

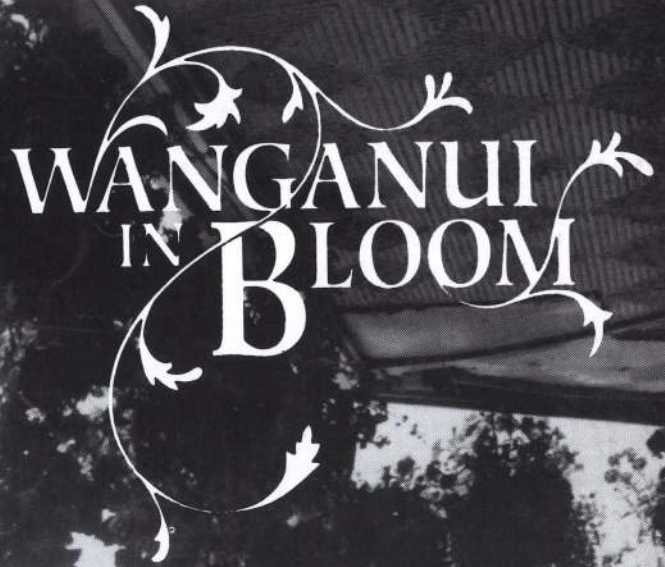
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A decorative graphic with the text 'WANGANUI IN BLOOM' in a serif font. The text is surrounded by ornate, white, vine-like flourishes that swirl around the letters. The background is a black and white photograph of a street scene in Wanganui, New Zealand, featuring a prominent white stone fountain in the foreground and a row of historic buildings along the street.

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The New Zealand BeeKeeper is published eleven times per annum; February to December. All copy should be with the Editor by the 1st day of the month of publication except for December when copy should be received by 20th November.

I would like to dedicate this month's President's Notes to the memory of Dudley Ward, a friend and former president of the National Beekeepers' Association.

Though there is an obituary for Dudley elsewhere in this magazine, I wanted to take this opportunity to pay tribute to someone who I respected and admired. Dudley was a real gentleman, a soft-spoken man who could be counted on to approach all issues with a fairness and consistency that was always appreciated.

I first met Dudley and Heather over 20 years ago, and spent several years working for Kintail Honey, both in New Zealand and Tonga. Dudley was never, ever secretive about his business or his beekeeping. You could always ask any question you wanted. I know I must have tried his patience some in those days, with a persistent questioning of why things were being done the way they were. Dudley never failed to reply with a

cheerful explanation.

During the last few years, I had the privilege of working with Dudley on the NBA Executive, both as a fellow member, and during his time as president. Again, Dudley was able through his quiet, conciliatory ways to keep at least a sense of decorum in an Executive of strong feelings and wills. He was always able to find the common ground that united us in our beekeeping, and kept reminding us of that, rather than the parts that we differed on. I can honestly say that I never left a meeting with the feeling that anyone had been stifled in expressing a viewpoint. It may be that the others did not agree with it, but Dudley always managed to allow people to have their say.

Dudley was always innovative and thorough in his beekeeping. My first contact with him involved the use of a dedicated queen rearing yard. Just like with all his other activities, Dudley believed in working 'to the book'. He

would never think about shorting the number of bees or feed necessary — it just wasn't a shortcut that would ever be considered.

Some may remember the setting up of Kintail Honey in Tonga. Though it never led to the end that Dudley sought, his whole purpose in trying to raise queens in Tonga was the feeling that a plentiful supply of August/September queens could make New Zealand beekeeping just that much more profitable.

Then, in more recent times, Dudley was instrumental in helping to establish reliable and reputable markets for bees and queens into Korea and Canada. Again, Dudley was always willing to share information and ideas with others. He recognised early on that such exporting would have to depend on a large number of other beekeepers. By treating them fairly, they would help to make the venture succeed.

I'm going to miss Dudley. He was a nice man and a good beekeeper.

Library news

Ms. Vivian M. Butz Huryn who has completed a research project at Otago University for the DOC has thoughtfully given a copy of the report and some papers to the library before returning to her country, Canada. Many thanks Vivian and all the very best wishes of the New Zealand Beekeepers go with you.

Beekeeping and Conservation Values of Protected Natural Areas: 166pp, 1996, N.Z. by Henrik Moller and Vivian Butz Huryn.

This report is the result of extensive research as to how and to what extent honey-bees affect our native flora and fauna, especially that present in our national parks and reserves. A valuable

document for DOC but equally for the beekeeping industry for it has established many facts and it does away with some misconceptions as to honey-bees severely causing the spread of problem weeds and the competition for nectar detrimental to the well-being of native birds.

An assessment of the Contribution of Honey-Bees to Weed Reproduction in New Zealand Protected Natural Areas by Vivian Butz Huryn and Henrik Moller. 1995, 12pp, N.Z.

Use of Native New Zealand Plants by Honey-Bees, a review. 1995, 16pp, N.Z. by Vivian Butz Huryn.

Are you a Member?

One of the commonly asked questions to this office is am I a member of the NBA as I don't keep bees?

The answer is, if you pay a Hive Levy to the association, or you subscribe to *The New Zealand BeeKeeper Magazine* you are a member of the Association and you take advantage of the member benefits that are offered through your magazine.

Harry Brown

STOP PRESS!

The scrutineer has just confirmed. Our industry has said

YES!

To Commodities Levy. Full details in the June issue or phone your nearest Executive Member

Front cover...
Wanganui, host city for this year's National Beekeepers' Conference, showing off some of its nearly 1000 hanging baskets.
Photo credit — Wanganui District Council

The New Zealand BeeKeeper
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DUDLEY LAWRENCE WARD

1925 — 1996

Dudley Ward passed away peacefully at home on April 4 surrounded by his family, eventually losing his six year battle with leukaemia.

Dudley was born and bred in the Whangaehu Valley, east of Masterton in the Wairarapa. He was the eldest of seven children and grew up on the family farm attending the local primary school and Wairarapa College, where he completed an agriculture course and was a member of the ATC. On leaving school Dudley joined the RNZAF training as a fighter pilot, but the war ended before he was posted overseas. Love of flying remained one of Dudley's enduring passions.

1947 was a good year that changed his life in two ways. Firstly he met and became engaged to Heather, and secondly he bought the Dannevirke beekeeping business of A.J. Smith. In January 1948 Dudley and Heather were married and began life together in a caravan until the house at Guy Street was built. The business grew with the purchase of additional hives from Jack Dale in the early 1950's.

In 1962 Dudley was elected to the National Executive for his first period of service to the industry.

James, his eldest son joined Dudley in the business in 1970. Craig and Grant joined in turn and then left beekeeping for other careers.

In 1971 Dudley and Heather were invited to set up a queen rearing business in Tonga in partnership with the government



of Tonga and local shareholders. Unfortunately the discovery of a mite not present in New Zealand prevented the business from following its original planned course but the association was maintained until the business was handed over to Tongan interests in 1985.

By this time James had set up a second base of operation at Takapau and the local business continued to expand. Dudley, together with Heather, attended a number of Apimondia Conferences in various parts of the world and made enduring and valued friendships among beekeepers from all parts of the world.

Dudley's life did not revolve solely around beekeeping; his community interests were many and varied and he served on the local school, hospital and Rahiri Home boards for many years. He was a long

serving Rotarian and received the Paul Harris Award from Rotary, he was also an Elder for 35 years with the Knox Presbyterian Church.

Above all he was a family man who made quality time available for his family.

Dudley again was elected to the National Executive in 1983 and to the office of National President in 1990. He served in this office for three years before retiring from national affairs in 1993. This three year period was a time of considerable stress within the industry, with government funding for AFB control terminated and the industry faced with legislative changes to both its funding base and to the Apiaries Act. This involved several visits to select committees and the Caucus Agriculture Committee, the preparation of numerous submissions on many topics from Honey Imports to the Biosecurity Act.

Throughout this period Dudley maintained a steady hand on the tiller and kept the industry together as it faced problem after problem. He had a gentle but firm control of meetings and the ability to arrive at a workable consensus from widely diverging initial viewpoints.

The industry as a whole is the poorer for his passing.

To Heather, James, Craig Grant and Kirsty and their families our sincere condolences, we mourn with you the passing of this gentle man.

*Thank you Bob Wotherspoon
for the photo*

Marketing

* Honey goes to town with New Zealand food retailers

Our major marketing activity during April was focused on the National Association of Retail Grocers' Conference. This Conference represents the foodstuffs and Rattrays/Supervalu groups. Between those two organisations they account for more than half of the food retailed in New Zealand. They are a very, very important sector.

The organisation (named NARGON) holds an annual conference and this year my own company (Floyd Marketing) was contracted to develop and manage the conference as it was held in Marlborough.

The major theme of the conference was what we called the "decommodification of the categories". Readers of this BeeKeeper marketing column will be aware that this is a theme which we have been promoting heavily for honey. You will be pleased to note that honey's

"problems" are being enjoyed (I know that's not the right word) by many other producer groups.

The NZ Honey Industry was a major sponsor of the conference; in return for which we were the "exclusive breakfast spread". That was an interesting tactic for us to take; at the conference itself the 250 delegates were spread around a number of hotels and motels in the central Blenheim area but the conference venue had a large trade display area and a conference restaurant was created in that building.

Delegates were brought to the conference venue for breakfast and instead of the traditional array of jams plus "a honey", delegates were instead greeted with a selection of New Zealand honeys; and jams were specifically excluded. It went down surprisingly well. Only one delegate remarked to me that she missed her marmalade and I suggested that an appropriate honey to

replace the marmalade for her if she liked a slightly bitter marmalade, would be the manuka honey. If not, she would enjoy the tawari. She and I then got into discussion about how she found it amazing to suddenly think of honey as being a whole range of totally different products (exactly the message that we as a honey industry need to get through to these people).

So breakfast went well!

Delegates also enjoyed honey in various menus during the weekend, but the honey industry's major involvement, was to be part of a full afternoon of "Sensory Evaluation". Once again readers of the column will be familiar with our tactic of carrying out blind tastings of honeys with various groups, chefs, foodwriters etc.

Building on that honey work, we developed an afternoon where delegates took part in blind tastings and questions

Continued on page 5

Continued from page 4

about wine, butters, beers, cheeses, coffees and honeys. The afternoon was an outstanding success. Delegates commented how (a) they learned so much about what they thought were just basic products, and (b), they thoroughly enjoyed the occasion.

For the honey session I gave a brief talk about the development of our strategies; why we were doing it; about how New Zealand was already the most successful honey consumer market in the world; but that we needed to create new opportunities for beekeepers, for food retailers, and for food and beverage manufacturers. The key to do this was to stop people thinking about honey per se, and to think about honeys each with their own values, and therefore with their own potential price and profit margins.

The message was well received. I also suggested that immediately after conference retailers should go back and stand in the aisle opposite the honey/jam session and look at where they can create more space for different types of honeys.

So there you are, if you are at the point in your own brand marketing where you can offer regional or national unique honey varieties, it's time to start thinking about making an approach to these food groups. They are starting to realise that honey does have some unique retail opportunities. But now we need innovative and assertive honey marketers to pick up on the niche opportunities that are starting to be created, capitalise on them, and help to grow the whole honey category to the benefit of everyone.

For the Sensory Evaluation Exercise delegates were given three little tasting pottles of honey. They were in fact Rewarewa, Kamahi and Honeydew. Note that delegates had already been enjoying Pohutakawa, Manuka and Tawari at breakfast.

We gave four options to describe the aromas of the three honeys and we gave four options to describe the flavours of the three honeys. Delegates working in teams of five had to try and decide which aroma description and which flavour description best suited either honey variety 1, 2, or 3. (**see right**)

The answers were very interesting. Most people had heard of manuka, but the answers to the ailment include the following:

Common cold, asthma, heart disease, arthritis (the majority of people believed that manuka was good for arthritis), infections, muscular dystrophy, cancer and four teams who had heard about the stomach ulcer work at Waikato University.

One team enthusiastically believed

that a combination of manuka and Royal Jelly cured "arthritis, cancer and aids". Their enthusiasm to create a wonder product was gently ignored in the judging.

AND, MOST IMPORTANT RESULT FROM THE QUIZ: Every delegate accepted that if honey prices went up, demand would stay the same! That's a tremendous vote of confidence by major New Zealand retailers in the strength of customer loyalty to New Zealand honeys... over to you how you use it!!!

For the record the Champion Honey Testing Team at conference was won by supermarket owner Brian Newbury and his team from Christchurch. So if any of you know Brian and are in his supermarket, you may like to congratulate him on his honey acumen.

Members of the winning team each won a bottle of Marlborough Honey Comb Liqueur plus a superbly presented beeswax candle and a hand crafted, wood turned honey serving stick.

We will be following up on the publicity created at the NARGON Conference with

representations to retail groups during the year, but what is needed now is for more honey marketers to capitalise on the opportunity by marketing varietal honeys. Remember it is not necessary to market a monofloral honey. I think the real potential is in marketing for example, a Rewarewa/Tawari, or a Manuka/Kamahi. What is important is to get away from the ubiquitous "blob blend" descriptions that have dominated honey packaging for literally generations.

The other unique benefit of being a major sponsor at the NARGON Conference is that most of New Zealand's major food and beverage manufacturers also attend conference. As a result we were able to talk to them about some of the advantages that honey has as a manufacturing agreement. We will be following up on contacts made at conference with those companies.

That's all for now. Don't forget to send us the names of companies you want entered in the 1996 NZ Honey Innovation Awards.

Regards, Bill Floyd

Those options are set out below and you may like to try that flavour and aroma matching experiment for yourself. We then had two general questions. These are detailed below as follows:

NEW ZEALAND HONEYS

Pure sweet magic from sunshine, flowers and the honey-bee

NARGON Conference, Sensory Evaluation Exercise

I Which honey (#1, #2 or #3) best fits the descriptions below?

Note, honey aromas can be fleeting, depending on the variety and especially with a small volume, keep the cap on when you're not sampling.

AROMA

Intense, herbaceous, hints of geraniums and dandelions, marmaladey	1	2	3
Musty, damp leaves, salty seaweed	1	2	3
Musky, mineral, citrus, Christmas-cakey	1	2	3
Lactic, complex hints of shearing sheds and old saddles	1	2	3

FLAVOUR

Slightly bitter, hint of licorice	1	2	3
Treacly, Christmas cake	1	2	3
Clean, rich, balanced, buttery	1	2	3
Musky, rosehip syrup	1	2	3

II General question

1 A New Zealand honey has received international publicity for its potential healing properties for one of the world's most "expensive" ailments:

What is the honey type? _____

What is the ailment? _____

2 There is an international shortage of honey in the world. Honey prices paid to New Zealand beekeepers have risen more than 20% in the last three months (and could rise further).

