New Zealand came in the good ship "James" and were embarked at Mangungu, Hokianga, on or about March 13, 1839.

"I am indebted for this information to Mrs Gittos, wife of the Rev. W. Gittos, and daughter of the late Rev. John Hobbs, who very kindly wrote me a long letter detailing the full particulars of the introduction of the bees, and confirming her recollections by the testimony of others who were conversant with the facts.

"The following extract from her letter will be sufficient for the purpose of this record. Mrs Gittos, I may mention, was an ethusiastic and successful beekeeper herself in after years.

"It was on March 13, 1839, that the good ship 'James' (Captain Mark Todd) anchored off the Mission Station of Mangungu, Hokianga, New Zealand. This ship brought a party of missionaries, among others the Rev. J.H. Bumby and his sister – Miss Bumby, who accompanied her brother as housekeeper. This lady brought with her the first bees I ever saw.

"There were two straw hives, and they were placed in the mission churchyard as being a safe place, and free from the curiosity of the Maoris, who of course had never even heard of the 'little busy bee.' Some years later on I was writing to a gentleman friend in Tasmania who had been one of the party I have spoken of. I was anxious to know if he remembered their first Sunday in New Zealand his taking us little children (I was nearly nine years old) to see the bees from England. He replied that he distinctly remembered bees having come in their ship, but what became of them he could not tell, as he removed from that station to another field of labour, and the same thing having happened to our parents, we lost sight of our little new friends, not, however, before we tried for the first time in our lives real honey in the comb, which Miss Bumby kindly sent to us, knowing our interest in her bees."

Killing bees intentionally

by E.R. Jaycox, University of Illinois

THOSE OF US in beekeeping do not like to kill bees. We sometimes have to do so when they are infected with American brood disease, when they are living in walls of buildings or other places where they create a nuisance, or when we must perform certain management practices, especially in the fall.

As yet, no material has been approved by the U.S. Environmental Protection Agency for killing bees on combs that the beekeeper wants to save and reuse. Treated combs must either be destroyed or rendered for beeswax. However, clearance, is being sought to allow the reuse of combs after treatment with the insecticide resmethrin. This insecticide is approved for killing diseased colonies and other colonies whose combs will be destroyed. Resmethrin is a short-lived material with residues that apparently cannot be detected four hours after treatment.

Resmethrin, or SPB 1382, is a synthetic compound with a structure similar to pyrethrin, one of our oldest organic insecticides, obtained from the flowers of a species of Chrysanthemum. Resmethrin has a low toxicity to man and other warm-blooded animals.

When a colony of bees is treated with resmethrin, the bees become wildly active, running and buzzing throughout the hive. They die quickly, with few if any bees remaining in the cells of the comb. If you use resmethrin to kill colonies, be sure to close the entrance and any other holes in the hive. This prevents bees from escaping when they react to the treatment and contains the insecticide vapour within the hive.

Bee beard defies "The Swarm"

WHEN ASHBURTON beekeeper R.W. Bray wants to make a point, he doesn't resort to half-measures.

So, when the movie "The Swarm" hit the local cinema, he decided to prove that the scenes of bee terror were just a great 'con'.

He contacted a friend who was a local newspaper photographer and arranged to put on a beard of bees.

"After looking through various books re bees beards and noting such things as how to position the queen in a cage on the chin, rubbing the eyes with vaseline etc, I decided that there must be an easier way to get bees on the face," recalls Bray.

"One warm spring evening I phoned the photographer and said that I would have the beard in place by the time he drove to our place.

"I broke down a hive and carried the top brood box about five metres in front of the hive and shook all the bees on the ground in a heap. I still don't know where the queen was.

"The bees, all full of fresh willow nectar, were more than pleased when I held my face above them and gave them a place to cluster.

"Did I get stung? Only when the photographer entered his photo in a competition run by the 'Christchurch Star' and it was voted in third place by public vote for photos submitted through the year by various newspaper photographers in New Zealand. He received $20 for my effort!

Beekeeper Bray with the swarm which proved the 'con'.

Books and brothers

by David Williams

MY HOLIDAY reading included, as it always does, certain bee books. One of the most pleasant being a recent addition to my library, "Beekeeping At Buckfast Abbey" by Brother Adam, a man known world-wide for improvements in queen-rearing and strains of bees for more than 60 years.

Idle jottings made as I browsed may not be without interest for the New Zealand apiarist.

Buckland, an abbey in Devon in south-west England, has a climate somewhat more extreme than most parts of that country and their beekeeping has to be adapted to this. They use a single brood chamber, the modified Dadant holding 12 frames. The size is 19⅞ in by 19⅞ in and 11⅞ in deep. Using a single brood chamber means that only one set of frames has to be examined at each visit, cutting down on work, equipment, and handling.

On the other hand, their supers are only six inches deep, while lids have to be wired on in winter because of the gales.

Two-thirds of their hives are requeened each spring (with the Buckfast bee, naturally) after the new queens have been over-wintered in nuclei.

Brother Adam considers queen "introduction" the wrong term, or definition, and says it is merely "exchange" or substitution". He is also very much against the concept of using queens sent through the post or subjected to any other delay, or any queen that has not had two months in some laying situation.

