Volume 15 No. 3

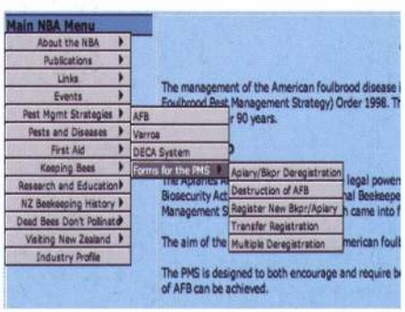
April 2007

The New Zealand BeeKeeper

New Zealand
Permit No. 154506

Permit

Updating the AFB NPMS Apiary Database



ISSN 0110-63325
The Official Journal of The National Beekeepers' Association of New Zealand Inc.

Published by South City Print
P.O. Box 2494
South Dunedin, New Zealand

NATIONAL BEEKEEPERS' ASSN OF NZ (Inc.) EXECUTIVE COUNCIL

Jane Lorimer (President)
Hillcrest Apiaries
'Kahurangi-o-Papa'
RD 3, Hamilton 3283
Ph 07 856 9625
Fax 07 856 9241
Mobile 027 294 6559
Email: hunnybee@wave.co.nz

R Neil Farrer (Vice President)
7 Nixon Street
Wanganui 4500
Ph 06 343 6248
Mobile 027 457 9634
Email: farrer@infogen.net.nz

Brian Alexander
Woodhaugh Apiaries
RD 3,
Kaukapakapa 0873
Ph/Fax 09 420 5028
Email: bee@xtra.co.nz (Attn:Brian)

Barry Foster
Tawari Apiaries Ltd
695 Aberdeen Road
Gisborne 4041
Ph 06 867 4591
Fax 06 867 4508
Mobile 027 449 7131
Email: bjfoster@xtra.co.nz

Neil Mossop
Mossop's Honey
1064 State Highway 29
RD 1, Tauranga 3171
Ph 07 543 0971
Email: info@
mossopshoney.co.nz

Arthur Day
Marlborough Apiaries Ltd
PO Box 307
Blenheim 7240
Ph/Fax 03 577 8143
Mobile 021 223 4790
Email: arthur@beekeepernz.com

Frans Laas
Wildlife Solutions Ltd
102 Gladstone Road
Mosgiel 9007
Ph 03 489 4597
Email: f-laas@xtra.co.nz

CHIEF EXECUTIVE OFFICER:
Jim Edwards
World Veterinary Consultants
10 Nikau Lane
Manakau Heights
RD 1, Otaki 5581
Ph 06 362 6301
Fax 06 362 6302
Mobile 021 631 447
Email: ceo@nba.org.nz

EXECUTIVE SECRETARY:
Pam Edwards
World Veterinary Consultants
10 Nikau Lane
Manakau Heights
RD 1, Otaki 5581
Ph 06 362 6301
Fax 06 362 6302
Email: secretary@nba.org.nz

Roger and Linda Bray (Librarians) Braesby Farm, RD 1, Ashburton 7771 Ph/Fax 03 308 4964 Email: birdsnbees@xtra.co.nz	**AgriQuality phone:** **0508 00 11 22**	**Rex Baynes** **AFB NPMS Manager** **PO Box 44282, Lower Hutt** **rbaynes@ihug.co.nz**	**Magazine subscriptions:** **— 11 Issues —** **NZ $112.50 GST inc** **Australia NZ$125.00** **US, UK & Asia NZ$135.00 inc p&p**

BRANCHES: The first named person is the President/Chairperson. The second is the Secretary.

NORTHLAND
Garry Goodwin
57 Whangarei Heads School Rd
RD 4 Whangarei
Ph: 09 434 0118
Jo Scott
148 One Tree Point Rd
Ruakaka 0171
Ph: 09 432 7149
Fax 09 432 7144

AUCKLAND
Ian Browning
1824 Great South Rd
RD 3
Drury 2579
Ph: 09 236 0764
Bob Russell
101 Kern Rd
RD 3
Drury 2579
Home Ph/Fax: 09 294 8656
Work Mobile: 027 284 8951
email: bob.russell@paradise.net.nz

WAIKATO
Russell Berry
Arataki Honey
2488 SH5 Waiotapu
RD 3
Rotorua 3073
Ph: 07 366 6111
Fax: 07 366 6999
email:
russell@arataki-honey-rotorua.co.nz
Cameron Martin
Haumea Road
RD 1
Galatea 3079
Ph: 07 366 4804
Fax: 07 366 4804
email: busy-bee@xtra.co.nz

BAY OF PLENTY
Dennis Crowley
PO Box 9170
Greerton
Tauranga 3142
Ph: 07 541 3323
email: crowleys@slingshot.co.nz
Barbara Pimm
448 Woodlands Road
RD 2, Opotiki 3198
Ph 07 315 7650
email:hikuhoney@xtra.co.nz

POVERTY BAY
Don Simm
2 Walsh St
Gisborne 4041
Ph: 06 868 3866
Mobile: 021 150 3041
email: donsim1@xtra.co.nz
Barry Foster
695 Aberdeen Road
Gisborne 4041
Ph: 06 867 4591
Fax: 06 867 4508
email: bjfoster@xtra.co.nz