Research commissioned by the New Zealand Honey Industry has looked at whether honey consumption is affected by price. What do you think the result was?

Will honey demand stay constant even if the price has to go up?

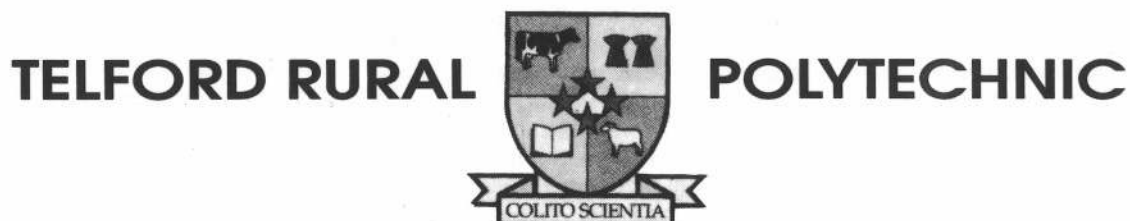
Yes _____ No _____

Thanks for enjoying our honeys

The NZ Honey Food & Ingredient Advisory Service

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Schools taking part in bee education

By Nick McKenzie, Apiculture Tutor, Telford Rural Polytechnic

Schools have definitely taken an interest in beekeeping in the past year, as we at Telford Rural Polytechnic are finding out, and likewise no doubt many other beekeepers across New Zealand.

The appeal is from both secondary and primary schools and teachers are enjoying the great interest apiculture has when teaching it to the students.

This year, seven local South Otago schools are using bees and beekeeping as a subject in their classes by using the School Education Kits and by resources supplied by us here at Telford, eg. glass hive, textbooks and other materials teachers find that they can use in their classrooms. Five of these schools have come to the Telford apiculture unit as a field trip as part of their learning. At Telford, the students, teachers and parents are all shown three main areas.

First part is a protective equipment session, including beeveils, gloves, hive tool and smoker. This is when some students enjoy dressing up and looking like a true beekeeper. Second area is the design of the hive, including lid, bottom board, excluder, brood nests, honey supers and the frames inside.

Thirdly, and most important, we look at all the bee products we can produce from our hives, including propolis, royal jelly, pollen, beeswax and honey, as well as a tour around the honey extracting plant, where the students can see honey being processed and drummed up for sale. They also receive a small poly jar of liquid

honey to take home. So these field trips should all help do their part in the road of promoting honey and other bee products in New Zealand.

So far, approximately 250 students have had "bees" taught at their schools and about 200 have come to Telford for a field trip. This is not including teachers and parents, as well as many other schools which come to Telford in general and spend some of their time at the apiculture unit.

Most of the schools would like to come back next year, especially when it is an extracting session, and others are showing interest in the subject.

One minor problem I had last year was on the odd occasion, schools would start their teaching programmes of beekeeping without letting us know, which is fine, but then contact us for help, wanting to see extraction of honey and/or needing our glass hive, but unfortunately in the winter time and we were long finished extracting and there is nothing to see in a glass hive regarding brood and drones.

But this year, all schools have got in early and have made the last two months very busy but enjoyable for us.

One of the science teachers at South Otago High School had a neat addition to the wagtail dance game in the Education Kit by splitting her class into groups and having one member from each group "act" out the bee dance which

in turn the rest of the group had to search for the "sweet treat" somewhere in the school grounds.

As for Telford's other involvement with schools on a more formal level, there is a programme out now called STAR which is for secondary schools. This allows students to study polytechnic and university courses while still at high school.

There are two high schools currently doing the bee course, Oxford Area School in North Canterbury and Waiopahu College north of Wellington. 20 students in total are involved. Each student works through the first four modules over a period of a year at their school. After they have completed this, he/she can then if they so wish, come to Telford or finish the course by correspondence.

There are another three schools looking at running this programme with us next year and if anyone knows of a school interested, please contact us.

Finally, good news for our students working on, or thinking of doing the correspondence course. Lately a party of industry people and Telford staff are working on reviewing the certificate in Apiculture course, the ideas being to increase units on the National Qualifications Framework, which will mean in time, the apiculture course will be a national qualification that is recognised internationally.

Effects of sprays on bees to be detailed

Beekeepers throughout Hawke's Bay are already putting plans in place to ensure next season's honey extraction is as good as this year.

National Beekeepers Association executive secretary Harry Brown said the main thrust this season would be educating people about the disastrous effect sprays have on bees.

"Our industry in Hawke's Bay had very serious losses of bees due to spray. We will initially try education before we consider prosecution of users," said Mr Brown.

He said bees were excellent pollinators which were beneficial to the horticultural industry in Hawke's Bay and a significant amount of beekeepers incomes came from bees being used as pollinators.

Mr Brown said consultation with different sector leaders about the effect of sprays on bees would be one step towards educating people.

"We see some positive signs with all honey starting to increase in price. This

will certainly start to increase the security of our industry as with all agriculture sectors of our economy."

Forestry was also threatening the industry as land once covered in floral sources was disappearing which meant beekeepers had to travel further to find sources of food for their bees.

Mr Brown said beekeepers in Hawke's Bay had fared better than those in Northland and Waikato who were affected by wet conditions and Canterbury beekeepers had a disastrous season due to extreme weather conditions. While some hives were flooded others in Canterbury were affected by drought conditions.

Hawke's Bay bees were given an extra boost with a flourishing thistle crop. The total saleable crop was assessed by the Ministry of Agriculture as 8047 tonnes, which averaged 27.5kg of honey compared to last year's record of 40.8kg per hive.

Of that 1200 tonnes were sourced from Hawke's Bay.

Do bees attack grapes?

A call from Wanganui.

A quick call to Cliff Van Eaton MAF.

The biggest pest with grapes are birds, followed by wasps. Bees will only feed on grapes when someone has broken the skin for them, their mandrills are not strong enough to pierce the skin.

Thank you Cliff

Beekeeping memoirs

By R.J. Mossop

At the recent Waikato Field Day, Russell Berry suggested to me that some of the older beekeepers should contribute an article to the New Zealand BeeKeeper. At the time I could not think of anything worthy of mention in the Beekeeper, but after some consideration, I thought of one or two little things that happened, that may be of interest to Beekeepers.

Many men I have noticed, take on beekeeping for all sorts of reasons. Their father may have been a beekeeper, or they wanted a change from their boring job, or to do their own thing. Perhaps a new life style, or for economic reasons, i.e. they wanted to get rich, or simply for a challenge. Well my reason was for none of these. I became a beekeeper because I did not want my head blown off with a double-barrelled shot gun.

A very good reason I thought at the time. Perhaps I should explain how this came about.

On the 7th July 1946, I along with my wife Noeline and two very small boys, arrived at the Waharoa Dried Milk Factory to take on a new job as shift engineer. Housing was scarce as hens teeth, so we shifted into a small cottage for four months, until a better house became available. When one of the other shift engineers retired, Noeline and I were given his house. It was a big house at the end of a grass lane about a mile from my work. But there was a catch!

At that time of the year the power house was working all the time, with four shift engineers, four firemen and the Chief Engineer, Mr Neil McLean, who was the best Chief Engineer I ever served under. We supplied steam electricity and water to the Dried Milk Factory and a large Butter Factory. The steam engine was a large vertical two-cylinder compound with the low pressure cylinder about two and a half feet in diameter. The engine was about ten feet high. It went without stopping for about four months. It was not the sort of engine any beekeeper would want in his truck. When I was on dayshift the Chief's daughter Cathy would sometimes bring something over for her father. She was a good looking girl about sixteen and had a lovely smile. This same girl later became Governor General and is now known as Dame Catherine Tizard.

Back to the catch. My work at night meant leaving my wife at home all night. One morning when I arrived home at 4.00am I found Noeline very upset. She and the

children had been kept awake all night by some men and women who arrived in a wagon drawn by two horses. The wagon was loaded not only with people but also with kegs of beer. I was furious. We did not have a phone in the house to ring for help. In 1946 you had to wait several years before you got one. There was only one thing to do. I had a single-shot .22 rifle that Noeline was good at target shooting with, but we felt something bigger and louder would be more appropriate. So with a pocket full of shotgun shells, we went out the back and Noeline had a bit of shooting practice. I told her not to pull both triggers at once, and demonstrated what would happen if she did. The idea was to put one shot through the door or window and save the other barrel. I thought a frightened woman with a loaded shot gun in her hands could be dangerous. Little did I realise how dangerous! When I came home next morning I would not have been too surprised to find a lot of blood on the lawn. As arranged I would tap on the window, but was never sure if my wife would jump out of bed and fire both barrels through the window. Then it would be my blood

on the lawn. I had already had an eyeball to eyeball discussion with the Matamata taxi driver who was taking grog up to these people. Things were getting a bit out of hand.

It was at this time I had a brilliant idea - Beehives. I remembered how fast I ran when I pushed sticks in the entrance of Uncle Bill's hive in Taranaki. I found a Beekeeper, Ray Clark of Matamata and explained the situation, He and his helper George Wilson put two beehives on the spot where the horses stopped and we waited and waited.

Noeline reported that one evening the horses came up the lane at a slow walk, and left at a fast gallop. They never came back again. This introduction to beehives was the beginning of my beekeeping career.

We were in that house for fourteen years. We went in with two small boys and came away with four young sons and one daughter. Our daughter now looks after the Honey Shop that her mother looked after for twenty-eight years.



Two semi-retired commercial beekeepers — Ron Mossop (left) discussing a honey pump from Ceracell with Dudley Lorimer (right).

Honey-bees introduction to New Zealand

This article taken from an old newspaper explains the introduction of honey-bees to New Zealand.

The question when and by whom honey-bees were first introduced to New Zealand has recently been discussed at length in some of our contemporaries, and the following interesting letter on the subject has been addressed to us:—

“Willys-at-Heath, Crockham Hill, Kent, England. October 1895.

Sir,

Knowing the interest you take in matters relating to the early days of the colony, will you allow a space in your journal for a copy of the enclosed photograph of a silver medal, now in my possession and presented to my mother, Mrs Thomas Allom, by the late Prince Consort in the year 1845.

“The medal was struck and given to her by the ‘Royal Society of Arts and Commerce’, in recognition of her enterprise, and the great benefit she had conferred on the colony of New Zealand by the introduction of bees. I well remember the months of anxious planning and experimenting with bees on the top of our house in Bloomsbury, carried on by her, before she perfected her scheme for their safe transit.

The special hive containing the bees was made under her instructions, by Messrs Neighbour and Sons, of Holborn.

It was placed under the care of Miss Wakefield, daughter of Colonel William

Wakefield (founder of the colony of Wellington), into whose hands she safely delivered them. In due course of time the first piece of beeswax made by these bees was sent home to England to Mrs Allom, who presented it to the ‘Royal Society of Arts’, with a small model showing the way in which they had travelled; and we heard the bees had been a great source of interest to the passengers in the vessel on which they went out, as they could watch their feeding daily.

“I believe that an attempt was made about the year 1842 by the Rev. W. C. Cotton to take out bees, but owing to a severe storm in the Channel they were thrown overboard at Plymouth. — I am, &c., Amy G Storr (nee Allom).”

Mr I Hopkins, of Auckland, who has made very searching enquiries into the question, states in a letter of the *New Zealand Farmer* that neither Mrs Allom nor Mr Cotton was the first to introduce bees to New Zealand. At present the record stands thus:— Lady Hobson landed bees from New South Wales at Bay of Islands early in 1840; the Rev. W.C. Cotton landed some at the same place in the first half of 1842 (the *British Bee Journal* of January 1, 1880, states that Mr Cotton embarked at Plymouth on Dec. 30, 1841, taking with him four stocks of bees, and subsequently reported that one stock had increased to twenty-six in one year). Mrs Allom’s bees arrived at Nelson, it is believed, early in 1843. Mr Hopkins

is investigating a prior claim to that of Lady Hobson.

The notification by the secretary of the Royal Society to Mrs Allom is dated London, May 23, 1845, and is as follows:—“Madam, — I have the pleasure to inform you that the society have awarded you their silver Isis medal for your communication respecting your successful introduction of bees into New Zealand.

Mr Albert Allom, of Tongaparutu, Taranaki, a grandson of Mrs Allom, is also making inquiries into this interesting question.

Thanks to Dougal MacKintosh.



Society of Arts Medal presented to Mrs Thomas Allom for introduction of bees to New Zealand.



Waikato Branch Field Day at Bryce Hooten’s, 23.3.1996. Two Waikato beekeepers Bryce Hooten — without sight and Dan Hanson — in wheelchair for 50 years, working beehives while other members of branch look on.

Plaque commemorates scientific breakthrough

Murray Reid, National Manager Apiculture, MQM Hamilton

Picture this scene. The year is January 1946, the location a scrubby valley at Pongakawa in the Bay of Plenty. A man is struggling through the scrub and stopping every now and then to examine a pretty wooden shrub with dark glossy leaves. He's been doing this for a year or two but a toxic honey poisoning in 1945 has given his mission a new urgency. He feels he may have found the missing link, a link that has concerned all beekeepers in the top half of the north island since 1878.

And what was the missing link and why this area. Well, the problem was toxic honey but no-one knew where it came from. People knew that bush honey from the Coromandel and Bay of Plenty was particularly suspect and Isaac Hopkins, the first government Apiculture Officer suspected Rangiora (*Brachyglottis sp*) and swamp buttercup as the cause. He was wrong and it was not until the late 1940's and several poisonings later that Roy Patterson, Apiary Instructor, Hamilton, began to get involved. He worked logically on the problem by first tracing the poison honey back to the beekeeper and to the apiary. He then set

up experimental hives and took honey and pollen samples every two weeks and sent these to Trevor Palmer-Jones at Wallaceville for testing. But all the tests were negative until February 1946. By then Professor Maurice Sutherland, a chemist at DSIR in Auckland had isolated crystalline mellitoxin (renamed hyenanchin in 1966) from the suspect honey. It seemed that tutu (*Coriara arborea*) might be the culprit as it was known to be toxic to stock but all the pollen and nectar which could have come from tutu was non-toxic. Birds were seen to collect and eat the berries too with no ill effects. Toxic honey production was also very sporadic and didn't occur every year, or throughout the honey season, which could suggest there was more than one plant causing the problem.

While carrying out further field checks Roy noticed leaf hopper insects on the tutu bushes and a sticky honeydew and decided to collect branches of tutu and the insects for further testing. And bingo, Professor Sutherland extracted hyenanchin from the sap and also honey produced late in the season. Entomologists identified the insects as the

passion vine hopper (*Scolypopa australis*) and the link had been found.