He claims there is no such thing as "colony odour" and that acceptance or rejection of the queen (or any other bee) is based solely on reactive behaviour.

He favours *complete* renewal of frames very four years and at one time adopted it as a regular procedure for disease reduction.

He feeds reluctantly and only when necessary, but states "it seems a necessity in the climatic conditions prevailing in the British Isles."

All queens are clipped by having one half of one wing removed, but in spite of the requeening and wing clipping programmes all colonies are checked every seven days for queen cells as a swarm preventative, which takes about four minutes a hive.

Buckfast takes its hives to the heather for the honey crop. Heather needs very strong colonies because the gathering is hard and the season often a very short one. Empty supers, when needed, are always placed on top of the partially filled ones.

When hives are brought back to their permanent sites they are always fed a gallon of sugar syrup to reduce the risk of dysentry, and more if needed.

They have great problems in winter with condensation in the hives because of the high humidity in Devon. This is best dealt with by having a slight through draft, achieved by having a slight gap between brood chamber and crown board, but "cold – even severe cold – exerts a beneficial influence . . . .also best suited by a sunny aspect and shelter from prevailing winds."

In queen rearing he warns against the development of any 'pure' strain, saying that this can only be achieved by in-breeding which "contravenes the most elementary dictates of nature". At Buckfast all their excellent results are gained by controlled cross-breeding even though "in this, we are confronted with a number of unusual problems".

Certainly he would agree with the strongly-held opinion of some of our local beekeepers that it is results that count, but perhaps he would qualify it with "controlled results".

In breeding he goes for primary qualities – fecundity, industry, disease resistance, non-swarming – and secondary qualities such as longevity, wing-power, keen sense of smell, defence, hardiness and wintering ability, spring build-up, thrift, efficiency in winter stores, comb building, pollen gathering.

He also comments on what he calls "qualities of indirect value" – good temper, calm behaviour, disinclination to propolis, freedom from brace comb, attractive cappings, good orientation, and discusses each with commonsense and clarity.

With all our experience, he himself says we are just at the beginning of research into breeding: "But our ultimate aim is the formation of a bee that will give us constant maximum average crop consonant with a minimum of effort and time on our part."

He also shows the vast differences the strain of bees can make to the honey crop, quoting an example where 30 colonies of Swiss-queen-bee-headed bees produced an average crop of 22 lb against a general average of 145 lb when queens from a particular breeder queen headed colonies giving 40 lb more than the average.

At Buckfast queens used as breeders are allowed only in small nucs where they can lay perhaps 150 eggs a day and thus giving eggs a "vitality" that those of a queen laying perhaps 2 000 a day cannot have.

He goes on to say, "No effort is shirked in ensuring the most favourable conditions at every stage from the egg to the development of the fully mature queen .... Poorly-reared queens are the bane of modern beekeeping – – and stimulative feeding is essential in the absence of a honey flow."

Because so much of the success in beekeeping comes from the queen, much of Buckfast's work has been on this aspect of apiculture and most of Brother Adam's writing has been on strain of bee and type of queen, even though the work of commercial honey production has gone on simultaneously with it.

This booklet is well worth reading, both as an expression of his personality and as an intellectual stimulus. My soft-covered copy came from Mrs Milne at the Auckland Beekeeper's shop, price $4.90.

Fiji volunteer needed

PLANS TO develop a honey industry in Fiji have meant that Volunteer Service Abroad is again being asked to recruit a beekeeper for a two year assignment.

VSA already has one volunteer apiarist selected for the Fiji Ministry of Agriculture and Fisheries who will be working in the Lomaivuna area north of Suva. But a second beekeeper is needed for the Uluisaivou area of north-eastern Viti Levu.

Initial research shows bright prospects for beekeeping with hive yields up to 250 pounds a year. As a commercial activity it is very new to Fiji and the volunteer would be involved in encouraging beekeeping in rural areas. This would include assisting in hive management, honey extraction and marketing.

The assignment is for a single or married person. There are opportunities for women to work in neighbouring villages, particularly on community activities.

Volunteers have fares paid, receive an adequate living allowance and other special grants, plus free accommodation. Anyone interested should contact Volunteer Service Abroad, P.O Box 12-246, Wellington.

Buckfast Abbey

(Clare Williams 12)

Fred Bartrum in the news

IF YOU ask Fred Bartrum, he'll probably agree with the old adage that "No news is good news".

For when he hit the headlines in "The Timaru Herald" of December 22, it was to draw attention to careless spray applications on clover crops. Pictured kneeling before a hive, its landing board covered in dead bees, he appealed to spray applicators to do their work in the evenings when the bees had gone back to their hives.

Nevertheless, Fred wasn't too hard on his fellows in farming. He pointed out that it was the first time in 22 years of operation that he'd had bees killed because of spraying. He said New Zealand apiarists were lucky that adequate protection was provided for them by the Agricultural Chemicals Board, though some operators needed to be made aware of the toxidity of new sprays.

Also quoted in the paper was Mr Steve Lyttle, "president of the South Canterbury branch of the New Zealand Apiarists Association". He warned applicators to carefully read the labels of spray containers before use.