HAWKE'S BAY
John Berry
46 Arataki Rd
Havelock North 4130
Ph. 06 877 6205
Fax: 06 877 4200
email: jrberry@ihug.co.nz
Ron Morison
31 Puketapu Road
Taradale 4112
Hawkes Bay
Ph/Fax: 06 844 9493
email: rmorison@clear.net.nz

SOUTHERN NORTH ISLAND
RN (Neil) Farrer
7 Nixon Street
Wanganui 4500
Ph: 06 343 6248
Fax: 06343 3275
email: farrer@infogen.net.nz
Frank Lindsay
26 Cunliffe Street
Johnsonville
Wellington 6037
Ph/Fax: 04 478 3367
email: lindsays.apiaries@xtra.co.nz

NELSON
Glenn Kelly
PO Box 421
Motueka
Ph/Fax 03 528 8174
email: glennjkelly@yahoo.co.nz
Michael Wraight
15 Titoki Place
Motueka 7120
Ph/Fax: 03 528 6010
email: wraight@xtra.co.nz

www.nba.org.nz

CANTERBURY
Roger Bray
Braesby Farm
RD1
Ashburton 7771
Ph/Fax: 03 308 4964
email: birdsnbees@xtra.co.nz
Trevor Corbett
PO Box 20
Waipara, North Canterbury
Ph: 027 450 4567
email: beeworks@xtra.co.nz

OTAGO
Blair Dale
Strathdale Honey
Olive Ave, Box 23
Middlemarch, Otago
Ph: 03 464 3122
Fax: 03 464 3796
Mobile: 027 464 3125
email: blair@strathdalehoney.com
Peter Sales
"Te Ora", RD1, Port Chalmers
Dunedin 9081
Ph: 03 472 7220
email: foxglove@paradise.net.nz

SOUTHLAND
Doug Lomax
61 William Stephen Rd
Te Anau
Ph: 03 249 9099
Fax: 03 249 9068
email: dougandbarbara@xtra.co.nz

NZ Beekeeper Printed & Published by:
South City Print
P.O. Box 2494, South Dunedin.
Advertising: Allan Middlemiss
Telephone: 03 455 4486 Fax: 03 455 7286
email: ckp@xtra.co.nz
NBA membership & Magazine Subscriptions:
Pam Edwards
World Veterinary Consultants
10 Nikau Lane
Manakau Heights, RD 1, Otaki
Ph 06 362 6301 Fax 06 362 6302
Email:secretary@nba.org.nz
Editorial/Publication:
Nancy Fithian
8A Awa Road, Miramar, Wellington 6022
Ph: 04 380 8801 Fax: 04 380 7197
Mobile 027 238 2915
email: editor@nba.org.nz

Table of Contents

President's Report

NBA to appeal High Court decision

As most of you will now know, the judgment has been given on our request to the High Court for a judicial review of the decision to allow bee product imports. The news was not what we wanted to hear, but I had realised that it was likely to be a close call whichever way it went. When we were bringing into question the rights or wrongs of law, winning the case was never going to be easy. However, the Executive feels so strongly on the issue that we have decided to move to appeal, where three judges at least will listen to argument.

Deformed wing virus

As many will now realise, Deformed Wing Virus (DWV) has now been confirmed as present in New Zealand, currently more prevalent in the Carniolan stock within the Waikato. I happened to hear about the confirmation of DWV from a reporter before Jim Edwards was able to contact me, and the news hit rather hard even though I had known about some samples being checked.

What is the presence of this virus going to mean for beekeepers from here on in? My first thought on hearing about the virus was that another income stream had just been closed to us— that the relatively small amount of contract extracting that we carry out could no longer be continued, as it is likely that varroa treatments are probably going to be needed in the hives a month earlier than before. My understanding is that if you keep varroa levels low, you should have minimal problems with DWV.

The problems will arise when resistance sets in. So don't take shortcuts to treatment just because they are working for you now, as this may bite you in the backside later on. **Alternate your treatment products, and use them correctly to avoid resistance.**

If the presence of DWV does prove a problem for us, there will be some major difficulties with regards to getting honey off quickly and extracted. The number of extraction plants that are capable of a high throughput are few and far between, so some beekeepers are going to need to find storage for their honey to extract later in the season. This storage may need to be temperature controlled so that honey does not become infested with wax moth. Once again, this will add more cost for the beekeeper.

South Island varroa workshops

I understand that HortResearch has done one presentation in Nelson to date, where the workshop was well received. The NBA will be following up with a further one-day workshop in Nelson on 7 May, with North Island beekeepers coming down to share information with our southern colleagues. My understanding is that there will be more practical demonstrations along with discussions.