In recognition of the contribution Roy Patterson made to solving the toxic honey riddle Professor Maurice Sutherland has generously donated memorial plaques to the NBA and MAF. The plaques also recognise the original work of Professor Sutherland himself in identifying the toxic chemicals and linking them to tutu as the source.

The efforts of Roy Patterson and Professor Sutherland and others has led directly to the current management system adopted by the NBA, which if adhered to, offers protection to the beekeepers and the public.

The MAF plaque is hung in the MAF Quality Management headquarters at Ruakura in a historic building called the Homestead. Professor Sutherland has also donated A\$300 towards a "living memorial" in the form of a beekeeping scholarship for study at Telford Rural Polytechnic. The NBA is seeking support from its members to add to this scholarship.

Visual Hives For Sale

Very experienced beekeepers learn from bees through the looking glass.

Your V.H. consist of three vertically stacked frames, with clear glass on both sides so the queen can be viewed at all times.

The V.H. can be placed in any room of your house or shed with an exit pipe through the wall or window pane.

Instruction pamphlet provided.

Kitset: \$112.30

Assembled \$168.75

Three framed Nuc of quiet bees \$56.25 (GST incl.)

Plus courier charges

Orders and enquiries to:-

Allan Churcher, Y-Rapa Apiaries,
12 Revans Street, Featherston.

Phone: (06) 308-8148

Very experienced beekeepers learn from visual hives

Having viewed many visual hives over the years, they all seem to fail to show the best of the inside working of the brood in the nest; eg. pollen dances right on top of pollen store in the combs, queen in action in the centre of the brood nest. Over a period of several years, experimental arrangements of combs to reveal all these features led us to have a vertical section from the middle of a three storey hive. This arrangement allows all to be revealed that can be seen with the naked eye.



The number of seconds it will take your queen to lay each egg. Sometimes the balling of a newly introduced queen from a queen cage. The queen, being fed and being attended to by escorts. How the queen lays an expanding pattern of brood on both sides of the comb, by laying on alternate sides intermittently, to keep the brood back to back. See the swarm process, and how the new queen programmes with pheromons, the workers to tear down the unwanted cells. The fallacy of the queen stinging unhatched queens goes down the plug hole. Watch the supersedure process with protected queen cells. The workers hatching, nursing and preening each other. Pollen collectors off loading into pollen cells. Chaining to produce wax, and building of the comb. How they enter cells for the winter cluster to conserve room and utilise heated air.

Down side of Visual Hives: Due to the fact of heat loss through the glass, they have to be fed through the feed bottle or given extra frames of honey. The V.H. can be managed in place or be removed and worked on outside the house. Escaped workers will return to the entrance, exiting through open windows, if the V.H. is left inside.

Mounting V.H.: Choose a place at right angles to an exit wall with vision from both

sides, that is not hampering traffic movement around the house. The exit hole needs to be in a less used place outside the house.

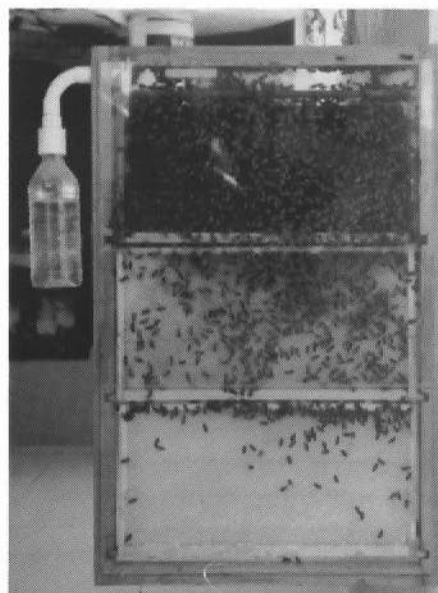
Above a bench near a phone so that you can watch your V.H. everytime you're on the phone and your callers can listen to the buzz of your new household pets at work. Hung with screw hooks and wires from the ceiling, with a small exit hole through gib and outside wall.

Exemption permit is needed from the

council to have a hive in a residential area and registration is required by MAF. The V.H. is the only hive that does not have to be opened to be checked for B.L. that can be thoroughly inspected in two minutes.

Three glass doors mounted on silicon hinges allow the removal of all frames to dewax and depopulate to maintain your clear vision for a year.

Children are fascinated for hours looking at their new pets and ask far more



questions than they do watching a fish tank.

Non beekeepers can have a V.H. in their home if they succond a local beekeeper for hive manipulation and inspection, or by themselves if they are willing to learn a little about beekeeping. If the hive doesn't swarm it may produce a few Ross Rounds of comb honey for the family in a good season.

The intention is to make a video in the future, as an instruction manual for the V.H. and then a film with interesting views; e.g. from the side of the cell, of nurses feeding grubs, from base of cells at workers cleaning, and of queen laying eggs looking in from the cell base, and maybe the mating of the queen with the drones.

The V.H. can be removed and transported to local schools for instructional talks to students of all ages and by beekeepers or for beekeeper meetings.

We have installed a V.H. in the Wairarapa College classroom for their agricultural department. They have four standard hives in this department for student instruction in apiculture under Mr Ian Trass. We have another in the Happy Honey Bee extraction room at Opaki, Masterton, under Mr Peter Ferris' supervision. Shops that sell our honey sometimes have a V.H. for customer observation and interest.

For about \$15.00 from The Warehouse a purchase of study glasses or a good magnifying glass, kept by your V.H. for better viewing, will give you an enlarged view of your subjects.

About a cup of sugar mixed with water per week will keep your hive topped up if you are low on fuel.

APOLOGY

New Zealand Beekeepers
Technical Library —
How it started and
Foundation Life Members

By Chris Dawson

Last month's Foundation
Life members should
have read: 21. David F.
Penrose, Southbridge,
Canterbury and NOT
Gore.

Our apologies to
Chris and David

In search of Father Petitjean's bees

Early history of New Zealand beekeeping

The father of New Zealand beekeeping was a remarkable man by the name of Isaac Hopkins who left our beekeeping industry with an impressive list of important accomplishments to which we are all happy beneficiaries.

* He championed the new Langstroth hive and we now enjoy the benefits of this virtual single standard within our industry.

* He had the foresight to realise the importance of Root's breakthrough comb foundation machine and imported the second machine to leave the USA.

His "The Australasian Bee Manual" became a standard text for beekeeping in the Southern Hemisphere.

In the four successive editions of his bee manual printed between 1881-1906 Hopkins detailed some of the early history of the introduction of honey-bees to New Zealand and Australia. In his fourth edition he finally credits Miss Bumby with the first successful introduction to New Zealand in the year 1839. Hopkins received correspondence from his many readers who would have been able to correct him on matters that were still within the living memory of some of them. This early history for the North Island was centred in Northland with Lady Hobson, Rev Taylor and Rev Cotton all receiving credit for introductions in the period between 1840-1842.

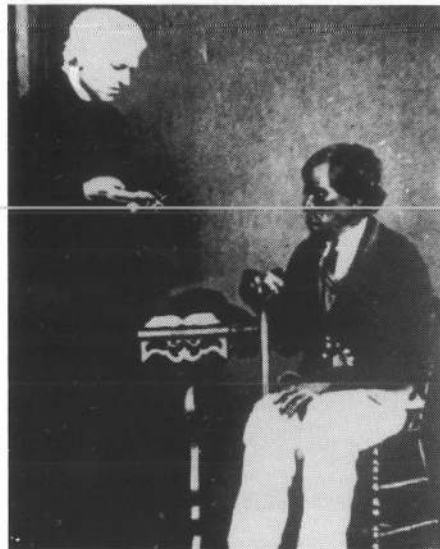
Surprising then that none of Hopkins correspondents appeared to have mentioned the role of the early French Catholic missionaries in bringing bees to this country at that same time period. He also fails to make mention of one William Brown of Browns Island off Auckland who is credited with importing two hives from Sydney in 1840.

Peter Barrett in his just printed highly recommended book "The Immigrant bees" makes reference to a mysterious 1845 account, discovered by Chris Dawson of Rangiora which gives credit to Bishop Pompallier for introducing bees to the Bay of Islands area and thereby helping to solve the problem of the lack of pollination especially as it related to introduced clover.

The question as to whether these early French Catholic missionaries had any impact upon the early introduction and spread of the European Honeybees takes another interesting turn with reading of some more recent linguistic research by Terry Duval. He points out that the French word for honey *miel* is the root word for the Maori gainword *miere* which is still used today in some tribal areas. The English gainword *honi* appears in both the Catholic and protestant bibles of the era

and therefore Duval argues that the *miere* gainword came as a result of the beekeeping of the French missionaries, not from their religious publications.

The quest for Pompallier's bees quickly has become a quest to unravel the mystery of Father Petitjean's bees. Bishop Pompallier obtained his missionaries from the then infant Society of Mary, that we know as the Marists. In 1839 Pompallier had established his headquarters at Kororaraka, present day Russell. His mission was funded from France and was fairly quickly into financial difficulty principally because of the



Bishop's inability to handle money wisely. The situation reached crisis point in 1842.

Pompallier was touring the Pacific and the mission ran out of money and credit from both the local Maori population and the Europeans. In July 1842 Father Petitjean was sent to Sydney on a begging mission to obtain help from the local Catholic community. A letter written from the Bay of Islands 9th November 1842 by Father Forest reads, "as arranged Fr. Petitjean went to Sydney a few days after your departure. Our great need, already well known in this town, has excited the compassion of many who would have helped us if they had had the means to do so. But they have made little impression on the rich who had to be besought very earnestly before they provided 300 pounds together with stores worth 100 pounds. Also the father has almost filled a ship with all sorts of animals, a little like Noah's Ark. He has bought us two cows, a good number of sheep, some pigeons, some bees," and I don't know what else!.....

Petitjean left Sydney returning to New Zealand on the brig Julia and landed at Russell on 14th September 1842. Petitjean makes no further mention of the bees or animals as far as I am aware, but

there is recorded the fact that in October of that year he and a Brother Basil undertook a most arduous overland trip to Whangaroa driving one heifer, three sheep and three lambs as a gift to the mission there. No doubt a small part of the "Noah's ark"

At this time it remains a mystery as to who took control of the bees. It is likely these skep hives performed as well as other early documented cases where many swarms were recorded as issuing from one stock in one season! The most important skill of the early skep beekeeper appears to have been the keen observation necessary to catch all the swarms!

The French language is probably the main reason that the story of Petitjean's honey-bees has remained outside the mainstream history of New Zealand beekeeping. The rivalry between the majority Protestant missionaries and the minority Catholics may have also influenced the early writing of Taylor and Cotton who were unlikely to give Pompallier credit for anything.

As the Marist archives, particularly those in Rome, are researched we can be sure that further references to bees will be discovered to add to the already fascinating account we have.

Did the Marists have an impact in further spreading bees around New Zealand? We know that by 1843 there were 22 Marist Priests, 14 Marist Brothers and seven lay helpers who had arrived in Northland. All were French. They travelled extensively throughout the hinterland of New Zealand. In many ways they were much more mobile than their Protestant rivals who would set up house and family and expect the Maoris to come to them. The linguistic evidence suggests they kept bees and a case can be made for the argument that beeswax would have been a prized asset for church use. Cotton in 1848 describes the presence of the so called French hive (*ruche a l'air libre*). It consisted of a square board 35cm and upwards standing on four legs, like a table, with rebates cut in the legs for shutters. These could be removed in fine still weather. "It is a beautiful sight when fully stocked, and when there are two or three tiers of these table shaped frames on top of each other". He gives a note of cautionary wisdom. "Take care that your breath does not fall upon the bees as you are taking down the shutters, or you will be stung".

Perhaps the question of later movements of bees throughout New Zealand is rather academic as there is some evidence that the honey-bee rapidly expanded into the

Continued on page 13

Continued from page 12

huge open available ecological niche that our native plants provided. The large number of swarms each hive sent forth was evidence of the potential that existed for the bees. Cotton in 1848 supports this view of the wonderful potential of New Zealand. He states, "I have known as many as 25 hives come from one in the course of 12 months; not all from the parent stock but standing to it in relation of children, grandchildren, great grandchildreneven to the fifth generation. He comments upon the rapid spread of feral colonies in the Bay of Islands saying that there was an abundance of hollow trees. "Many are now tenanted by bees and that honey in considerable quantities has been bought in by the Maoris for sale". The contention that the Maoris were New Zealand's first commercial beekeepers is also supported by observations by Hopkins. He comments that by the 1860's "bee nests in the bush were plentiful in those days". At that time the only honey he saw for sale was that sold by Maoris, "hawked about in kerosene tins. A conglomeration of honey, wax and bee grubs all mixed together". He goes on to say that occasionally strained honey, free from wax would be offered, "but it was generally believed (and with good reason) that the straining cloths used by the

Maoris were parts of discarded blankets that had served as body wrappers in the heyday of their usefulness" He suggests that the older wiser colonists were always reluctant purchasers!

Hopkins details the advancement into the 1870's which saw the first extensive settler box-hive apiary near Gisborne. The straining system involved dumping the cut combs into a large tank with a fixed strainer in the bottom. "When the drainings had well-nigh ceased, a man with bared feet tramped about on the combs to press out as much as possible of the remaining honey".

I leave you to make your choice. Bon appetite!

In conclusion, the historical evidence so far unearthed suggests that the Catholics were indeed the first to successfully introduce bees to the Bay of Islands in September of 1842. The hive that Lady Hobson landed in the Bay of Islands in 1840 seems to have died out and it was not until August 3rd 1843 that James Busby returned to New Zealand with bees. The fascinating account of the "Busby Bees" is currently being researched and written from the detailed account left in the journals of Rev Charles Cotton.

Bruce Stevenson, Kerikeri

PMS UPDATE

Very little is happening with the PMS at the moment. As the Apiaries Act is due to sunset in two months time and with insufficient time to get the PMS operating, common sense suggests that some Government announcement could be expected in the near future.

It would not be responsible of me to speculate on just what the above announcement may be but be assured the situation is being studied closely by the Disease Control Committee. I trust that soon I will have something positive to report.

Of course, the PMS for AFB is not the only PMS in limbo at the moment.

Terry Gavin, Chairman

RATCHET MISTAKE

An error was made in our insert that accompanied the NZ BeeKeeper last month. The 50mm, 9 metre & 6 metre tie downs were incorrectly advertised as 1200kg.

They are in fact **2200kg**.

The prices are again:

50mm, 9 metre, 2200kg \$33 +GST

(Usually \$54)

50mm, 6 metre, 2200kg \$32 +GST

(Usually \$49)

25mm, 6 metre, 350kg \$10 +GST

(Usually \$12)

Order 10x50mm ones and have your name etc woven in free.

CHEAPER PARAFFIN

The price of paraffin wax has recently reduced. In addition to that, we are running a special on it for four cartons or more.