"Pollinizer trees" - good news for orchardists and beekeepers

by Elbert R. Jaycox, University of Illinois

THE PRODUCTION of most tree fruits requires plenty of pollen and lots of bees to carry the pollen among the flowers of the different varieties. The principles of pollination were established a long time ago, but problems have persisted.

Fruit growers prefer to have solid blocks of a single variety because that simplifies their pest control, pruning, and harvesting operations. With reluctance, they have planted limited numbers of pollinizer trees of another variety, either scattered throughout the orchard or in single rows between several rows of the main variety.

In orchards with sufficient pollinizers and enough bees to carry the pollen between the flowers, the grower harvests a good crop of fruit if other conditions are favorable. Many orchards, however, do not have enough compatible pollen to set fruit on the main variety. In that case, even large populations of bees cannot produce the desired fruit set on the trees.

Apple growers solved some of their pollination problems by using spur-type winter banana trees as pollinizers for their main varieties. These trees can be interplanted between trees of the main variety but they must be carefully pruned and defruited each year to provide reliable yearly bloom.

The use of ornamental flowering crab apple trees may soon improve apple pollination dramatically, with benefits for fruit growers and beekeepers. Hilltop Orchards and Nurseries, Inc. of Michigan, has stated that the use of crab apple trees for pollination promises to be one of the most important developments in the history of fruit growing. Flowering crabs produce many more flowers and more pollen per flower than regular apple trees and also produce flowers and fruit every year without any need for removing the fruit.

The compact growth of selected varieties will allow growers to plant them at half the normal spacing between trees in a solid block of a desirable commercial variety. By using the crab trees as pollinizers, growers will be able to maximize land use by planting solid blocks while also providing plenty of pollen for setting fruit. Management will be simplified. Larger and more consistent crops will be produced.

Beekeepers will also benefit when apple growers use crab apple trees as pollinizers. If pollen is no longer a limiting factor in fruit set, growers will be able to determine more accurately how many bees they need to produce the optimum crop. The lack of pollen will not defeat the bees' efforts, and more colonies will be used. Crab trees can also be used to improve pollination in established orchards by interplanting them in the rows of the main variety. We should soon see a greater use and appreciation of honey bees as pollinators of apples.

Both growers and agricultural advisory personnel are belatedly realizing that there is money to be made by using bees to pollinate both apple and pears. Because pears, especially the Bartlett variety, set some fruit without pollination, many pear orchards are short of pollinizer trees. At the Southern Oregon Experiment Station they found that long-term yields of pear trees adjacent to a pollinizer were consistently higher than those of trees two or more spaces away.

The use of bees for pollinating pears together with plenty of compatible pollen can be major factors in productivity. The production of pears by

"Orchardist" photo

grower Carl Perleberg of Quincy, Oregon, is a case in point. As reported in *The Goodfruit Grower,* his Bartlett pear orchard has a five- year average yield of 33 tons per acre, an outstanding accomplishment. Among Mr Perleberg's 14 points for achieving such high yields of pears are two points relating to bees: (1) have a heavy bee population during blossoming with at least three strong hives per acre; (2) use an adequate number of cross-pollinating varieties supplemented by bee-hive (pollen) inserts to spread Anjou-Winter Nellis pollen by the bees during the three days of peak bloom.

A great deal of attention is being focused on improving the yields of Red Delicious apples in Eastern United States. The transfer of pollen and the number and location of bees in the orchard are being examined along with pollinizers, frost sensitivity, and management practices to pinpoint the reason(s) for the poor productivity of Red Delicious orchards. Providing more and better pollinizers such as winter banana or flowering crab trees may allow the bees to do a better job.

Some growers are also providing plywood windbreaks on the north and west sides of hives placed in their orchards. These shelters break the force of the wind and reflect some heat from the sun onto the hives so that field bees may be stimulated to leave the hive earlier than they would otherwise.

Although pollinators other than honey bees are being tested for tree fruit pollination, they are not likely to replace honey bees, but may help improve yields in some areas. Two species of solitary bees of the genus *Osmia,* family Megachilidae, can be managed by providing, and later storing, artificial nesting blocks that are, acceptable to the female bees. One species, *Osmia cornifrons,* has been managed for apple pollination in Japan since the 1940's. This species was introduced into the United States in April, 1977, in Maryland. It reproduced and overwintered successfully and was seen again in 1978. A related native species, *Osmia lignaria,* is a potentially excellent pollinator according to work done by P.F. Torchio at Logan, Utah.

Wind is an important factor in the pollination of tree fruit because of its effects on bees. Cool, spring winds affect both the colony and the foraging bees. British researchers placed temporary windbreaks in dwarf orchards and studied their effect on pollinators and fruit set. Among the trees most protected by the windbreak, there were significantly more pollinating insects, mostly honey bees, and the fruit set was better.

Unsheltered areas had fewer pollinators and a poorer fruit set. Foraging bees appear to fly into the wind, thereby giving better fruit set in that direction from the hives. In orchards with strong prevailing winds, especially in newly planted and dwarf blocks, more hives should be placed in the downwind part of the orchard than in the upwind area.

Many years ago, someone in bee research got the idea that we should produce colonies of bees for pollination that could later be destroyed. These colonies were called disposable pollination units, or DPU's. A lot of valuable research time and money was spent in developing the idea. Yet, to my knowledge, no one has ever made any practical use of the studies.