Beekeeping profile document

In one of our early planning sessions the Executive Council identified the need to update our industry profile document. The problem has been that both the Executive and Jim Edwards have not had the time available to begin the task. As I reported in the March issue, an opportunity has come our way in the form of an overseas student, Richard Gasse, who is studying at a university in Germany, and has been in New Zealand working for a beekeeper in the Taupo–Turangi region. Jim and I met with Richard to talk about the industry and our need for an updated profile document. He is keen to do this as part of his thesis, and has met with several people to get a handle on the industry before he goes back home. His intention is to do a comparison of beekeeping in Germany and New Zealand as part of his work towards the equivalent of a Masters degree.

Richard Gasse

- Jane Lorimer

From the Executive Secretary's desk

Another month has passed and we are still very busy. Before we know it we will all be heading for the Annual Conference in Dunedin.

Subscriptions

The subscriptions are still coming in although the pace has slowed down somewhat. **Please note that if you have not paid your 2007 subscription, this will be the last issue of *The New Zealand BeeKeeper* that you will receive, except for the April and October issues that go to all registered beekeepers. As from 1 May you will also no longer have access to the Library or the Members only section of the website.**

We understand that things may be difficult for some with the added costs with varroa and risk management programmes and low returns for some honeys. Please do not hesitate to contact us if you are having difficulty paying your subscription. We can make arrangements for it to be paid off as your cash flow allows or arrange for you to join at a lower level, thus allowing you to continue to receive the benefits of being a member. All contacts made to us will be kept confidential.

Planning for the AGM

By now all Branches will have received a request for Notices of Motions/Rule changes and Ward Representatives. To assist the smooth running of the AGM I ask you to please ensure that these are received by the Secretariat by the due date.

Website

We are planning some new initiatives for the Members only section of the website. These will include reports on areas in which the Executive Council and Management Committee are working on your behalf, as well as any interesting international snippets that pass by our desks.

- Pam Edwards
Executive Secretary

Is your RMP approved and running well?

All honey processors that want their product to be eligible for official assurances were required to implement risk management programmes last year. The first audit round should soon be complete and you will then know how your RMP stands up against the specifications and whether you have improvements to make.

All of this is important, especially if you plan to have your honey available for possible export to overseas markets. This process has to start with the harvest declaration. Every step of the process through to export must be documented and use only registered operators, be they processors, transport and storage facilities or exporters. Please keep all of this in mind if you want to keep your options open so that your honey may be acceptable for export, where hopefully you might receive a premium price.

A workshop will be held on Monday 2 July prior to the NBA Conference in Dunedin, where the process leading up to export certification will be clarified. This follows the successful similar workshop that we ran in Wellington in December. This may be your opportunity to make sure that you are up to speed with the current requirements.

- Jim Edwards
Chairman
Bee Products Standards Council

Management Agency takes positive step towards becoming a body more representative of all levy payers

Beekeepers will recall that in the October 2006 issue of *The New Zealand BeeKeeper*, beekeeper organisations and levy payers were invited to provide comment on the AFB NPMS Management Agency becoming a body more representative of all levy payers. This invitation originated from a remit passed at the 2006 Annual General Meeting of the New Zealand National Beekeepers' Association (Inc.) held in Hamilton on 20 July 2006.

For the record I can report the Management Agency received one submission.

I can advise that the Management Agency has adopted a positive approach to this initiative by establishing a working group. The group has been instructed as part of its terms of reference to establish clearly defined criteria for selection for appointment to the Management Agency, as well as developing an easily understood and transparent process of selection. This latter aspect might well involve employing the services of an independent person to chair an appointments committee.

- Rex Baynes
AFB NPMS Manager

Do you still want the bees you have been keeping?

Circumstances change and what we had the energy for three, five or seven years ago may not be the same now. If any of the following applies to you and you would like to dispose of any hives, please make use of the contacts on page 2 of this magazine.

- Do you still want to keep your bees?
- Have your hives died out?
- Has treating for varroa got on top of you?
- Do you have empty bee gear in the back shed?
- Maybe you inherited hives that was a family passion and you no longer can care for them.

Alternatively, become involved in the National Beekeepers' Association, attend field days and learn how to take care of your bees.

Biosecurity New Zealand investigating Deformed Wing Virus

Biosecurity New Zealand is investigating the presence of Deformed Wing Virus (DWV) in New Zealand after a beekeeper reported an unusually high level of supersedure in some of his hives and alerted MAF's 0800 number.

DWV is one of more than 13 viral bee infections now identified and has a global distribution. It is strongly associated with the varroa bee mite and has become apparent in declining hives, with some bees exhibiting malformations including stunted or deformed wings and malformed body segments. Affected bees usually die within 48 hours. It is not known if there is a difference in DWV susceptibility between Italian and Carniolan bee strains. DWV has no potential for any human health impact and can be managed by ensuring good varroa control and colony nutrition.

Initially, two properties, one in Northland and one in Waikato were confirmed as affected, and Biosecurity New Zealand began a tracing project to identify potential pathways for spread.

The find is the first laboratory confirmation of DWV in New Zealand, although bees with deformed wings have previously been observed in varroa-infested hives. The confirmation was made possible through the use of a newly introduced and more sensitive polymerase chain reaction (PCR) technique, developed in collaboration with HortResearch, which allows analysis of genetic material.