Prices are per 28kg carton.

OLD PRICE:

\$82.13 +GST

NEW PRICE:

\$72.18 +GST

SPECIAL PRICE:

\$65.00 +GST

(Minimum 4 cartons for special price.)

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Progress with Biological control of wasps

By B.J. Donovan, Canterbury Agriculture and Science Centre, Lincoln

Part One — Introduction

Wasps have been a major enemy of beekeeping since the German wasp *Vespula germanica*, established and began spreading during the Second World War. During the 1980's the problem worsened with the invasion of the common wasp, *V. vulgaris*, which in many areas has built to much higher numbers than the German wasp, particularly in South Island honey dew beech forests. Since the first invasion of wasps more than half a century ago, beekeepers and others have sought for means of controlling wasps so that they no longer cause problems. Here I will outline progress with research towards controlling wasps by introducing insects that eat them, and also future plans, providing of course that funding is available.

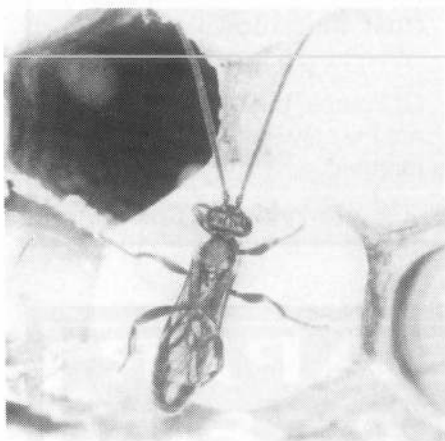


Fig 1. A female European wasp parasitoid, *Sphecophaga vesparum vesparum*, on wasp comb.

First introduction of *Sphecophaga vesparum burra*

Research on the possibility of controlling wasps by importing insects that would eat them began in 1978, when I visited the late Dr Roger Akre of Washington State University, U.S.A. He offered to send me living individuals of *Sphecophaga vesparum burra*, an ichneumonid parasitoid wasp that attacks wasp pupae in nests in North America. (Parasites don't usually kill their hosts immediately by feeding on them, eg. mosquitoes and fleas, whereas parasitoids do). Female wasp parasitoids lay eggs in to sealed cells, and from the eggs small larvae emerge which eat the developing wasp.

Parasitoids arrived in 1979, but unfortunately little was known anywhere in the world of their life-cycle, so breeding the insect proved to be somewhat difficult. To compound matters, all imported insects have to be raised in quarantine so that any enemies and diseases they may have can be eliminated before the insects are

released in the field, and quarantine conditions are never as natural as conditions outdoors. Also, the timing of the insects life cycle had to be re-adjusted to match the southern seasonal cycle.

Nevertheless, several generations of the parasitoid were raised in quarantine, and by 18 February 1980, a very limited experimental release of just 6 parasitoids had been made into a nest of German wasps on the DSIR research station at Lincoln. There was no attack on the wasps, but progress with parasitoid breeding in quarantine was sufficiently encouraging that the decision was taken to import another subspecies of the parasitoid, *S. v. vesparum*, from Europe.

Introduction of *Sphecophaga vesparum vesparum*

At this time the only wasp present in New Zealand of the type that attacks honey-bees was the German wasp, *Vespula germanica*, which occurs throughout Europe, so we thought that our best approach was to import a parasitoid from the same area.

So, during 1980-81, nearly 9000 cocoons of the European wasp parasitoid were imported from the Commonwealth Institute of Biological Control in Switzerland (Fig 1). The life-cycle of this parasitoid is almost the same as that of the North American parasitoid. During early 1983 I discovered that the common wasp *Vespula vulgaris* was established in Dunedin, and although its rapid spread over the country greatly increased the wasp problem, the occurrence of a second, more abundant host for our wasp parasitoid was a boon to our programme!

Host-range tests

In quarantine we raised sufficient female parasitoids to test whether they would lay eggs on other possible hosts such as the larvae or pupae in the sealed cells of leafcutting bees, bumble-bees and of course honey-bees. In one test two drone honey-bee cells were indeed parasitized! However, I had removed all workers from the comb so the brood was undefended, which of course is a situation which is rarely, if ever, found in nature.

Further, I had placed the parasitoids directly on to the cells to give them every possible chance to lay eggs.

In another and much more realistic test, I released female parasitoids into a flight cage attached to the front of a nucleus hive. Figure 2 shows what the bees did to the parasitoids! The parasitoids were observed frantically attempting to escape from the cage, but all were completely destroyed by the honey-bees.

These tests showed conclusively that only wasps would be attacked. However,

we can be even more certain that bees of all kinds are safer than our tests indicated, because never once in the Northern Hemisphere have any bees ever been attacked by the parasitoid.

Parasitoid release



Fig 2. Female European wasp parasitoids after contact with honey-bees in a cage attached to a nucleus hive.

By winter 1987 we had raised and released more than 30,000 overwintering European parasitoid cocoons over much of the South Island, and 1050 near Hamilton in the North Island.

During the late 1980's the old DSIR was subjected to the same financial squeeze that affected most of the public service, so in order to cover the cost of the wasp parasitoid project we had to solicit funding from whomever might have been having problems with wasps. Many beekeepers contributed funds, and in return you will have received a wooden box about a cubic foot in size which contained up to 1000 overwintering cocoons, each of which held one hibernating parasitoid prepupa (the resistant larval stage). Now, the life-cycle of the parasitoid is quite complicated, but the idea was that the box would provide the parasitoids with a safe haven within which they could develop to adults over the next four years. Each spring, parasitoids would fly from the box to seek out and attack nearby wasp nests.

Parasitoid establishment

How did this succeed then? Well, in 1988 we had really good news when ecologists working on wasps at Pelorus Bridge between Blenheim and Nelson, discovered parasitoids breeding in two nests of the common wasp *V. vulgaris*, one year after we had released 315 parasitoids nearby. In one nest 1034 developing wasps had been killed by the parasitoid, and in the other, 471. What is more, the nests had been poisoned on May 5 when still active and with the parasitoids still breeding in them. So if the nests had been left to die out

Continued on page 15

naturally, the number of wasps killed would have been a lot greater. Since then the percentage of nests attacked by the parasitoid at Pelorus Bridge has fluctuated between 3.4% and about 20%, with the overall trend going up. However, ecologists say that there has been no measurable decrease in numbers of nests, or numbers of wasps. This last summer though, the density of wasp nests appeared to be well down, but of course the parasitoid cannot be said to be responsible without appropriate research.



Fig 3. Worker/male comb of common wasps, *Vespula vulgaris*, from Okuku Hill, attacked by parasitoids, from a nest which died before producing new queens. Parasitoid cocoons, some of which have produced new adults, occupy some cells.

Widespread establishment in Canterbury foothills

Has the parasitoid attacked wasps anywhere else? To date about 250,000 parasitoids have been released in 1000+ release sites over much of the more human-populated areas of the country. More than 200,000 of these have been overwintering cocoons in release boxes, and the remainder were cocoons in wasp comb that was inserted directly in to wasp nests. In 1991 and 1993, a few parasitoids were found in one nest each year in Ashley Forest, which is just north of Christchurch. On the other hand, Nelson-based ecologists did not recover the parasitoid from about six sites which were searched fairly well, and another 20 or so sites from which some nests were examined.

But, beginning in March last year Mr Geoff Watts recovered the parasitoid from about 10% of wasp nests from a 30 km-long by 25 km-wide area of the foothills behind Christchurch, an area which includes Ashley Forest. The first liberation of parasitoids had been made 10 years earlier in Mt. Thomas, but in the following few years there were further liberations at a number of sites. There is no evidence as to whether the parasitoid has established from one or more of these liberations, but at a guess, several

establishments appear likely. If so, this suggests that there are probably many more establishment sites around the country.

Are parasitoids killing some nests?

Early that summer in the same area Mr Tom Penrose marked some nests near Okuku Hill. Several months later he found that they had died out, and what is more they had died at a time when they should have been at their peak wasp populations. When one nest was dug up, the first new queen cells had been formed, but no new queens had emerged.

I examined the nest carefully, and recovered 259 cocoons of the parasitoid. There were not enough parasitoids in the nest to have killed it by destroying the usual one developing wasp per parasitoid, but ecologists have evidence that somehow, just the presence of even one parasitoid in a nest can reduce the production of new queens to less than half the number produced by a normal nest. Perhaps the presence of several hundred parasitoids in a nest is sometimes sufficient to kill the nest before any new queens are produced?

This summer the parasitoid has again turned up in nests in the same area, and a new recovery has been made about 5 km from the closest attacked nest last year. There seems to be every possibility that regardless of whether or not the parasitoid has established from other release sites, it will eventually spread over most of the wasp-infested areas of at least the South Island. Of course the rate at which parasitoids establish in new areas will be greatly increased if parasitoids are liberated in the area. Already, because of the size of the areas over which the European parasitoid is established, it can be calculated that during winter there must be millions of overwintering parasitoid cocoons in the remnants of wasps nests — and for each cocoon, one developing wasp was destroyed.

Re-importation of *S. v. burra*

At Lincoln, the year before the old DSIR was dissolved at the end of June 1992, we once again imported the North American parasitoid *S. v. burra*. Further importations have been made in the last few years, and under a joint effort by myself and staff of Landcare Research Ltd. we now have a thriving population of this parasitoid in quarantine. This summer we have tested parasitoids on honey-bees, bumble-bees and leafcutting bees under a variety of conditions, to determine whether they would be parasitized. All tests have shown that the parasitoids do not attack these bees, so the next step is to build the population to the point where thousands are available for field release. If MAF gives approval for release, Landcare Research staff plan to make releases in two areas where the other

parasitoid is not known to be present, so that the effect of the new parasitoid on wasps can be followed in isolation.

Long-term plans

For the last three years the government science funding body, the Foundation for Research, Science and Technology, has funded me for one-third of my time to research information on new species of biological control agents against wasps. I have found that there are about a dozen other insect species in the Northern hemisphere which attack only wasps, and which seem to have a lot of potential for importation to New Zealand.

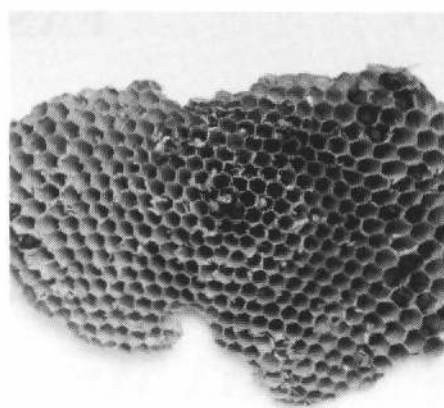


Fig 4. The only queen comb from the common wasp nest from Okuku Hill which was attacked by parasitoids. The central cells contain dead queen larvae. All cells were without larval meconia (faeces), which shows that the comb was too new to have produced new queens

Theoretical basis for biological control of wasps

The theoretical concepts underlying the biological control of social insects such as wasps, bees, ants and termites are still being developed, but one thought is that two different kinds of enemies operating in a nest might be more effective when together, than the sum of their effectiveness when alone. This is because each would disturb the 'morale' of a nest in a different way, so allowing the other enemy to multiply more rapidly. Thus, the more species of wasp enemies that we could establish in New Zealand, the greater the beneficial impact on wasps might be.

Also, it is a curiosity of the interaction of wasps and their enemies that although *V. germanica* ranges naturally across Europe and mainland Asia, and *V. vulgaris* is found over most of the Northern hemisphere, different enemies are found in different areas. If we were able to introduce most of these enemies, we could therefore subject wasps to a much greater biological attack pressure than they experience anywhere in their home range.

In the second instalment I will outline the biology of some of the new enemies that could be introduced to New Zealand.

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To my mind, the foul brood problem occurs in two major forms with variations in between. The first is when you have a foul brood problem which threatens the very financial viability of your operation (or if you only have a few hives, whether you have any left at the end of the year). The second and worse scenario obviously is when you have found some foul brood in your hives, or bought some hives which you know, or suspect, are riddled with foul brood (in other words you've bought some hives). If that sounds paranoid to you, it's fine by me, I am paranoid about foul brood and don't get to burn many hives because of it. In fact I quite enjoy finding foul brood in other peoples hives, because it reassures me I'm not getting lax and missing it and it tends to reinforce my paranoia about it in our own hives. Needless to say I just hate finding it in our own hives.

Theoretically, if your hives are clean to start off with you could go forever without any foul brood at all, even if you're the worst beekeeper in the country. But sooner or later the odds are that one or more of your hives is going to be infected by robbing out someone else's infected hives. This is where beekeeping skills and practices come in. Hives catch foul brood, beekeepers spread it. Take two boxes of honey off an infected hive, that's 20 bits of hardware all set to infect 20 hives, or rob the wets out first and well, it's exponential. Not all the hives infected come down with clinical foul brood either, it hangs around for years then appears during times of stress, particularly when you starve hives in the spring time. Putting hives into pollination is also a sure fire way of picking up the odd foul brood, but whether it's stress or picked up from another hive, I'm not sure, probably some of each.

So here's my formula for keeping foul brood at under 1 per 1000 on average:

Don't spread it. Don't encourage it. Don't leave it around. Keep good records of it. If in doubt, BURN it and Be helpful to your neighbours.

DON'T SPREAD IT. Check sealed brood in every hive every time you work it. Sometimes this just isn't practical or necessary, chucking another super on one week after you last checked them etc. but rules are made to be bent not broken. Never take anything from a hive without checking the brood: one frame where you haven't had any problems for the last couple of years and give it a more thorough check than usual. This is the most fundamental rule for keeping foul brood under control and I repeat, never take anything from a hive without checking the brood, not ever!

DON'T ENCOURAGE IT. By this I mean keeping stress, from all sources, such as feed shortages, shifting, robbing etc. to a minimum. Having a hygienic strain of bee, which will also reduce stress from nosema and chalk brood and generally not mucking them around by letting them rob out more than one load of wets per season or siting them in a shady swamp. Of course we can't be perfect but every little helps.

DON'T LEAVE IT LYING AROUND. This is not just a matter of disposing of infected hives quickly and cleanly but also of removing possibly infected material from hives. We have always had a policy of removing and melting down old black combs from the brood nest. We also repaint and paraffin boxes as they become untidy. If a yard keeps getting the odd foul brood for no obvious reason move it across the paddock. If that fails to cure the problem move your hives somewhere else as some localities have more foul brood than others. If you buy a box with a X, FB, BL or whatever on it give it the full heat and time paraffin treatment and if you see a box which is scorched on the inside for goodness sake burn it. I may be paranoid but scorched boxes and foul brood seem to go hand in hand, — they used to treat foul brood by burning the inside of the boxes a bit.