The reasons are simple. People do not like to destroy bees and they are not interested in using styrofoam boxes, cardboard cartons, or other containers in place of ordinary bee equipment. The research results usually showed that the disposable colonies were less effective for pollination than conventional colonies. We should put the DPU idea to rest so we can concentrate on more productive pollination research that will benefit beekeepers and growers.

The future of tree-fruit pollination and production looks good, with greater acreage and more trees per acre. Beekeepers should be aware of opportunities to help fruit growers while also helping themselves by providing bees for pollination.

World honey output up in 1978

from: Honey Market News, January 1979
Published by the U S Department of Agriculture

THE WORLD honey harvest of an estimated 683 000 metric tonnes in 1978 is about 5.5 per cent above that of last year. Conditions have been favourable in 1978 for honey production, following a poor outturn in 1977 caused by unfavourable weather in several major honey producing areas. Based on past experience, the chances are two out of three that this preliminary estimate of 1978 world honey production will be within 5 per cent of actual output.

World honey production is expected to be slightly above consumption in 1978. However, world honey trade may not increase significantly in 1978. Exportable supplies in Mexico, the world's leading exporter, are considerably lower because of lower honey outturn in 1978 compared to the record level in 1977.

Honey output in 1978 is up in North America, South America, the Soviet Union, Africa, Asia, and Oceania. Early indications point to a much better harvest in the United States. In South America, Argentina's honey output is up as a result of more favourable weather. The Soviet Union's crop is larger as conditions were good, in general, during much of the season. Most African and Asian countries are experiencing modest increases. The People's Republic of China (PRC) is expected to harvest 5 000 more tonnes in 1978 than a year earlier. Australia has a slightly better crop in 1978 than in the extremely low production year of 1977.

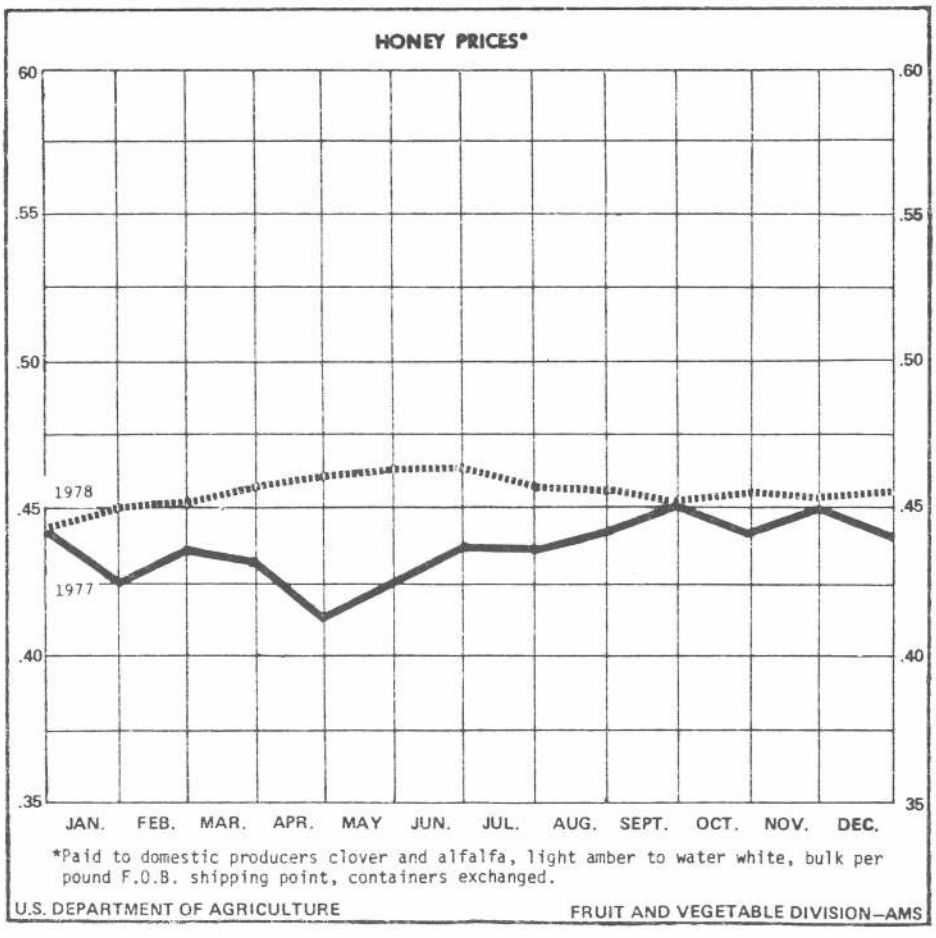
The honey outturn is smaller in Europe as a whole. The West German crop is down because of inclement weather following two excellent harvests. Spain has a normal honey crop after the good one of 1977. Poor weather conditions have reduced the honey crops in most East European countries. While France is the only country in Europe expected to have a major increase, the higher output there will only be a return to normal levels after the very low production in 1977.

World honey trade was little changed in 1977, despite the slightly reduced world output. U.S. imports were down about 1 000 tonnes from the peak reached in 1976. Led by the United Kingdom, Europe's honey imports increased by about 4 500 tonnes. Japan's honey imports were up about 1 000 tonnes.