Little testing has been done before now because the tests previously available were not sensitive or specific enough to reliably identify bee viruses. A complicating factor is that many bee viruses, including DWV, can be present in "latent" form and difficult to detect, and that clinical signs tend to become apparent only when hives are under stress. It was also known that negative impacts could be avoided by avoiding hive stress with good nutrition and pest control—actions which are not dependent on knowing what diseases may be present.

That said, knowledge of bee viruses is improving, particularly with better tests being available, but there is still a lot of work to do to fully understand the mechanisms involved and how they cause disease. Honey bee viruses appear to be spread in two ways—vertical—from the queen to the offspring, and horizontal—via food, by a vector (such as varroa), and possibly bee-to-bee during mating. Vertical transmission is normal in healthy hives. Horizontal transmission occurs in times of stress, due to the presence of another disease or parasite, or when there is a decline in protein food supply. Increased numbers of virus particles make horizontal transmission more viable and can lead to the death of hosts and potentially, collapse of a colony.

Worldwide, DWV is believed to be one of the major contributors to parasitic mite syndrome, which is linked to a number of viruses and conditions leading to the collapse of colonies. Varroa mites have been shown to acquire these viruses when they feed on infected bees, and pass the infection on to other bee pupae and adults on which they feed. It is uncertain how the viruses are passed on by the mites, but there is some suggestion that the feeding of the mites reduces the immune response of the bee, allowing viruses and other pathogens to multiply in the bee. DWV has been shown to be transmitted by the mites to both pupae and adult bees. The amount of virus replication that occurs in the bee pupa determines the disease symptoms that are observed as it develops into an adult. A low level of infection results in reduced life span but no deformities, a high level of infection results in wing and abdomen deformities in the adult bee. Due to the involvement of varroa in the expression of clinical disease symptoms, varroa control is an important aspect of minimising the impact of DWV.

If you suspect you have Deformed Wing Virus in your hives, call 0800 80 99 66.

More information is available online at www.biosecurity.govt.nz

[Article submitted by Biosecurity New Zealand]

Parasitic mite syndrome is a sign of heavy varroa infestation.

Beekeeping community supports Management Agency AP2 recruitment and training initiative

The Management Agency has as one of its key objectives for 2007 the task of increasing significantly the number of Authorised Persons of Level 2 (AP2) to assist in the detection of American foulbrood and surveillance for varroa in the South Island, as well as assisting in the Exotic Bee disease surveillance programme.

In response to an invitation to beekeeping organisations, I am pleased to report that to date we have more than 70 people whom the nominating organisations consider meet the criteria as set out in the Management Agency Guidelines for Selection.

A series of one-day training courses are planned as follows:

Whangarei	24 May 2007 (Thursday)
Hamilton	25 May 2007 (Friday)
Te Puke	28 May 2007 (Monday)
Gisborne	29 May 2007 (Tuesday)
Napier	31 May 2007 (Thursday)
Palmerston North	1 June 2007 (Friday).

These courses are to be facilitated by Byron Taylor of AgriQuality Limited and AFB NPMS Manager Rex Baynes.

An application for funding assistance was made to Biosecurity New Zealand in January; as of this moment we are still awaiting a response. [*Editor's note: please see page 9 for an update.*]

- Rex Baynes
AFB NPMS Manager

NBA to appeal High Court decision

The NBA has been advised of the Judge's decision in our hearing by the High Court on the importation of honey from Australia.

Our main thrust was that the importation of honey would introduce new organisms to New Zealand beekeeping and in particular *P. alvei.* Our case was reinforced by the decision of ERMA that *P. alvei* was not present in New Zealand and therefore it would be a new organism to the beekeeping industry. MAF had acknowledged that within six shipments of honey from Australia it was likely that *P. alvei* would be found in New Zealand.

NBA has been assisted with funding by the Honey Industry Trust and we acknowledge that without this funding NBA could not have afforded the cost, which to date is around $70,000.

However, the Judge found that although *P. alvei* was not present in New Zealand and would be introduced as a passenger in imported honey, that ERMA did not have to address the implications of the organism to New Zealand, and that MAF did have the power to make the decision (which of course they did).

There are grounds for an appeal, based on the law as it applies, but it will create a precedent in the way MAF and other Government departments endeavour to assist the government of the day with importation of material from overseas. Your Executive has discussed the Judge's full written decision with the barrister who handled our case and has agreed to proceed to an appeal. In the appeal we will also seek the reinstatement of the injunction preventing importation of honey until the appeal has been heard. NBA is seeking further funding assistance as the costs of the appeal are anticipated to be more than $30,000.

NBA is acting on behalf of all beekeepers in New Zealand in this matter, as every beekeeper, both hobbyist and commercial, will be affected by the import of honey from overseas.

- NBA Executive Council

Varroa Agency Incorporated
PO Box 304
Mosgiel

Ph +64 3 489 0066
Fax +64 3 489 0071
Web www.varroa.org.nz

VARROA AGENCY INC

NEWS RELEASE

March 21, 2007

2007 will be the last year a South Island-wide varroa surveillance programme will be carried out.