KEEP GOOD RECORDS OF IT. Actually it's a good idea to keep good records of everything but the least you need to know is where you've had it and when and where those hives have come from and gone to.

IF IN DOUBT, BURN IT. Some hives recover from light infections, — you shouldn't have left it long enough to recover, burn it. Sometimes you're not completely sure if it's foul brood — in which case ask a MAF advisor to recommend an expert to you, or burn it anyway if you're reasonably sure. Not all commercial, let alone amateur beekeepers are expert, as history has shown over and over again. Dead hives in particular, are notoriously difficult to tell. If you are unsure of a dead hive, remember it is better to burn one than 20 before you make up your mind. You can also send off a sample to be checked, modern science is wonderful, use it.

BE HELPFUL TO YOUR NEIGHBOURS. Once again this isn't a bad policy anyway, you never know when you might need a hand. Your neighbouring beekeepers are also a likely source of infection so it's in your own interests to go on inspections days, or to call in and check out a suspect hive when asked to, or to demonstrate at a field day. Some beekeepers haven't got the eye sight any longer to see foul brood properly and, in my opinion, shouldn't be

commercial beekeepers without full-time help but surely we can all help out the odd amateur with this sort of problem.

Which brings us to the problem of an aggro beekeeping neighbour who you suspect is giving you foul brood. If you can't negotiate the only thing you can do is to ring your local MAF advisor who will, in my experience, sort the problem out. But remember, they are bound by the laws of New Zealand and much as they may like to, they just can't stop a person keeping bees. Hopefully all the work the foul brood committee are putting in will make it harder for the ignorant, the careless or just plain hopeless to keep bees but I won't hold my breath. It's a bit like the gang problem, the obvious answer is to line them, their wives, girlfriends, children, associates and lawyers up against the wall and then shoot them (plus any trendy lefty civil libertarians that get in the way). Hey presto! No more gang problem, but such a solution would not be acceptable in today's ethical and political climate. I suspect the same applies to poor beekeepers. If we vote in a tiger, however gummy, the government will no doubt do its best to knock out the last two teeth and make free use of an elastrator, not on its tail either (they will probably use that to tie it up with).

So do your personal best to combat foul brood and also support the Executive over new legislation. A united front will get us further even if we don't agree with everything, the alternative is massive outbreaks of foul brood.

BUYING BEEHIVES WITH SOME FOUL BROOD. Have a foul brood clause in the contract so you don't end up paying for infected hives. We paraffin all boxes, floors and lids on hives that we buy, swapping the gear the bees are in with paraffined gear first round in spring. Be highly suspicious of gear which has been lying around unused for a long time. Burn the frames or make sure you use all the old used gear on the least number of hives and yards possible. Don't leave them lying around sooner or later you will think you need them, use them and then you'll be sorry. If the hives have a high percentage of foul brood knock them down to singles, melt out and then burn all the rest of the frames, paraffin the boxes and then start again.

I have no scientific basis for all these recommendations except for the fact we have run at less than 1 per 1000 for years and there are plenty of infected hives in our area. Some of what we are doing may be a waste of time but I for one am not going to take the risk of changing something that works.

Peter Berry

If you write a letter to the Editor, or have an article you want printed as an article, can you clearly mark it as such. In a recent issue I inadvertently published an article as a letter to the Editor and not as an article. My apologies to the contributor.

Thanks, Ed.

I am a beekeeper and I have 385 hives in Gorgan (in north of Iran). I have worked in beekeeping since 1988. My education is in Agricultural Engineering (majority wildlife and fishery). I am 28 years old.

As there isn't any serious support in beekeeping in Iran, I am looking to come to New Zealand for a job.

Can anyone help? Contact

*Aleem Nabighods
No.1, Valley 3
Takhty Ave.
Gorgan 49177
Iran*

Dear Sir,

It is almost irrelevant to promote the worth of the NBA in terms of its history. What should be taking place is informed discussion about its role, as a regulatory body, in the future.

I'm a bit slow. I admit it. often I speak out without full understanding (although that begs the question: who doesn't). Half-baked ideas, facts not quite accurate! I assure your readers that I have had my hand slapped on a very personal level concerning some of the content of my last letter, which denounced the proposed Pest Management Strategy, inferring conspiracy and crying slavery. Perhaps I should have remained silent, but alas it is not in my nature to do so.

The difficulty though, is that I felt as though something was not quite right and I have had trouble identifying that 'something'. Well the other day the light dawned. The thing that has been bugging me is that the **Function of the NBA is changing!** Through the enforced necessity of a Pest Management Strategy, it (the NBA) is becoming a regulatory or governing body. That is a very significant change.

Historically (as the Beekeepers in the April issue information bulletin stated), the NBA has educated, co-ordinated, lobbied, liaised with M.A.F., enabled interest group communication and generally served beekeepers. Good job well done? no question about it! While those functions will remain for as long as there is a National Beekeepers Association, **the additional function of policing beekeepers** is being added to it. To my knowledge this new role has not been understood, let alone discussed by rank and file beekeepers.

Under the proposed PMS and the goal of eradication of AFB beekeepers will be policed in order to bring about the aim. Part 7.1, page 9 of the proposal states that: "The duties specify the beekeeper

practices which must be adhered to if the New Zealand beekeeping industry is to eliminate American Foulbrood". [no problem there, the duties listed are the same as under the Apiaries Act]. To continue . . . "these behaviours are therefore prescribed by law". And under an approved amendment to the Bio-Security Act "the Act will define the legal status of a pest management strategy by providing that strategy rules shall have the legal status equivalent to regulations". O.K. So what?

That the industry polices itself is not a 'bogey man' as such, but beekeepers need to see quite clearly that the NBA, as the "Management Agency" will have legal power over them! Its function will have changed! It will become a governing body. To my knowledge nobody has asked the beekeepers what kind of government they want?! It's the first question that should have been settled!, before the 'road show' even kicked off! It comes before whether we allow robbing apiaries or who marks the exam that makes me worthy of the title 'approved beekeeper'. How do I want to be governed!! How do you, the beekeepers, want to be governed?

Stephen Lee

Dear Editor

The April edition of our magazine contained a letter from Stephen Lee concerning his views on the PMS. I trust that the answer in reply by the PMS committee chairman may have helped explain some of the more technical and legal points that Mr Lee has obviously been confused about.

The issue that I would like to take up with Mr Lee is his general theses that the PMS is to quote him, "intrusive, dictatorial and enslaving". The small but vocal group of opponents of the PMS all seem to pick up on this major gripe albeit without the same "goose stepping" rhetoric that Mr Lee employs.

In my view the crux or most central feature of the PMS is the process by which beekeepers are invited to become "approved beekeepers" by entering into an agreement with the management agency detailing just how they intend to control and eliminate AFB in their operations. I invite Mr Lee to take a careful look at this most important section of the PMS. (8-9-8.92).

He will notice that it has a small mandatory component and a very large negotiated component. The "rights of individuals and their ability to enjoy

autonomy within their own operations", was central in the formulation of this aspect of the strategy. I expect that for the majority of beekeepers who go ahead and decide to enter into a DECA it will largely be a matter of formalising or detailing the methods that they are at this time already practising in their operations. It gives a large measure of freedom for all beekeepers to set out a plan which most suits their own particular needs and situation. In essence the DECA will serve as a sort of code of practice for themselves and any staff employed in that operation.

There are some beekeepers who maintain that we don't need all this extra paperwork and that all these agreements will not achieve anything positive at all. With respect I would like to point out to this group that perhaps the most fundamental aspect of problem solving is planning. The absence of planning results in all too many business failures in this country. The starting point in the control of the AFB problem is planning. Developing a DECA or a plan of action, or code of practice has the potential to be a highly profitable, worthwhile exercise for many beekeepers. It is their own starting point towards the achievable goal of eradication within their own operations.

The goal of eradication of AFB is only possible, in my view, if beekeepers adopt whole-heartedly the central thrust of the PMS which is that they must be involved in formulating and implementing plans for their own operations. The history of AFB in this country is littered with buck passing moaning beekeepers complaining that the authorities have failed in their duty to rid the country of AFB. The government has finally, and quite rightly, decided the buck should stop with us. AFB is a beekeeper's problem and can only be solved by beekeepers. I would argue that those of us who want to revisit the past with more inspectors and diseaseathons are demonstrating both a lack in hindsight and foresight.

I would suggest that a careful analysis of the PMS simply does not support Mr Lees' Big Brother tears. The uniformity in approach required is only at the most fundamental level. That is that we all know how to recognise this disease and know how to destroy it. Sadly we still have people out there without the basics and consequently the need for a PMS. Capable competent beekeepers have absolutely nothing to fear from this PMS. Quite the reverse in fact.

Bruce Stevenson

Sunflowers now bloom in Canterbury

Canterbury, New Zealand's main grain production area, is undergoing a transformation as farmers latch onto alternative land use options.

Dairy farming, process vegetable production, speciality seed crops and rural sub-division are making a significant impact on the region's farms.

Acting grain manager for the co-operative marketing company Cropmark, Brent Stirling, said there were a lot more options for grain growers than five years ago. These had reduced significantly the area of grain grown.

But, sheep and beef farmers who used to make up a significant proportion of the grain production, might return with the rise in wheat and barley prices, he said.

Agriculture New Zealand farm consultant Geoff Dunham compiles the Arable Crop Survey and is surprised by the stability of the grain acreage in Canterbury.

In the last five years wheat had risen by about 10 percent and barley had fallen by a similar percentage. He suspected sheep and beef farms had made up for any land lost from grain production.

Temuka-based milk company Alpine Products is expected to double its production to 80 million kilograms of milk solids in the next five years. Dairy conversions are not only reducing the number of farms grain growing, but fuelling a lucrative feed market. Stock and arable farmers are cashing in by growing feed crops dairy grazing and maize silage for cows.

The demand from dairy farmers and Five Star Beef's cattle feedlot near Ashburton, has turned Canterbury into a significant maize production area.

There are also three major vegetable processing companies operating in the region with another, Talleys, building a plant near Ashburton.

Process vegetable crops are limited by the number of contracts available to growers. The presence of Talleys will give more farmers the opportunity to grow higher valued crops.

Temuka grower Gary Leonard said carrots and peas were a

substantial part of his family's operation since they moved into vegetable production 10 years ago.

Last year the Leonard Partnership's carrot crop yielded 100 tonnes per hectare. At an average price of \$50 per tonne the return from carrots far outweighed the gross income from growing wheat which is about \$1500 per hectare.

Carrots cost more to grow and harvesting in a wet winter is not easy. Physical constraints such as spelling paddocks and machinery, limit vegetable production so the partnership still grows 120 hectares of barley and wheat.

"We are far better off growing carrots than grain, but they take a lot more work."

Growing process peas is an attractive proposition to farmers, particularly for those without combines, because the company harvests the crop. There is a risk that the processing company will bypass the crop, leaving the farmer to harvest the peas for seed.

Based on figures from Lincoln University's financial budget manual, the gross margin for process peas is \$1675/ha where as a winter wheat was \$560/ha.

Further south at Makikihi, near Waimate, cropping farmers Gloria and Martyn Jensen have diversified into dairy grazing and sunflowers. About 16 hectares of sunflowers have been grown for the bird seed market.

Mrs Jensen said the crop was high paying and well worth growing, but it required a high chemical input. She did not disclose prices or who the company it was sold to.

If Canterbury's cropping area does shrink, bird damage to crops is likely to be more significant.

The Jensens grew sunflowers in the Hawke's Bay, but the crops were hammered by birds. Since moving to South Canterbury the bird damage has been insignificant, diluted by the large number of crops in the area.

People pinching flowers, not the birds have been the problem, she said.

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Honey-bees as vectors of Biological control agents for control of Fire Blight Disease

Joel L. Vanneste and Mark Goodwin
HortResearch, Ruakura Research
Centre, Private Bag 3123 Hamilton.

Fire blight is caused by *Erwinia amylovora* a bacterium which colonises the stigma of apple and pear flowers before getting in the tissues and infecting the plant. When climatic conditions are favourable (wet and warm) the bacteria multiply on the stigmatic surface very rapidly and move down to the nectaries where they enter the plant tissue through the nectarthodes (the orifice from where the nectar is exuded). Once in the tissue, the bacteria can migrate down the tree very rapidly leaving only dead tissue in their wake (Fig. 1).



Symptoms of fire blight on apple.

Sometimes the bacteria reach the root system; killing the entire tree. *E. amylovora* can be easily spread from flower to flower by rain wind or insects (including bees), affecting or killing every tree in the orchard. This explains why outbreaks of this disease can be so devastating. In South West Michigan (USA) in 1991, an outbreak of fire blight resulted in US \$3.8 million loss. In New Zealand, it also causes significant losses and results in market access problems notably with Australia.

Honey-bees have been implicated in the spread of fire blight. They pick up the bacteria from diseased flowers and

spread them to healthy flowers. For fear that moving hives for pollination might spread *E. amylovora* from contaminated orchards to fire blight free areas, some orchardists in New Zealand specify that hives introduced to their orchards must come from fire blight free areas.

Antibiotics are the only chemicals that can control fire blight. However, this has led to selection of strains of the pathogen resistant to the antibiotic. Biological control, using beneficial bacteria, might offer a much needed alternative. Several of these beneficial bacteria have been demonstrated to reduce the incidence of fire blight when they are sprayed on flowers before the fire blight pathogen is present. They have been tested in orchard situations for more than 10 years. They compete with *E. amylovora* for food and space and some also produce compounds that inhibit the pathogen. One of these bacterium recently received approval for sale in the USA and will be on the market over there in a few months. These bacteria will be sold as a powder to be mixed with water and sprayed on the flowers in the same way as other chemicals.

Spraying bacteria to control fire blight is not particularly cost effective as it is labour intensive, most of the bacteria sprayed never reach the flowers and some flowers may not receive any bacteria. A much better solution would be to deliver the bacteria directly onto the stigmas of apple and pear flowers. This is something bees can do. Bacteria delivered by bees would then multiply on the stigmas of apple and pear flowers and prevent fire blight from developing. So how do we get bees to do yet one more job for us?

Most of you will be aware of the importance of pollination for apple and

pear crops. Flowers that are not pollinated do not set fruit and inadequately pollinated flowers develop into misshapen fruit with low market value. Pollination of apples and pears relies heavily on insects delivering cultivar-compatible pollen. The most important pollen delivery agents are honey-bees. Bees collect pollen and deposit it on the stigma of apple or pear flowers. If there are no compatible cultivars in bloom in the orchard, compatible pollen can be provided to the bees for dispersal using a device called a pollen dispenser. A pollen dispenser fits on the entrance of a hive and coats bees with pollen as they leave the hive to visit flowers (Fig. 2). This pollen is then taken to the flowers the bees visit. We can get bees to deliver the beneficial bacteria by adding a twist to the story, such as by altering the pollen. The pollen can be coated with the beneficial bacteria so that the bees will pick up and then deposit on the flowers both pollen and bacteria. The flowers will not only receive cultivar-compatible pollination but also face a reduced risk of fire blight.