Turning to exports, Mexico's honey exports continued to climb, reaching a record 53 000 tonnes in 1977. Canada's honey exports were more than 4 000 tonnes above the year-earlier level. Spain's exports reached an estimated 7 000 tonnes in 1977. Declines were registered by Argentina, Australia, the PRC, and Cuba.

The average price (unit value) in 1977 of all honey imported into the United States was almost the same . . . 67.6 cents per kilogram . . . as a year earlier. During the first seven months of 1978, prices strengthened to 76.3 cents per kilogram.

Beginning stocks were down for 1978 from year-earlier levels in several countries. The largest decreases were in Australia, France, and the United States.



COLIN ROPE, the Ministry of Agriculture and Fisheries quality standard's advisory officer has provided the following estimates of the 1978/79 honey crop:

REGIONAL CROP FORECASTS AS AT JANUARY 31, 1979

The figures in parenthesis represent the six year average crop estimated for each region.

	tonnes	(tonnes)
Northland—Auckland	428	(452)
Bay of Plenty	640	(648)
Waikato	1200	(1192)
Palmerston North	834	(834)
Nelson	331	(331)
Christchurch	1400	(933)
Oamaru	959	(855)
Gore	900	(1034)
New Zealand	6692 tonnes	(6279 tonnes)

The following article has been condensed and adapted from a longer article which appeared in the July 15 edition of the Australasian Beekeeper. That article was, in turn, translated from an article which appeared in the October 1977 edition of "Revue Francaise D'Apiculture", the monthly journal of the French Beekeepers' Union.

Varroa is undoubtedly a most serious threat to modern beekeeping and New Zealand beekeepers should not be complacent about their relative isolation from the rest of the world insofar as the spread of the disease is concerned.

Illegal imports of bees or bee products should be taken extremely seriously by individual beekeepers. Any infringements of the law should be reported to the nearest MAF office without hesitation.

VARROA

The reason why we have import controls on bee products

ON THE advice of the experts who have been able to record its outbreaks, Varroa is the most frightening of bee diseases. It is parasitic disease which attacks, simultaneously, larvae, nymphs and adult bees (queens, workers and drones).

As an example of the virulence of this disease, take the apiary at the Moscow Timiriazeff Academy, where all of the colonies (about 400) had to be destroyed, the plant and stock disinfected and new non-contaminated swarms introduced in order to build up the academy's apiary.

It has been observed that the disease assumes a particularly serious form in apiaries which are used in extensive production of honey and other products.

Varroa is moreover even more frightening as it is such a difficult disease to detect. It requires two to four years or even more in order to show up in an obvious way, and during that time the contamination may spread to all colonies of the apiary and near-by apiaries. According to Dr Macia (of Roumania), a newly infected colony may disseminate the parasites over a radius of three kilometres in the first year and up to six kilometres in the second, which totals a surface area of about 100 sq. kms. During this period, the beekeeper doesn't notice anything unusual; the colonies which have been declared infected at the Institute of Oberursel had produced as good a harvest as average in 1976.

There is considerable difficulty in understanding how this disease could spread so rapidly in 20 years, invading Japan and Russia and now threatening the whole of Europe.

Varroa is certainly an ancient disease in numerous countries of South and South East Asia (Phillipines, India, China, Vietnam, Korea etc.) as the parasitic disease of Asian bees (Apis cerana) proved, but it appeared there in a benign form and no obvious damage was noticed.

In the last century, our bee Apis mellifica, was still geographically clearly distinct from Apis cerana; Siberia and the interior of Asia did not know this bee. In Iran the two types were separated by a large belt of desert country of about 500 km.

The mixing of the two came about during the course of the last 100 years; India, Pakistan, Thailand, Indonesia, Japan etc., had introduced Apis mellifica to their apiaries as it was considered a better and more productive bee.

Various factors have contributed to the passing of Varroa from Apis cerana to Apis mellifica. The colonies of the two species fought together and out of these fights, the little colonies of Apis cerana often came out the worse.

Also Apis mellifica swarms less and has a more extensive "hatching" area. These are good conditions for the development of the parasite which found a completely favourable ecological niche in them.

In May 1958 Varroa was detected for the first time in Japan. By 1962, it was already widespread in a large number of Japanese apiaries, and it represents, at the present time, a very serious problem for beekeeping in that country.

In 1964, it was found in Eastern Siberia. The bees in that area, descendants of the colonies brought in the previous century from Russia, were highly valued because of their resistance to the harshness of the Siberian climate. After the second World War, it was thought that they were worth keeping and increasing and some were brought into Western Russia, and in exactly that way Varroa was brought to the West, where it spread very strongly.

Varroa was found in 1967 in Sofia in Bulgaria, no doubt through the importing of queens from the Russian Caucasus. In May 1976 the Hungarian bee researcher Orosi Pal discovered it in Roumania. At the end of 1976 it was detected in Yugoslavia near the Bulgarian frontier.

Officially Poland and Hungary are still free of Varroa as is Czechoslovakia.