Varroa Agency Inc. Board members decided at a recent meeting not to set a levy to carry out a further surveillance programme in 2008 and beyond to check for the presence of the varroa bee mite.

This follows an extensive series of Varroa Agency Inc. consultation meetings with South Island beekeepers over February, to gauge support for the agency to continue with its surveillance and education roles.

The Varroa Agency Inc., which is responsible for the national varroa pest management strategy, has been managing varroa monitoring in the South Island for the past three years. That surveillance programme detected the discovery of varroa in Nelson in June 2006, the first time varroa had been found in the South Island.

Agency Chairman Duncan Butcher said there was a limited response from beekeepers and industry representatives at the meetings and to the call for submissions, and the results were inconclusive.

Only about half of those who made a submission to the Agency wanted surveillance to continue, which didn't give a strong indication of support and direction. "However, in assessing submissions, it was the larger beekeeping units opposing further surveillance levies, while beekeepers in favour of continued surveillance generally had only a small numbers of hives. This indicated to us there was overall lack of support for continued surveillance," Mr Butcher said.

"The Agency is disappointed, but feels the amount of support generated is not sufficient for the board to then go to its contributing regional and unitary councils to seek funding from their regional rates for a further year."

However, the Agency's surveillance programme for 2007, already funded, has just started in the north of the South Island and will be completed in September 2007. This will give beekeepers and those who depend on bees for pollination a good idea of varroa spread, so they can plan accordingly. The results of that surveillance, some of which is being done in conjunction with Biosecurity New Zealand, will be reported to the industry as they come in.

The Board will work out a disestablishment programme for the Agency at its next meeting to present to the Agency's annual meeting in September, and is expected to wind up in January/February 2008.

For further information, please contact:
Duncan Butcher, Varroa Agency Inc. Chairman, phone 03-445-0463

Biosecurity New Zealand refuses funding assistance for AP2 training

The Management Agency has been stunned to receive word from Biosecurity New Zealand of its refusal to provide financial assistance to train Authorised Persons Level 2 (AP2s).

A key tool in the ongoing fight against the reduction and ultimate eradication of AFB is the availability of AP2s.

The Management Agency through its endeavours has some 70 people waiting to be trained. Regrettably Biosecurity New Zealand, in a 20 March 2007 letter to the Management Agency, advised that while a certain level of flexibility exists in the budget, they have to be aware that the NPMS is an industry-funded programme, paid for by a levy on the people who benefit from it, the beekeepers.

Quite clearly it appears that Biosecurity New Zealand fails to understand and appreciate the contribution that beekeepers make not only to the agricultural sector, but economically.

While I have my own opinion on Biosecurity New Zealand's decision I will leave beekeepers to reach their own conclusion.

NBA Vice President Neil Farrer and I have already requested a meeting with Biosecurity New Zealand on this matter. Failure to reach a satisfactory result will see us visiting the Minister for Biosecurity.

- Rex Baynes
AFB NPMS Manager

API LIFE VAR

New Zealand's No 1 organic product for mite control

Some very good reasons to use ApiLife:
-it is an organic registered varroa treatment
-there is no resistance, which make ALV a sustainable product
-It is highly effective, average 95% +
-the easiest and quickest treatment to apply, no need to split the beehive, which saves you time and money
-All the components are completely safe for the beekeepers, the bees and all the products of the beehive
-Meets all EU standards for the products of the beehive
-Used effectively & successfully for over 15 years in Europe

ApiLife var contains four essential oils:
Thymol, Eucalyptus, Camphor and Menthol
absorbed on a vermiculate wafer,
with slow vapor release
It is the natural alternative for the fight against varroa mites

For orders and enquiries:

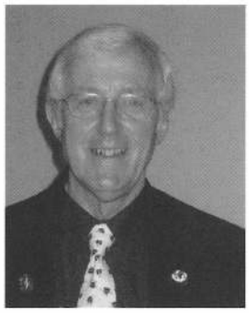
1. **Beegreen**, Reuben and Anne Stanley, beegreen@fastmail.fm
   NEW phone / fax 07 333 2249 Rotorua
2. **Mossop's honey**, Neil and Wendy Mossop,
   info@mossopshoney.co.nz phone / fax 07 543 0971, Tauranga
3. **Honey centre**, Kerry and Wilma Fountain, honeycentre@xtra.co.nz
   phone / fax 09 425 8003, Warkworth
4. **Rongoa honey**, Don Simm, donsim1@xtra.co.nz
   phone / fax 06 868 3866, Gisborne

New prices (1box =100pces / 1 pce = 2 wafers)
1 to 8 boxes, 100 to 800 pces = 4.50 each +GST
9 boxes +, 900+ pces = 4.20 each + GST

Use ApiLife and your bees will have a happy life

BK246

A new disease—how should the NBA react?



It is timely that the finding of Deformed Wing Virus (DWV) has been announced within a month of the Executive Council having started planning its consultation on how the NBA should react to new diseases.