Bees present several advantages. No machinery is necessary besides the pollen dispensers. Usually bees visit flowers as soon as they are open giving them immediate protection. Bees will also take the bacteria to almost every flower in an orchard, which is a much higher success rate than that achieved by any sprayer. Best of all the bees are the specialists who are doing all the work.

We have conducted two series of tests in orchards in New Zealand to assess the potential of bees as vectors for biological control of fire blight. Several experiments conducted last year showed that bacteria-coated pollen is picked up by bees and deposited on apple flowers. Bacteria

Continued on page 21



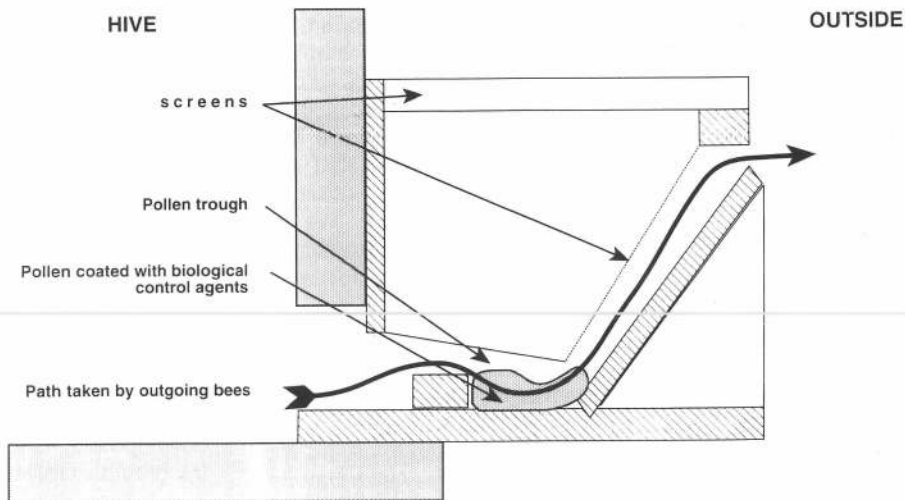
Bee visiting an Asian pear flower.

brought this way to the flowers start to multiply on the stigma. We also have indications that bees might not only distribute beneficial bacteria from the hive to the flowers but also from flower to flower. This means that the pollen dispenser are initially necessary to supply the biological control agents but as the season develops they do not remain the sole source of beneficial bacteria.

There are obvious benefits for orchardists to use bees as vectors of biological control agents of fire blight, but is there any benefit for the beekeepers? Firstly the provision of pollen dispensers could be seen as an additional service with appropriate grower funding. But more importantly, there will be increasing emphasis placed on having enough high quality colonies in orchards to make the

best use of the system. In conclusion, in the future we may see bees used to control the spread of fire blight rather than implicated in its spread. This work is funded by ENZA New Zealand (International) and by the Foundation of Research Science and Technology. We thank Dr T.A. Batchelor (ENZA Market Access Manager) for his comments on the manuscript.

FIG.3 POLLEN INSERT
Cross section



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In a world constantly seeking security of the individual through personal health and well-being, natural or non-synthesised substances are becoming the focus of clinicians and scientific researchers as the quest for quality of life intensifies. There is an urgency to their work as previously unchallenged remedies and institutions continue to fail.

New Zealand's own Dr Peter Molan is one such far seeing researcher who is prepared to risk derision of his peers in the pursuit of proving the value of natural substances as being relevant and having significant medicinal properties in spite of their "folksy" image. There are many more dedicated professionals ferreting out the real worth of a range of natural raw materials among which are pollen, bee venom and propolis.

It is notable that the Brazilian beekeeping industry are sharing in a \$NZ2 billion bonanza in Japan based solely on the researched consequences of their propolis tinctures having beneficial effect in the destruction of some cancer cells. A book on the subject written by Dr Tetsuya Matsuno describing the cytotoxic effects on certain cancers is a best seller. It is a success story of enormous proportions. Brazilian propolis tinctures are a demand product. Strictly regulated as a therapeutic substance, in Japan, propolis tinctures command high retail prices dependant on strength and quality. However, low quality propolis sourced from China and Eastern Europe brings significantly lower retail prices.

The Brasilia's in association with Japanese importers have been clever enough to integrate their operators and weave a strong qualitative image for their "eucalypt" sourced propolis based on various scientific reports produced in Japan with Matsuno's work being the latest. There is clear evidence of carcinoma retardance and antibacterial activity from chemical compounds found in propolis. (et al., Grunberger 1988; Scheller 1990; Guarini 1992; Frenkel 1993; Rao 1993; Matsuno 1995). What other harmless, no side effects, substance has this track record. Is it any wonder Japanese consumers are motivated.

Where is New Zealand? First the homework! In funding a study of propolis randomly sourced from suppliers in New Zealand, Comvita New Zealand Limited enlisted the aid of Industrial Research in Wellington and Waikato University to qualitatively compare "active" compounds known as flavanoids and caffeic acid phenethyl esters found in New Zealand

with samples from other suppliers. The result; New Zealand compares more than favourably. Eminent scientists Dr Ken Markham and associate Professor Alistair Wilkins produced a joint paper clearly showing the superiority of New Zealand propolis in areas of significant therapeutic interest.

What does this mean? It means, given the resources and industry support, New Zealand has the potential to establish a strong international presence as a source of high quality value added propolis products, derived from unique flora, located in a geographically isolated, clean environment distinctly different from any other competitor. No ifs or buts. We have a new exciting opportunity providing it is handled well and marketed to advantage.

It is imperative that we establish a standard for the home grown product that will stand international scrutiny. The work of Comvita has set the base line for such. It is critically important to control the natural tendency to cash in on the short term. Japanese and other Asian importers will be quick to take advantage of buying bulk raw product thus diminishing the returns and potential for New Zealand. We must not overlook the benefits of a quality reputation and added value in the longer term. Only now is seen the stupidity of the rejection of a TBG grant application for Comvita in 1992 aimed at covering the research and marketing set up costs. The industry has lost four years and millions of dollars.

What of the future? Undoubtedly the Japanese experience will have a ripple effect in other Asian countries such as

Korea, Taiwan and Malaysia. Indeed some is already apparent. It is equally clear that science is taking a very keen interest in propolis as a therapeutic, with the potential for conversion to a medicine. Such interest will focus the giant drug companies who are likely to cash in by synthesizing the "active" systems put in place that will ensure measurable quality and efficiency.

New Zealand is fortunate to have a Comvita who have been at the cutting edge of processing and marketing for ten years. The company has generated widespread export trade relations and is widely respected for its range of internationally competitive apitherapy products. It is a great start to have such experience and reputation in your team before the wider game begins. Success will only come from team work. The continued blending of natural products with science, good marketing with quality, added value with research and development. Growers and processors. Integrity and reliability.

Soon Comvita will announce a new initiative designed to increase productivity and volume dollars to the apiculture industry. It is the first step in a journey that will take New Zealand propolis from relative obscurity to centre stage. The conclusions drawn in the April BeeKeeper concerning propolis are not well found. It is a substance that is part of the tree of life. The flavanoids and other chemical compounds are recognised for their value to daily life. The New Zealand variety has them in abundance.

Bill Bracks



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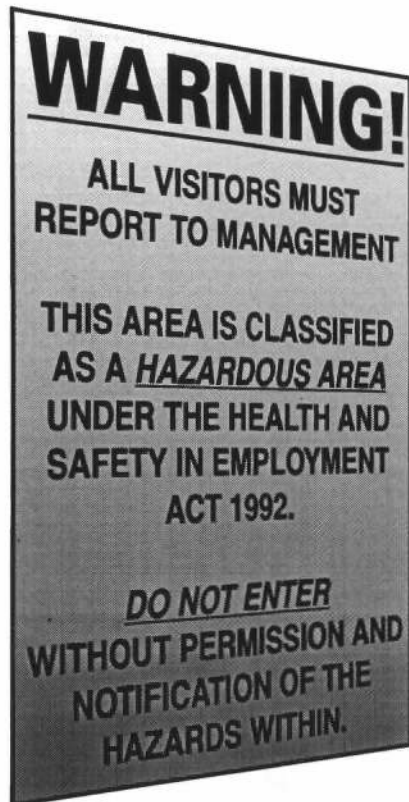
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New warning signs don't say it all



Bright orange warning signs are popping up throughout rural areas as well as in some industrial sectors within city limits.

While the signs tend to suggest they are the ultimate in owner protection against trespassing under the Health and Safety in Employment Act 1992 — an assumption made by some farmers who have gone to the expense of placing these notices on every roadside gate — this is, in fact, not the case.

Farmers who construe that these notices say far more than “Keep Off” or “Trespassers will be Prosecuted” — even “Beware of the Dog” — are in ignorance of the true facts. It could be they have forked out \$35.56 (multiplied by every roadside gate on their property) in a misguided belief these notices cover their “backsides”.

While OSH inspectors say it is a safeguard aimed at controlling access of people legally or even illegally on the property, it is merely a “practical” step and “part of the overall process of minimising culpability of the rural landowner or urban industrial site.”

If the warning sign is ignored and “intruders or visitors” are injured as a result of any harm caused by equipment, animals, chemicals or other hazard there are predetermined standards on which the incident or accident is judged under the Act.

Farmers are generally coming to grips with the legal requirements under the Act if they employ staff, are self employed or employ contractors but there is contention — indeed strong views on the clause “if you allow the public on to your property”.

Trespassers, some say, are not “allowed” on the property and that’s like a red rag to a bull!

If bonafide visitors arrive via the “standard entrances” — not over the fence — then the bright orange warning signs, coupled with other practical steps and hazard and personal protection should meet all requirements under the Act.

“Next we will have to put up blankety-blank cottontail notices above every rabbit hole,” one farmer quipped.

FOR SALE

200 Beehives	\$125.00 ea
360 Full depth frames, new	Offers
1½ Spools of wire	\$40.00
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Hive Barrow	\$450.00
10 20 litre plastic containers	\$15.00 ea
3 Nuc boxes	\$10.00 ea

All hives are in good condition.

We want to sell the whole lot as a complete package and as a going concern.

J.L. & R. Kelly

Pirongia

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Question Korner

If I lease my hives out, who pays the levies due to the NBA?

In the first instance the NBA would go to the owner of the hives to collect the levies due, as the Hive Levy Act 1978 gives us this right.

But you, as the owner for the hives can write into your lease agreement **That the Lessee pays the levies to the NBA.** I would suggest you notify the NBA of the arrangement so I don't keep hassling you for the payment.

If you have a question on anything to do with our industry, drop me a note and I will attempt to find an answer for you.

No, I won't print your name unless you say so .

Kind regards, Harry Brown

Employee wins after procedural lapses

By Peter Cullen

The dismissal last year of a nurse aid at Lorraine House Rest Home in Canterbury neatly raises problems associated with dismissing someone who is sick.

Audrey Visser was working as a nurse aid at Lorraine House. In February 1994, she learnt that she had a kidney tumour. She did not return to work. She was operated on March 24 1994. She was dismissed by letter dated May 25, 1994. The Employment Tribunal found that the company was entitled to turn its mind to dismissing Mrs Visser in mid-May 1995. She had already been absent for three months, the company was in possession of a medical certificate that said she would not be back at work till August 6 at the earliest and the certificate was less optimistic than an earlier medical certificate had been.

A temporary replacement the company had hired to work her shifts had just resigned, as had two other staff capable of covering the shifts in question temporarily.

The employer made its decision without speaking to Mrs Visser and advised her of the decision by letter. These were fatal flaws.

The employer should have met Mrs Visser and given her an opportunity to state her case. It should have put its tentative conclusions to her. It might have required her to supply a more detailed medical report from her surgeon. None of these things were done.

The dismissal had an enormous effect on Mrs Visser and led to a depressive illness that resulted in her locking herself away from the world for several months. The tribunal awarded her three months' lost remuneration (approximately \$5000) and \$6000 compensation for humiliation. The law has long been settled that an employer is not required to keep an employee on the books forever if they are absent from work because of sickness or injury.

The courts speak of the point in time "at which an employer can fairly cry halt". The key issues in reaching a decision

are, the nature of the illness or injury, how long it has continued and what prospects there are of recovery. Other factors would be whether the employee had a key position, how long the person had been employed, whether they would have been employed for a lengthy period if they had not been sick and whether they were a valued employee.

But as the Visser case makes clear the employee must be given a hearing before the decision is taken. It is no good the employer coming along and saying a hearing would not have made any difference.

The obvious reply is that one never knows the answer to that till one tries it. — It may well have made a difference. A meeting has the further advantage of showing respect to the employee in a way posting a letter never can.

Doing things properly from the start saves anguish for both parties and money, particularly for the employer.

Peter Cullen is a Wellington lawyer specialising in employment.

New Zealand Honey — Sensory Profiles

MONOFLORAL VARIETIES

— All descriptions based on liquid, except where stated as "Creamed"

VARIETY	APPEARANCE	AROMA	FLAVOUR
CLOVER	Light pale gold	Herbal dry grass hints of plums	Clean mild, sweet Traditional honey flavour
BLUE BORAGE	Deep yellow gold	Dusty orange with a hint of musk	Caramelised, buttery flavour
ERICA	Deep red amber	Complex, toasty, hint of turpentine	Slightly bitter, hints of liquorice and treacle toffees
HONEYDEW	Medium-dark amber	Musky citrus Mineral	Complex, treacly, "Christmas Cake"
KAMAHI	Pale lemon yellow	Intense, musky, almost lactic. Quite complex	Very clean, rich and sweet, balanced buttery finish
MANUKA	Dark cream to dark brown	Catmint, damp earth, heather, aromatic	Mineral, slightly bitter barley sugar, herbaceous
NODDING THISTLE	Pale lemon gold	Citrus orange peel/orange blossom, intense	Intense floral flavour, sweet barley sugar
POHUTAKAWA (Creamed)	Off white	Musky, damp leaves, salty (almost seaweed) but pleasant	Clean earthy sweet butterscotch
RATA (Creamed)	Pale cream	Heady, lime blossom, musk; papaya	Very sweet, lime flavours
REWAREWA	Light amber with orange hints	Intense, herbaceous, geranium/dandelion	Clean sweet, smoky herbaceous complex
TAWARI	Deep orange gold	Rich perfumed musk/incense/sandlewood orange peel/liquorice	Clean musty rosehip syrup, very sweet golden syrup
THYME	Very pale amber	Very aromatic, tarry, "dusty"	Resinous, aromatic herbal, very strong
VIPER BUGLOSS	Yellow gold	Dusty, rose oil character	Clean tasting, lemon and floral characters

HONEY AROMA CAN BE FLEETING ONCE CONTAINER OPENED.
REGIONAL VARIATIONS MAY RESULT IN DIFFERENCES
FROM THE ABOVE GENERIC DESCRIPTIONS.