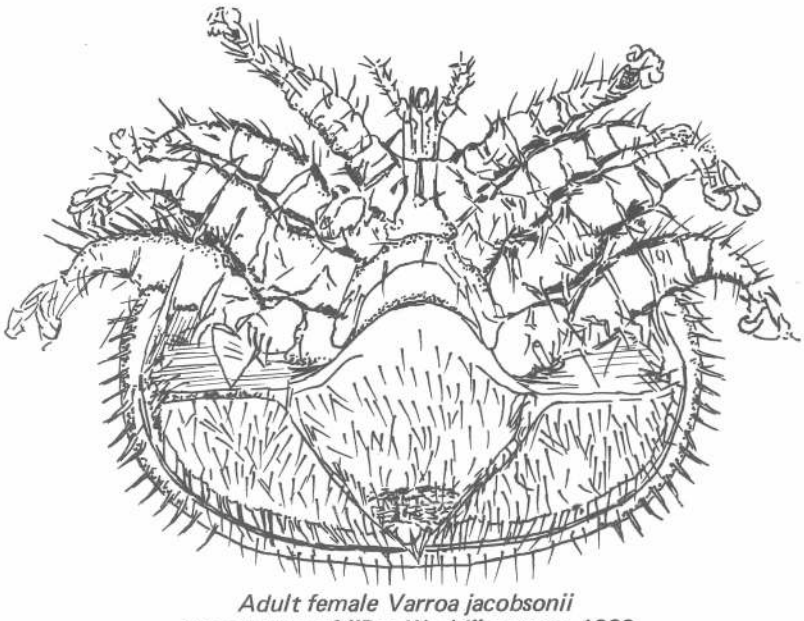
Through bee movements the parasite has also been introduced from Japan to South America (Paraguay).

At present it is found in Germany. In fact over recent years hundreds of bees from the Balkan countries have been imported into Western Europe, and it is quite likely that other areas of Varroa exist in Germany, as in Switzerland and France.

Forms of Varroa

The mite Varroa Jacobsoni is a parasite which can easily be seen by the naked eye, in contrast to Acarapis woodi, carrier of Acarioce, which can only be seen through a microscope. It would be, however, at first sight confused with the bee louse – Braula Coeca – because of its length and its brownish colour – a fact which has no doubt contributed to the development of several outbreaks of the disease. With the magnifying glass (enlarging it five to ten times) the distinction can be easily made.

The Female Varroa is more bulky than the louse; it is oval (across the body) with a flattened shape, slightly arched. It resembles a small crab. Its



Adult female Varroa jacobsonii
by courtesy of "Bee World" autumn 1968

length may vary; on average it measures 1.3mm long and 1.7mm across. It is a mite; along its body can barely be distinguished 4 pairs of legs. These finish in powerful suckers which allow it to move quickly, still visible to the naked eye, not only on the body of the bee, but even in the cells, on the honeycombs and throughout the whole hive.

The female Varroa is found over all the body of the bee, with a marked predeliction for the intersegmentary spaces on the abdomen, horizontally and vertically. With its sucking equipment it pierces the soft sections and pumps out haemolymph from the bee. That is no doubt, how pathological elements of certain infectious diseases can be transmitted, septicaemia for example. A single bee can carry up to a dozen parasites.

The Male Varroa is different from the female; smaller and almost round (a diameter of .8mm), its soft body is a milky white to yellow colour. Its suckers do not seem to let it feed itself and it perishes soon after mating which takes place in the cell, before hatching of the parasite ridden bees. You therefore never find it on bees in a hive.

Life Cycle

During the period of hibernation, only fertilized females are found in the colony. They begin to lay in spring and lay (in several batches) three to 12 eggs of oval shape (0.6mm x 3mm) in the walls of the cells occupied by the bee larvae. It is especially the broodcomb of males which is affected.

After two days, the egg hatches and becomes a larva, male or female, with six legs. This develops quickly from a protonymph to the deutonymph with eight legs. In eight days the adolescent development is complete. The adult males and females mate and the males perish soon after. It is not yet known exactly how the mites feed during their development; it is thought that they may partly suck haemolymp from the larvae and they may also consume pollen, honey and jelly from the larvae.

The fertilized females leave the cell with the bee which is hatching. As they are rarely found on drones, it is thought that they leave them after hatching. In the colony, the parasites may pass easily from one bee to another. It seems to be able to survive several days unattached to a bee. Transmission in the hive is therefore very easy and even when several bees are pollinating one flower.

The egg laying stops in autumn; the old females die then and the young hibernate in the bees and recommence laying in spring. They can live from two to three months in summer and six to eight months in winter.

The parasite ridden broodcomb suffers the development, but only dies when there is massive infestation; the broodcomb appears spread along the honeycombs then, as in the case of European Brood Disease. The bees are less lively, their life span is shortened, they are smaller, with deformities or irregularities on the wings, legs or other parts of the body.

Spread of Varroa

One third or ¼ of bees are carriers of parasites of which the beekeeper can usually observe symptoms. One can observe, near the exit of a hive, bees in a distressed condition, as they turn over on their backs, try to fly off again and falling often to the ground where they die.

The number of mites per colony may range from several dozen to more than 10 000. Colonies which are badly effected weaken and die off quickly, most frequently in the autumn, when the number of the mites is at its peak, or during the winter through the increased activity which produces an increased consumption of food, followed by diarrhoea. They frequently try to 'get out' of the hive by swarming.