You will be able to read more about DWV elsewhere in this issue of *The New Zealand BeeKeeper.* However, we do know that bee viruses generally cause inapparent disease that becomes significant when bees are subject to serious varroa infection and other stresses. This is one of the important reasons why we tried to keep varroa out of New Zealand. Now we have to live with it and keep it managed to a level that will not lead to further disease problems in our bees.

How we react to new diseases will depend on the disease. The Executive Council wants the NBA to agree ahead of these new incursions how we should react. Do we want to try eradicate if that is possible? Do we want strong controls to apply around the infected apiaries? Or do we agree that a particular disease does not warrant severe restrictions on beekeeping activities and that we will just have to learn to live with it?

We are planning an interactive session at the NBA annual conference in Dunedin in July. We will ask you for your direct feedback on how the NBA should respond to disease and other emergency situations. Our planning requires that we do some homework before our conference. If you have views or relevant information on how the NBA should respond to diseases, please contact me.

Let's get our contingency plans sorted out in the cold light of day before we have to do it in the heat of battle.

- Jim Edwards
Chief Executive Officer

Bumblebees can estimate time intervals

In a finding that broadens our understanding of time perception in the animal kingdom, researchers have discovered that an insect pollinator, the bumblebee, can estimate the duration of time intervals. Although many insects show daily and annual rhythms of behaviour, the more sophisticated ability to estimate the duration of shorter time intervals had previously been known only in humans and other vertebrates.

The findings are reported by Michael Boisvert and David Sherry of the Behavioural and Cognitive Neuroscience Group, Department of Psychology, University of Western Ontario, Canada, and appear in the 22 August issue of the journal *Current Biology*, published by Cell Press.

Bees and other insects make a variety of decisions that appear to require the ability to estimate elapsed durations. Insect pollinators feed on floral nectar that depletes and renews with the passage of time, and insect communication and navigation may also require the ability to estimate the duration of time intervals.

In the new work, the researchers investigated bumblebees' ability to time the interval between successive nectar rewards. Using a specially designed chamber in which bumblebees extended their proboscises to obtain sucrose rewards, the researchers observed that bees adjusted the timing of proboscis extensions so that most were made near the end of the programmed interval between rewards.

When nectar was delivered after either of two different intervals, bees could often time both intervals simultaneously.

This research show that the biological foundations of time perception may be found in animals with relatively simple neural systems.

[*Reprinted from* Bee Craft, *October 2006, page 41.*]

Want to read more articles from overseas? Join the NBA and you are eligible to borrow items from the NBA Library. Membership form is on the back page of the conference insert in this issue.

BAYVAROL®

NZ's No 1 VARROA TREATMENT

Why?

- it's highly effective (up to over 99% efficacy)
- it's the easiest to use (rigid strips - no curling)
- it's very safe to use (very important - especially for staff)
- it has twice the contact area (4 strips per brood chamber)
- very kind to beeswax, propolis & comb honey
- very gentle on queen bees & nucs
- it can be used during the honey flow if required

— 8 Week treatment now approved in N.Z.

— showing no signs of resistance

— no residues detected

We'd strongly recommend that you use Bayvarol® as one of your alternate treatments.

We believe that Bayvarol is now New Zealand's most popular Varroa treatment.

Current prices

20 to 96 strips	$1.87 + GST each
100 to 796 strips	$1.75 + GST each
800 to 8800 strips	$1.49 + GST each*
9600 plus strips	$1.35 + GST each

* For orders of one or more cartons, enquire from us to find out how to join in with a bulk purchaser and receive your strips at the best possible price.

Packets contain 20 strips, cartons contain 800 strips. For orders of up to 100 strips please add $6 incl. GST for freight. Orders of 100 strips or more are despatched freight free to anywhere in New Zealand. Payment is required prior to despatch by Visa, M/Card, Cheque or Electronic Banking.

For any enquiries or orders, contact Stuart Ecroyd
Free Fax: 0800 233 929 or email: Bayvarol@beehealthy.co.nz

BK121

Bayvarol **®** - Registered trademark of Bayer AG Germany - Approved under the Animal Products (Ancillary and Transitional Provisions) Act 1999

www.beehealthy.co.nz

Ecroyd Beekeeping Supplies Ltd

Distributors, Exporters & Importers of Beekeeping Equipment
Distributors of Bee Healthy & Beeway Honey & Bee Products

www.ecroyd.com

P.O. Box 5056 Papanui, Christchurch, New Zealand • 6A Sheffield Crescent, Burnside, Christchurch
Phone: (03) 358-7498 • Fax: (03) 358-8789 • Free Fax 0800 233 929 • Email: ecroyd@beehealthy.co.nz

Whangarei Bee Club portable dipper unit

Our intention was to build a portable unit that could be transported with a minimum of inconvenience and manpower. We didn't meet this objective due to the weight of the product: we would have had to drain the wax by 50% of the volume.

The heat source was to be LPG bottles, but the economy of time meant three boxes needed to be treated at a time. Perimeter cleanliness was a consideration, as was the ability to address flashpoint fire.