Cooking with Honey

Sue Jenkins

Two very different but delicious desserts, the Panettone Custard is for a more formal occasion or for when friends have been invited for a meal.

The Fruit Whip can be for a family meal or dressed up for a more formal occasion. This Fruit Whip is for those wishing to watch the amount of fat and sugars they do not wish to consume. But as the Fruit Whip with the addition of either an egg or gelatine can be turned into a cooked or unbaked tart. The Panettone Custard is a modern version of a very traditional Italian dessert, where the tofu, is a relatively new food to our Western palates but old in the Eastern diet and is used as an ingredient substitute for more traditional ingredients. The tofu dish is an example where Western and Eastern ingredients meet to create new versions.

Fruit Whip

Use as an alternative dessert to serving ice cream with fruit. Or it can be turned into a tart by adding 1 egg to the whip mixture and baking with a sweet short crust pastry or biscuit base or turn into an uncooked tart by adding 1 tablespoon gelatine softened in ¼ cup of fruit juice and pour into an unbaked biscuit crust. Garnish with fruit, flakes of chocolate or dusted with a little cinnamon.

- 1 block firm tofu
- 1 ripe banana
- 3 tbsps honey (*Suggestion: Vipes Bugloss, Clover, Tawari, Blue Borage, Nodding Thistle*)
- 2 tbsps oil
- ½ tsp vanilla essence
- 1½ tsp cinnamon
- ¼-½ cup fruit juice until of desired consistency
- chopped fresh fruit, canned or dried fruit (*optional*)

Place tofu, banana, honey, oil, essence, cinnamon and fruit juice in a blender. Process until smooth. Pour into a serving dish, mix in fruit of your choice. (*Serves 4*)

Panettone Custard with Honey-whiskey Sauce

This dessert is made using brioche, a sweet bread containing sultanas. If no sultana or fruit bread is available use a small sponge and increase the amount of sultanas used. Brioche is a traditional bread which is made as a small bun to an enormous cottage loaf and is a traditional Christmas gift in Italy. The dessert is a traditional dessert of Milan.

- ½-1 cup sultanas
- ¼ cup sherry
- 1 small sponge or 6 slices of sultana or fruit bread
- softened butter
- apricot jam
- 3 eggs
- 4 tbsps castor sugar
- 2 cups cream
- 1 tsp vanilla essence

Whiskey Sauce:

- ½ cup honey, eg mild bush, clover blend with multifloral
- ½ cup whiskey
- 30g butter

Soak the raisins in the sherry for 30 minutes. Cut the sponge slices into about 1cm thick slices or slice the sultana or fruit bread. Lightly butter the sponge slices, spread with apricot jam. Butter a 6-7 cup capacity and put the slices of sponge or bread into the dish, sprinkling with the sultanas between each layer. Beat the eggs and sugar, add the milk, cream and vanilla extract, beat to combine. Pour the egg mixture slowly over the sponge pieces, ensuring that all the sponge is moistened. Stand in a dish in a baking pan and pour boiling water into the baking pan to come about half way up the side of the dish containing the custard. Bake at 160-170°C for about 50 minutes until set and golden brown. Serve warm with Whiskey Sauce.

To make the sauce put the honey and whiskey into a small suacepan and bring slowly to simmering point. Add diced butter gradually, stirring to combine. Serves 6-8.

Special thanks to Sue Jenkins

Quick Orange Rolls

- 1 tbsp orange juice
- 2 tbsp grated orange peel
- ½ cup honey (*Suggestion: My favourite is Rewarewa*)
- 3 tbsp margarine
- 2 cups sifted flour
- 1 tsp salt
- 3 tsps baking powder
- 4 tsps shortening
- 1 cup milk

Combine orange juice and peel, honey, and margarine in small saucepan. Boil 3 minutes until thin syrup is formed. In mixing bowl, sift together flour, salt and baking powder. Cut in shortening. Stir in milk to make a soft dough. Pour equal amounts of the hot syrup into 12 greased muffin cups. Drop equal amounts of dough on top of the syrup. Bake at 400° for 15 minutes. When baked, turn pan upside down to allow syrup to coat rolls. Makes 12 rolls.

Chicken Breasts in Wine Sauce

- 3 chicken breasts, deboned and skinned
- salt to taste
- 6 slices bacon
- ½ cup honey (*Suggestion: Very versatile recipe for something a little different and really very flexible could utilise any different New Zealand honey variety to get different honey contrasting flavours*)
- ½ cup concentrated orange juice
- ½ cup dry white wine
- 1 tbsp lemon juice

Rub chicken breasts with salt and wrap each piece in a slice of bacon with ends tucked under. Line glass baking dish with remaining bacon and arrange bacon-wrapped chicken breasts so they rest on the bacon. Combine honey, orange juice, wine and lemon juice and baste chicken breasts. Bake slowly at 350°, basting frequently, until tender. Serve with remaining sauce and serve bacon from baking dish as a side dish.

Honey Nut Spice cake

- ½ cup shortening
- 1¼ cups honey (*Suggestion: I'd like to try Kamahi from mid season*)
- 2 eggs
- 2½ cups flour
- 2 tsp baking powder
- ¼ tsp soda
- ½ tsp salt
- ½ tsp cinnamon
- ½ tsp allspice
- ¾ cup water
- 1 cup chopped nuts

Beat shortening, honey and eggs with electric mixer on high speed until light and fluffy. Mix together flour, baking powder, soda, salt and spices. Add alternately with water to honey mixture, stirring just to blend after each addition. Fold in nuts. Bake in greased and floured 9 x 13 x 2 inch pan at 350° for 35 minutes.

Fluffy Honey Frosting

- 1 cup honey (*Suggestion: This recipe really lends itself to bring out the best in any honey, however I'd be tempted to go subtle and have a nice mild Clover*)
- 2 egg whites
- ¼ tsp salt
- 1 tsp vanilla

In a small saucepan or double boiler, heat honey to boiling. In a bowl, combine unbeaten egg whites, salt and vanilla. Beat with an electric mixer at high speed until egg whites are stiff but not dry. Slowly pour in hot honey; beat for 5-7 minutes, until frosting holds shape. Frosts two 8 or 9 inch layer cakes or one 4-layer cake.

Acknowledgment: American Bee Journal

Passionfruit Sauce for Ice Cream

- 2 tbsps clover honey
- 2 tbsps orange juice
- 1 tbsp butter
- Pulp of 3 large passionfruit

Gently heat honey, orange juice and butter until almost simmering. Take off the heat and add passionfruit pulp. Serve warm over vanilla ice cream. This is also lovely, warm, over a bowl of blueberries. Serves two to three.

Special thanks to Bill Floyd for his "Suggested" honey types

In last month's notes it was argued that a colony of reasonable strength would not consume a much greater amount of winter stores than a weaker one would as the latter has to expend more energy (= food) in trying to keep conditions within the hive right.

There are further reasons why it is important to have decent sized colonies going into the winter, colonies with a large proportion of young worker bees. A number of bees will surely die during the winter months and as the queen will usually stop laying for a time and only a small brood nest is maintained for a further period, replacements cannot compensate for the losses suffered until warmer weather arrives and the broodnest expands once again. A good sized cluster can stand this numerical loss but a small colony will become weaker still and, if surviving, will be much slower in its spring development. Weaker colonies are apt to suffer with stress. There may not be enough worker bees to care for the brood, it is harder for a small number to keep the inside environment of the hive in optimum order. Think of expelling chilling moisture and hygiene. It is well known that the development of many bee diseases is stress related. This of course applies not only to honey bees but to numerous other creatures, us humans included. Anything that adversely affects a colony's hygienic behaviour raises the risk that it will be unable to control an infection (nosema, chalkbrood etc.). So it is good practice to keep that stress factor as low as possible and maintaining strong colonies is one of the means to do this. A very important part indeed of beekeeping management.

Now someone is bound to ask how the foregoing ties in with wintering nucs which has been advocated before. Nucs are after all small colonies.

In the first place there are degrees of smallness, so it are strong nucs which are suitable for wintering. Secondly these nucs are tops, meaning they are placed on top of a hive over a division board. Under it is a full sized colony, the parent colony. So they benefit from a little "under floor" heating but more important is the fact that they are well raised up from the ground. If they were at ground level they would no doubt run the risk, especially here in the south of the country, to suffer more from cold and damp conditions. The grass temperature is always the lowest and we all know how the dew first settles on the grass and that it takes longer to dry out in the morning than it does from objects higher up. Mind what is unpractical in this part of the country may well be feasible elsewhere. Kawakawa clocked 23° today while Dunedin made it only to 16°.

Put this in your O.S.H. manual...

Car exhaust fumes fail to drive out bees

Feilding police thought they had an attempted suicide on their hands when they turned up at a house to find a long hose jammed in the exhaust of a car and leading inside the dwelling.

Instead they found a woman attempting to kill not a human but an infestation of bees.

Acting Senior Sergeant Rob Duindam, of Palmerston North, said the woman met police at the door yesterday afternoon and told them she had been trying to eradicate the bees infesting her roof by using fumes from her car.

When police asked if she had been successful, she said: "No I've tried everything but they don't want to die."

Mr Duindam said that despite the woman's obvious determination and initiative, police would discourage anyone with a similar problem from trying such a dangerous procedure.

"There are professional people who are available for this type of problem and they should be used," he said. — NZPA

Now after extracting is done and you have been getting your hive ready to face the months ahead you may be left with some frames with broken combs or culls with some honey left in them. Best to get them cleaned up as soon as possible. A hive will do it for you. Put the frames with damaged combs or culled out ones into a super after first scraping open any sealed over cells and give them to the colony selected to do the cleaning job. Placing it on top is OK and convenient. However I have found in the past that setting it on the bottom board with the cleaner colony above seems to get it done faster. A couple of days and when removed early in the morning after a cool night not a bee is left in the super while the one placed on top may well have a good number of bees still wandering around.

Just to play safe place a queen excluder between the super to be cleaned and the colony doing the work so that the queen cannot stray into the wrong compartment, it is not very likely to happen but one never knows.

A reasonably strong nuc housed in a single super can well cope with the job and is much easier to handle than a two storied hive especially if the super to be cleaned out goes underneath. Make sure the "cleaner" has enough empty comb space for storing the honey. Robbing is always a risk and greater when there is nothing to get so make sure that the entrance of the "cleaner" hive is restricted as far as practicable, it also helps to put the super to be cleaned out towards evening so that a good bit of the job is already done by next morning. And of course beware of any combs and pieces of unknown origin, s.a. stuff removed from a feral nest. You don't want a B.L. infection!

John Heineman

★ CONFERENCE ★

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NBA 1996 Conference, Wanganui.**

Hotel and Motel accommodation

Venue:

Avenue Motor Inn, 379 Victoria Ave,
Wanganui

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P.O. Box 7000, Wanganui.

Start— Monday 15 July

Day one:-

Speciality Groups
Evening free.

Day Two:-

Tuesday — Seminar Day
See the cooking competition using honey
Evening — Presentations and sponsor's evening

Day Three:-

Wednesday — AGM and Conference
Evening — Social

Day Four:-

Thursday — Conference and AGM
Evening — Conference dinner

Questions?

Call Frank or Mary-Ann on (04) 478-3367
(Fax same number)

PLEASE COULD YOU HELP?

The samples need to be monofloral and authentic to avoid misleading results. This requires that they have come from sites where you know what was in flower at the time that the comb was filled. The honeys should not have been stored in a warm place or have been kept exposed to light (sunlight and fluorescent light particularly) as both may cause destruction of activity. A minimum of 10 grams is required, but 20 grams would allow the honey to be used as well for research developing the "fingerprinting" technique of identifying honey. A few hundred grams would allow follow-up research if any are found with an interesting antimicrobial activity.

For the results of the screening to be meaningful it will be necessary to obtain a fairly large number of samples from different sites for each floral type.

If you are willing and able to help, please could you supply the following information on the samples if you can:

- 1) major floral source
- 2) other plants in flower at the time, and an estimate of the proportion of nectar from those
- 3) month and year produced
- 4) location of production (e.g. Central Otago, Kaimai Ranges)
- 5) drum identification number if you have bulk amounts in stock, so that more can be obtained for further research if a sample is found to be very active.

I am keen to get hold of the following floral types:

Barberry

Clover

Nodding Thistle

Ling

Tawari

Vipers Bugloss ("Blue Borage")

Honeydew

Thyme

Rewarewa

Spanish

Pohutukawa

Rata

Kamahi

Five-finger

Heath

Kanuka of reliable identity (i.e. is definitely not from manuka and contains no manuka).

I will gladly reimburse postage/courier costs — just let me know how much.

Yours sincerely, Peter Molan

Post to Dr Peter Molan, PB 3105, Honey Research Unit, Hamilton, or Courier to Waikato University Attention Dr. Peter Molan, Honey Research Unit, Hamilton.

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Please order early to ensure a delivery date to suit you.

Gary Jeffery

P.O. Box 55,

Westport.

Phone (03)-789-6929 — probably best in the evenings or fax (03)-789-8869

A box to stand on

Yesterday I was out helping a beekeeping mate with a crook back. He couldn't do anything his back was so sore and to put it mildly, it didn't look much like fun. I'm very lucky in that although my back gets sore sometimes, I've never had a really bad back. While I was working he watched the way I do things and lift things and put honey on the truck. We discussed methods of work and a couple of ex-beekeepers we know who had quit because of very bad backs. Both of them are constantly in some pain and restricted in their enjoyment of life. All of you will know someone who has or who should have given up beekeeping because of a bad

underneath. Your left hand should be on the bottom of the left hand super side, about two thirds of the way up with your fingers curled under the bottom of the box. The left hand edge of the box, where the top bar rebate is, rests on the big muscle at the top of your leg. Your arms carry very little weight, it is all carried on the top of the leg muscle. When you get to the truck, you flex your knees a little and bounce the box up to the appropriate height. Let your legs do the carrying, carried this way bees don't get squashed between the frames either.