The amount of time involved in a hive becoming seriously affected varies; between three and seven years. In the first two years, there is practically no sign of the disease. It is in the 3rd year that 80 per cent of the colonies perish, according to the information from Roumania.

The Russian, Roumanian and Bulgarian reports allow for evaluation of the losses which have been suffered so far as about 200 000 colonies.

In the very first place, it is the beekeeper who spreads the disease. Current beekeeping practices; the strengthening of a colony by the addition of a brood frame and bees, uniting and division of colonies, buying and selling of queens, batches of bees and of colonies, all contribute to the spreading of the disease from colony to colony.

It is also necessary to quote bee theft, bee drift, swarming and migratory beekeeping, especially in overpopulated areas, as important sources of contamination. The parasite can even be transmitted from bee to bee during cross pollination on a single flower.

Treatment

There is no treatment available which is 100 per cent effective against Varroa.

In the USSR, a new outbreak in an area not previously known to be contaminated means the destruction of all colonies in that area. Despite these drastic measures, the spread of the disease is unchecked.

According to Professor Poltev from Moscow, who has been studying Varroa for over 10 years, none of the 23 specialized products tried in the contaminated areas has given complete satisfaction to date.

In the countries apparently still 'untouched' by the disease, such as New Zealand the sole means of fighting Varroa as soon as an outbreak is discovered is its immediate and total destruction by burning. (Dr Rousseau). These draconian measures are justified

in face of the danger. In cases of severe injury severe measures are necessary, for in order to gain a little it may be necessary to loose the lot.

But it is unlikely that the invasion of Varroa can be contained for long, because of the gaps in the health controls in certain areas, because of the individuality of the beekeeper, and because of his fear of declaring a disease in his own hives, and above all because of the black market and illegal importing of queens by tourist beekeepers bringing back a beekeeping souvenir from their trip abroad, and by those fanatical breeders convinced that what comes from somewhere else must be better than what they've got – without a thought for their beekeeping neighbours.

The example of acarine disease should make us pause to reflect; remember the rapid development of this disease since the beginning of the century. It is now widespread in the world and producing, despite a serious fight by the health authorities, serious economic losses.

It has seemed that when the disease gains a hold in an area, systematic destruction of the colonies are not followed by any success, because the following year numerous hives which were apparently healthy were struck again. Moreover, compensation for the destroyed hives comes very dear. It is necessary therefore to turn towards more biological means of control.

Conclusion

Varroa must be considered as a definite immediate threat and is very serious for New Zealand beekeeping. Controls, awareness, and a sense of professionalism amongst beekeepers will play a significant role.

BOOK REVIEW

THE COMPLETE HANDBOOK OF BEE-KEEPING

THIS BOOK is dressed in as beautiful dust jacket as ever delighted the eye of a beekeeper.

The easily read printing type, produced on heavy paper by good quality printing and the full colour dust jacket, all contribute towards an attractively produced book that would grace the shelves of the most fastidious book collector.

It is an excellent book for, as the writer of the preface says "those who keep bees to get a modest amount of honey and a lot of pleasure." Some of the more modern beekeeping techniques have been included in this newly revised edition of a book that has been used for reference and instruction since 1952.

A disappointing factor is the poverty of illustrations. On its 190 pages there are only about 80 drawings and pictures. Each page has a two inch white outer margin where many useful pictures could have helped the book to be as "complete" as its title claims it to be.

The picture of comb diseased with B.L. would be little help in identifying the disease and it is unfortunate that advice on treatment is included. It is illegal to medicate B L. in New Zealand.

"The Complete Handbook of Bee-Keeping" by Herbert Mace, — 192 pages — published by Ward Lock Limited, 116 Baker St. London.

Reviewed by Chris Dawson.

THE WONDERFUL WORLD OF HONEY -- A sugarless cookbook

HAVE YOU, like me, run out of sugar at that crucial moment when baking was essential and tried to substitute honey with only mediocre results?

Or, are you reading about the wonders of honey as a health food and beauty aid and wondering how to go about transforming your pantry away from the evils of refined sugar?

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With everything from salad dressings to sundaes, pies to Cleopatra's face pack, chutney to candy, Grandma's vinegar to Auld English meat, one can forgive the American spelling and lap up the hints for changing ones own recipes to honey, while still retaining their own unique qualities and best of all, successful results.

Allowances should be made for the American love of sweet foods (honey baked parsnips) and some few ingredients will require substitution (pecans mainly).

Joe Parkhill has taken 18 years to collect the information, 160 pages of it – good value for money – clearly printed on heavy paper with strong lie-flat binding.

He won the Golden Bee Award for the year's best publication on honey. When you are using your copy you will know why.

"The Wonderful World of Honey, A sugarless cookbook" — by Joe Parkhill, — 160 pages — lay-flat binding. Published by Cookbook Publishers, Inc., Kansas City, Kansas U.S.A. 66105.

Reviewed by Esther Chivers, Home Economist.