The size of the tank was dictated by the height of two full-sized supers with 100 mm clearance all round. The inner tank is 3 mm steel welded internally and externally. Raised bars traverse the bottom to ensure that supers are not scorched by direct contact. A demountable drip tray fixes to one side to allow the boxes to cool prior to painting. A permanently fixed cover latches back against the chimney for stifling any fire and to protect the unit while not in use. All sides of the box are insulated with fibreglass batts (not wool), and outer sheathing is fixed by rivets.

The heating chamber is fully sealed on three sides due to the wind factor, and the fourth side has adjustable flaps. The chimney extends from the bottom of the heat chamber to above head height to vent the excess heat to above operator height. The chimney has a damper at the base and is removable for easy transport.

The gas burner is a large four-tap unit available from the BBQ Factory. This is essential, as once up to temperature very little heat is required. At the moment we have a hand-held temperature gauge that does the job, but we may explore an alternative that is less likely to breakage and easier to read.

The cost of the unit was always a consideration. Robert Smith both designed and made the unit. Fortunately Robert has a passion for beekeeping and was unpaid for his labour.

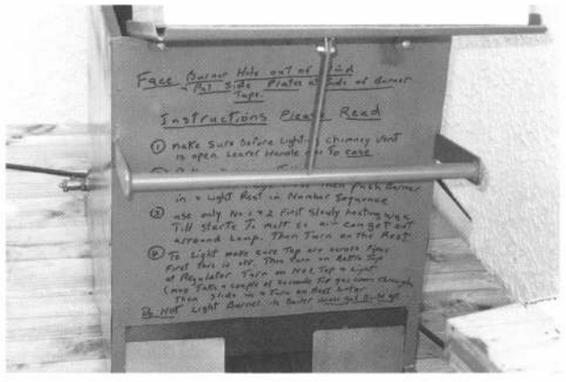
Material costs were in the vicinity of $550.00 to $600.00 including GST. Trevor Cullen of Ceracell supplied the wax products at $725.00 GST inclusive, which filled the unit with 100% in reserve, so for half that cost we completed the initial fill. LPG consumption runs in the vicinity of $14.00 to $16.00 for a half-day operation.

Various club members with relevant knowledge spoke with Robert Smith, and coupled with his trade skill we have been provided with an efficient unit that is being extensively used.

As near as we can estimate a labour factor of approximately three days should be factored in if the unit is to be built commercially.

If anyone is considering going down the same path we are willing to provide measurements and sketches via our hotmail address: whangareibeeclub@hotmail.com

- Whangarei Bee Club



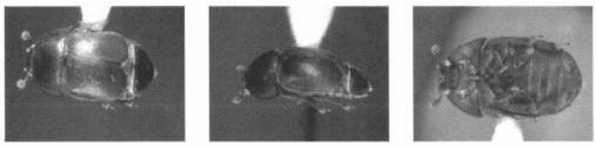
The dipper unit and its creator Robert Smith.
Photos: Whangarei Bee Club

It is important to get a laboratory diagnosis when half-moon shaped larvae are found in a hive—could be half-moon syndrome, parasitic mite syndrome, or EFB.

The small hive beetle: another exotic invasive pest (part two)

Marco Gonzalez
Apiculture Officer
AgriQuality Limited

[Editor's note: part one of this article appeared in the March 2007 issue, pages 20–23.]



Aethina tumida dorsal, lateral and ventral view.
Source: www.beetlelady.com/?page_id=5

Control methods

Beekeepers require a high level of understanding of the pest and its management to effectively control SHB.

The first line of defence for small hive beetle is sanitation in the bee yard and honey house. There are different methods of SHB control available overseas that include chemicals, plus non-chemical methods that rely on improved hive and honey house hygiene and management.

Chemical control

In the hive

Check Mite+® strips (Bayer Corporation) have been approved for use in hives for the control of small hive beetles in some states of USA under an emergency registration. This is an organophosphate (10% Coumaphos) for which registration in New Zealand is currently being assessed. Unfortunately its use creates residue problems in wax and honey.

Soil around the hive

Using products containing 500g/L permethryn (Permex®) as their only active constituent. A solution is prepared by mixing 1 ml product in one litre of water. Application must be done when bees are inactive (late evening or early morning). The prepared solution is applied to the ground in front of the beehives (45–60 cm wide) at a rate of four litres per square metre. Repeat the application monthly. Grass in the area to treat must be cut prior to application to improve soil penetration.

Other pesticides, such as fipronil, have also been shown to be effective under lab conditions.

In the store room

PDB (paradichlorobenzene) has been used successfully for protecting empty stored combs. However, this product leaves residues in comb and honey that condemns honey for the European market, thus it is no longer an option for New Zealand beekeepers.

Phostoxin® (aluminium phosphide) has been used successfully to kill all stages of SHB. However, Phostoxin® is not registered for this purpose in New Zealand and honey from supers treated with this chemical may only be used to feed bees.

Chemical resistance

As with varroa the development of sustainable control methods are desirable to avoid resistance to chemical treatment in the long run.