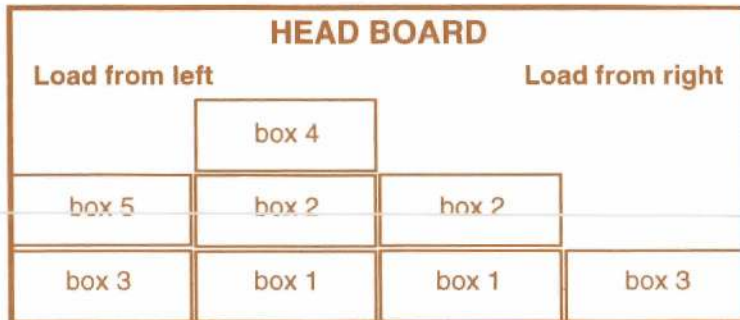
If the second box is full and the only reason you need to go down to the bottom box is for a brood check, split the

used to pick up frames, division boards, etc. from the ground. You just bend your knees slightly and you can pick things up off the ground without bending over. With the right tool for the job you can pick things up and separate stuck together boxes with a hell of a lot less effort and bending.

And last but not least, something so obvious and so simple you can fix it up in five minutes. Get a box to stand on! Nail some rough sawn boards across the open top of an old bee box and step onto it when you load honey onto the truck. Until you've tried it you won't believe how much easier it makes it.

You, know I think I might just set myself up as a consultant, seeing as how it's all the rage nowadays. Charge you people a couple of hundred dollars a day to load my heavy boxes of honey on my truck, while I supervise and instruct. Disregard what you have been reading, what you really need is hands on experience with a master.

Peter Berry



back. It's serious, it's a major problem and here are some of the answers we came up with to help prevent beekeepers back.

Don't do anything dopey! Lifting the last two pollination hives onto the truck bodily by yourself because the boom has just broken down etc. Split the boxes and put up with a few stings or come back the next night. There are very few things so urgent that they can't be put off. Losing a few hours has got to be better than risking your business and years of chronic pain.

Don't do too much in a day! The temptation is always to do that little bit extra, which is fine, but be reasonable in the demands that you make on your body.

Get a truck with a low deck, power steering and a comfortable seat.

Never have a yard where you can't drive the truck between the hives. Have the hives in groups of four and keep them compact. If you have 6 or 8 groups of hives (24 or 32) keep the end groups closer to the truck and the middle ones half a metre further out to give you some room to work and break up the line of the hives to minimize drift. If you must have them along a fence, put half on each side with a gap for the truck. Never carry a box of honey further than you have to.

Pick the honey super up with the top bars vertical and facing you. Your right hand should be on the corner nearest your right hip, with your palm on the side of the box and your fingers curled

two boxes, turn the second on its end, balance it on one side of the top of the bottom box and reach over it to hook out a brood frame for inspection. Never put a box, particularly a full one, on the ground — you only have to pick it up again, and never lift anything that you can avoid lifting.

Load your truck in an organised and methodical manner: (This also helps if you find a FB — if you know what order you loaded them in, you can work out which boxes came off which hive).

1. Put the box on the deck on its end, pivoted on the bottom edge, then tip it forward and slide it across onto the middle stack.

2. Repeat above, sliding the second box onto the top of the first box.

3. Put a box on the outside stack, put another in the middle so that you go 2-1, 3-2, 4-3, 4-4 (see diagram).

Loading in the correct order is easier, much easier. I challenge anyone to show me a less stressful way of loading honey on a truck and that includes having a lift on the back with a barrow. It is easier to lift a box properly, than to put it down onto a pallet.

Get a decent hive tool made. In my opinion there is no commercial hive tool available which is fit for full time commercial beekeeping. Mine is 350mm long, made of 4mm spring steel, with a turn up at one end and a sharp edge with a hook at the other. It is easy to slide between boxes, has immense leverage, is not too heavy and the hook can be

Study finds men's brains shrink faster

Men lose brain tissue at almost three times the rate of women, curbing their memory, concentration and reasoning power — and perhaps turning them into "grumpy old men" — American researchers say.

"Even in the age range of 18 to 45, you can see a steady decline in the ability to perform attention-oriented tasks in men," Ruben Gur, a professor of psychology at the University of Pennsylvania, said yesterday.

Professor Gur said shrinking brains could make men grumpier because some of the tissue loss was in the left frontal region of the brain, which seemed to be connected to depression.

"Grumpy old men may be biological," he said.

The findings are the result of Professor Gur's studies of the brain functions of 24 women and 37 men over the past decade. He measured brain volume with a scanner, and studied metabolism rates.

He found the most dramatic loss was in men's frontal lobes, which control attention, abstract reasoning, mental flexibility and inhibition of impulses. Professor Gur theorised that men lost more tissue because they had lower blood flow than women, particularly in the frontal lobe region.

He said men might be able to stop tissue loss by picking hobbies that allowed them to rest the grey matter, slowing the metabolism in the brain.

Strange going-on down at the drug-hunting 'pharms'

Alison Smith on how the genetic engineers could be endangering New Zealand's environment

Field-testing of "human-sheep" and super cereal on green pastures here is worrying some scientists and environmentalists who say the multi-national experimenters may be putting New Zealand at risk.

Genetically-modified goats are among herds and crops thriving down on the "animal pharms" created by pharmaceutical firms in their search for new drugs.

Critics say the Government bodies set up to monitor the hazards of genetic engineering are swallowing company propaganda.

The government has drafted a bill to govern gene manipulation by agricultural and pharmaceutical companies, several of which have come from overseas targeting New Zealand's relatively disease-free environment.

The Hazardous Substances and New Organisms Bill would set up an independent body with legal powers allowing companies to do their tests.

At the moment the Minister for the Environment gets the final say on an application. The proposed bill would create an Environmental Risk Management Authority separate from the Government which would assess the dangers of genetic engineering and choose whether to allow experiments.

The bill has drawn criticism from scientists such as Dr Peter Wills, an Auckland University theoretical biologist and the chairman of Greenpeace.

It also caught the critical eye of Waitakere councillors, who plan to write to the Local Government Association and MPs for support in lobbying for more public discussion.

Dr Wills said the bill took the same approach as the Government's temporarily-appointed Interim Assessment Group, which assesses applications and advises the Minister for the Environment.

The latest request from the Scottish company PPL Therapeutics Ltd closed for public submissions last month. In it the company seeks a field trial of its genetically-modified sheep — or what Dr Wills calls "part-human sheep."

Overseas scientists have produced rams carrying a gene with a human protein, and hope that their work will lead to a drug for emphysema.

The plan is to import semen from the human-sheep and inseminate scrapie-free New Zealand ewes, whose female offspring would then become a kind of pharmaceutical factory. Milk from these second-generation ewes would contain the human protein — and from that would come the drug.

But what are the chances of the human gene giving rise to a freak scrapie-like disease that no one would know how to contain?

ACC tackles child deaths

ACC is stepping up its safety campaign following the deaths of three children riding ATVs on farms over the last three months. The corporation says children lack the strength to operate full-sized farm vehicles safely. It is recommended that children under 12 years of age should not ride ATVs over 70cc and children from 12 to 17 should not ride ATVs over 90cc. Uncontrollable environmental factors on farms like hills and muddy slopes, add to the danger of riding ATVs.

"The corporation has already distributed resources on ATVs and farm vehicles, but we need to reinforce the message further following fatalities and numerous injuries," says managing director Gavin Robins.

Children and ATVs have been the focus of ACC's five-year farming injury prevention programme, which began last year. Already the programme has been given the "thumbs up" by 97 percent of farmers surveyed. Many farmers have reported positive changes in knowledge and behaviour and an interest in applying injury prevention techniques.

Acknowledgement Straight Furrow

The unintentional release of the rabbit calicivirus in South Australia showed how quickly viruses could spread despite assurances that experiments were well-contained.

"That sort of risk outweighs the supposed benefits," said Dr Wills, who has studied diseases such as Creutzfeldt-Jakob disease which can be caused by hormone treatments developed from human pituitary glands.

He believes the creation and exploitation of genetically-engineered farm animals has extraordinary potential hazards not considered by those assessing the risks.

"I've been extremely critical of the way the (assessment group) does its work," he said from his university office. "Their interpretations of what risks might be involved are extremely biased in favour of commercial interests."

"There hasn't been much informed discussion (critical) of genetic engineering, and as a consequence the propaganda is rife."

The convener of the group, Dr Abdul Moeed, said the independent committee of 12 put outside complaints to the company and asked for its response when deciding an application's fate.

It had no vested interest, he said, and varied expertise. The panel could co-opt members to check an applicant's explanations, but so far it has not done so.

"I believe it's a very fair process where all the information is before the group," he said in Wellington.

"Companies have the opportunity to come in and explain to the group so it has all of the facts before it makes a recommendation to the minister."

The Environment Minister, Mr Upton, told Dr Wills in a letter that New Zealand was conservative about new scientific methods when the knowledge of the full impact was incomplete.

Genetics, he said, might one day help maintain bio-diversity, and the more research that was done would lead scientists closer to preserving or "archiving" nature's variety using DNA. "(Gene) manipulation is now part of the scientific world and we can't turn the clock back. The inescapable issue from here on is safe use ... I believe scientists should assist in discrediting patently sensational misinformation about the dangers ..."

In Melbourne, Mr Bob Phelps of the independent Gen-Ethics Network, said the chemical industry and farmers' groups were a potent lobby for genetic-engineering of crops to improve resistance to herbicides.

But the continued use of herbicides, he said, was a step backwards in reducing chemical residues and scientists should concentrate on working with nature.

Acknowledgement N.Z.P.A.

IMPORTANT PUBLIC NOTICE

Ecroyd Beekeeping Supplies Ltd wish to advise that all specials advertised in last month's advert are **valid only until 30th June 1996.**

This information was omitted from individual ads and any misunderstandings is regretted.

The specials advertised included:

- ☆ Bee Suits ☆ Gloves ☆ Tie Down ☆ Nylon Strappers ☆ Honey Bears ☆ Tanks
- ☆ T-Shirts and Sweat-Shirts

Magazine subscription

Have you paid for 1996?

I am going to cancel all outstanding subs on the 28th of May so if you haven't got around to paying please do.

Ed

IMPORTANT DATES FOR 1996

BRANCHES SEND YOUR MEETING DATES IN FOR 1996. NO CHARGE.

NBA EXECUTIVE ELECTIONS

	Start		Finish
Closing for nominations	15 May	Wednesday	5pm
Voting forms posted out	24 May	Friday	
Closing date, return of votes	24 June	Monday	5pm

EXECUTIVE MEETINGS

May Meeting	14 May	Tuesday	to	15 May	Wednesday
July (conference) Meeting	15 July	Monday			
September Meeting	3 September	Tuesday	to	4 September	Wednesday
December Meeting	3 December	Tuesday	to	4 December	Wednesday

CONFERENCE

Speciality Group Meetings	15 July	Monday			
Seminar	16 July	Tuesday			
Conference/AGM	17 July	Wednesday	to	19 July	Friday
Special Meeting (if required)	18 July	Thursday			
Last Date, remits in	2 June	Sunday			
Last Date, rule changes in	2 June	Sunday			

MAGAZINE

Copy/advertising deadline 1st of month

COMING EVENTS...

★ ★ ★ CLUBS... PUT YOUR MEETING DATE IN HERE... FREE ★ ★ ★

HAWKE'S BAY CLUB

Meets every second Monday of the month at 7.30pm.
Cruse Club, Taradale.
Phone: Ron (06) 844-9493

WAIKATO BRANCH

Meeting Friday 24th May at 7.30pm.
Green Room, MAF Ruakuru.
Phone: Tony 856-9625

CHRISTCHURCH HOBBYIST CLUB

These are held on the 1st Saturday each month, August to May, except for January on which the 2nd Saturday is applicable.
The site is at 681 Cashmere Road, commencing at 1.30pm.

FRANKLIN BEEKEEPERS CLUB

Meet second Sunday of each month at 10.00am for cuppa and discussion. At 10.30am open hives. Secretary — Yvonne Hodges, Box 309, Drury.
Phone: (09) 294-7015
All welcome — Ring for venue.

AUCKLAND BRANCH

REMIT MEETING

Next meeting 20th May at 7.30pm.
Venue: Rob and Janey Johnston's, Runciman Road, Rama Rama, Signposted, North Side, 1½kms from Great South Road.
Business will be followed by guest speakers — Helen Giaccon and Louis Malone of Hortresearch on Nosema, said to cost us 20% of our honey production.
Secretary — Jim Phone: (09) 238-7464

CANTERBURY BRANCH

Next meeting 28th May at 7.30pm.
Merrivale Rugby Club.
Remit formulation meeting. Bring your ideas and concerns for the future of our industry.
Phone: Brian (03) 318-0732

For your current events diary

Privacy Commissioner's Third Annual Privacy Issues Forum, Christchurch June 13 1996. Topics to be covered include internet, health, employment, privacy impact assessments, security issues, privacy officers forum, street surveillance, debate, managing information in the public sector. For a registration brochure phone: 0800-803-909.



9th International Palynologic Congress. Houston, Texas, USA. 22nd-29th June 1996

Contact: D J Nichols, US Geological Survey. Fax: (+1) 303 236 5690. E.mail: dnichols@greenwood.cr.usgs.gov

7th International Symposium on Pollination. Lethbridge, Canada. 24th-28th June 1996

Contact: Dr Ken Richards, Apiculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, Alberta, Canada T1J 4B1. Fax: (+1) 403 382 3156. E.mail: richards@abrsle.agr.ca

The Sixth IBRA Conference on Tropical Bees: Management and Diversity. San Jose, Costa Rica. 12th-17th August 1996

The second announcement of this important IBRA conference is available from: Sixth IBRA Conference on Tropical Bees, IBRA, 18 North Road, Cardiff CF1 3DY, UK. Fax: (+44) 1222 665522. E.mail: ibra@cardiff.ac.uk

Pollination in the Tropics and with Tropical Bees. Habana, Cuba. 21st-24th August 1996

Make the most of your visit to Central America for IBRA's conference on tropical bees — travel on to Cuba afterwards for a specialist pollination meeting. For more information contact: Lic. Adolfo M. Perez Pineiro, Director Estacion Experimental Apicola, Min. Agricultura (EEA), El Cano, Arroyo Arenas Mun. Lisa, Ciudad de la Habana, Cuba. Fax (MINA-GRI): (+53) 7 335086. Fax (Empresa Cubana de Apicultura): (+53) 7 815428.

3rd Asian Apicultural Association Conference. Hanoi, Vietnam. 6th-10th October 1996

'Bees and beekeeping with sustainable agro-forestry development' is the theme of this meeting. For details of the conference, contact: Committee of the 3rd AAA Conference, Ms Nguyen Thu Hang, Bee Research and Development Centre, Lang Ha, Dong Ha, Hanoi, Vietnam. Fax: (+84) 4 352725.

The Bee Research Conference. January 11th-12th 1997, in Mexico.

Apimondia Conference.

September 1st-6th 1997 in Belgium. September 13th-21st 1999 in Vancouver. September ? 2001 in South Africa.

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