FEEDING SUGAR TO BEES

by Dr T.S.K. and Mrs M.P. Johansson (M92)

THREE ARTICLES from Bee World are now combined in this useful reprint. The first describes the general principles of feeding sugar or syrup, and the different types of feeders and their use. The second explains the various circumstances in which colonies should be fed, and gives details of the most successful methods. The final part deals with dry sugar and candy feeding.

The whole reprint provides the thorough coverage of the subject that we have learned to expect from the Johanssons. The price is $1.20, including surface postage.

A copy of this publication is available from the NBA Library, Box 423, Timaru.

THE POLLINATION OF CROPS BY BEES

by Dr J.B. Free and Dr I.H. Williams

THIS JOINT publication of IBRA and Apimondia is now available from the International Bee Research Association. It is an advisory bulletin for international use, describing the needs of crops for insect pollination. It suggests ways in which bees can fulfil these needs and gives information on colony management for pollination. 126 crops are listed, with their pollination requirements.

The price of the publication is $0.80, plus $0.25 to cover postage and packing.

Both reprints are available from International Bee Research Association, Hill House, Gerrards Cross, Bucks SL9 ONR, England.

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OTHER PUBLICATIONS

BEE CRAFT — Official (monthly) magazine of the British Beekeepers Association. Contains interesting and informative articles. Annual Subscription £2.50. Post free. The Secretary, 15 West Way, Copthorne Bank, Crawley, Sussex, RH10 3DS.

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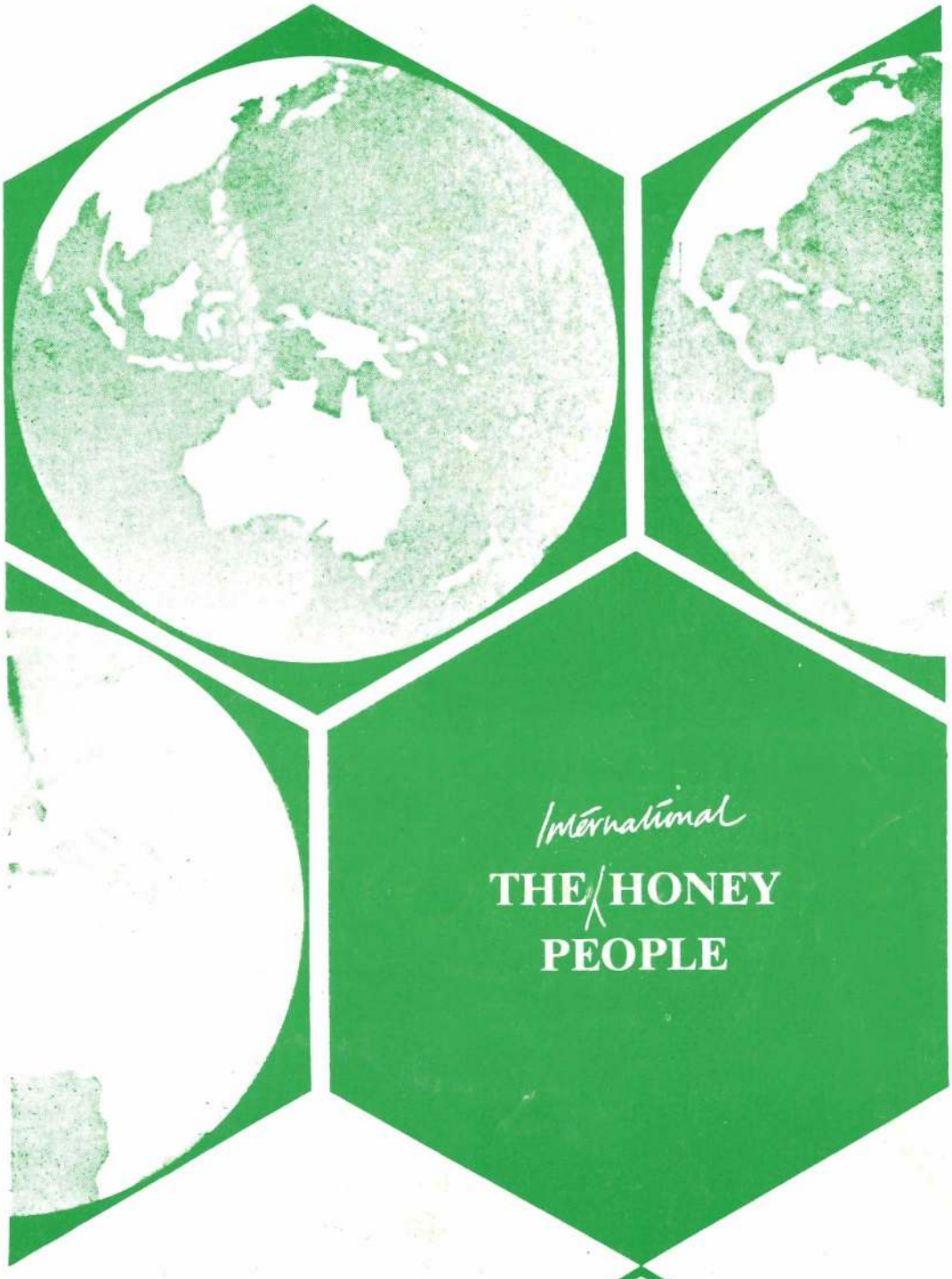

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