Non-chemical control methods

Increased public concern about environmental and public health issues with the use of chemical control methods have increased the search for alternative safe control methods.

Traps

There are different models of traps, some to be used inside the hives and others outside. They all have different degrees of effectiveness. One of the latest and more effective trap models has recently been developed by American scientists, based on the identification of a type of yeast (carried by the small hive beetle) that releases potent attractants for the beetle when it ferments pollen which has been collected by honey bees.

Biological

Tests undertaken under laboratory conditions have shown that at least three species of entomopathogenic nematodes *(Steinernema riobrave, S. carpocapsae, and Heterorhabditis megidis)* are effective in killing SHB at the pupal stage.

Genetic selection

There are variations in the severity of SHB infestation, even between hives in the same apiary, and there is evidence that genetic traits must be responsible for this. It is believed that a breeding program toward resistance to SHB may be more rewarding than in the case of varroa.

Physical methods

Freezing supers at (-12°C) for 24 hours kills all stages of SHB.

Low humidity (<50 percent) inhibits the hatchability of small hive beetle eggs. Hive beetle damage is prevented by simply circulating air through stacks of stored honey, thereby reducing the humidity.

Diatomaceous earth: several beekeepers are experimenting with the use of diatomaceous earth around the hive as a way to disrupt the beetle's lifecycle. The diatoms abrade the insect's surface, causing them to dehydrate and die.

Managerial control methods

These include:

- keeping colonies strong, healthy (disease free), requeening regularly, feeding them properly
- extracting honey from supers without delay
- using pesticides to kill beetles in different stages (adult and pupae) of their life cycle
- removing and treating all dead out hives without delay
- avoiding returning wet supers to weak hives
- keeping a high level of hygiene in and around the honey house.

Experience from the USA has shown that the best line of defence is good management. An integrated pest management strategy should be used for reducing the impact of the beetle. This involves hitting SHB at different levels and stages of its life through a combination of improved hygiene, managerial practices and control methods cited above.

Impact of SHB in New Zealand

The damage caused by SHB in Australia has not been so dramatic as those seen in the United States. This could be explained, in part, by the fact that in Australia there is no varroa infestation, there are a number of native ants that predate on SHB and soils are very dry.

It is difficult to predict the impact of the small hive beetle in New Zealand. It is likely that its effect will be different for different parts of the country depending on soil type, climatic and topographical conditions. However, because varroa is already present in the country and predatory ants are not common, it is likely that the effects of SHB will resemble those seen in the USA.

The organic beekeeping industry will probably be the more severely affected as there are, to date, very limited organic alternatives to control this pest.

As a secondary effect important export markets (both live bees and bee products) could be lost due to the presence of this pest or residue problems likely to arise from combatting this plague.

Conclusion

Beekeepers must be aware of this pest and include it within their regular inspections for exotic diseases.

Even though it is hard to predict the impact of this pest in New Zealand, it is likely that it will be severe, at least in the warmer areas of the country.

In case the SHB became established in New Zealand, the prompt development of a national guideline on control of the SHB would be essential to restrict the detrimental effect of SHB on the beekeeping industry. This should be flexible and dynamic, and capable of adapting to any new information that becomes available.

Suggested reading and websites

- http://creatures.ifas.ufl.edu/misc/bees/small_hive_beetle.htm
- www.zeta.org.au/~anbrc/small_hive_beetle.html
- http://beebase.csl.gov.uk/pdfs/SHB_factsheet.pdf
- Field control and biology studies of a new pest species, *Aethina tumida* Murray (Coleoptera: Nitidulidae), attacking European honeybees in the Western Hemisphere. Elzen, P.J., J.R. Baxter, D. Westervelt, C. Randall, K.S. Delaplane, F.A. Eischen, L. Cutts, & W.T. Wilson. 1999. *Apidologie* 30: 361–366.
- Elzen, P.J., J.R. Baxter, D. Westervelt, C. Randall, K. S. Delaplane, L. Cutts, and W. T. Wilson. 1999. Field control and biology studies of a new pest species, *Aetina tumida* Murray (Coleoptera, Nitidulidae), attacking European honey bees in the Western Hemisphere. *Apidologie,* 30: 361–366.
- Neuman, P and Elzen, P., 2003. The biology of the small hive beetle (*Aetina tumida*, Coleoptera : Nitidulidae): Gaps in our knowledge of an invasive species.
- Ellis, James; Hepburn, R; Delaplane, K. and Elzen, P. 2003. A scientific note on small hive beetle (*Aethina tumida*) oviposition and behaviour during European (*Apis mellifera*) honey bee clustering and absconding events.

NIWA's climate outlook: March to May 2007

Atmospheric circulation patterns for March to May are likely to feature higher than average pressures over and to the east of New Zealand, and an anomalous north or northeast airflow over the eastern Tasman and New Zealand.

Temperatures are expected to be average or above average over the country. Rainfall is expected to be normal in most districts, but above normal over northern New Zealand. Normal or above normal soil moisture and stream flows are likely in the north of the North Island. Elsewhere, normal soil moisture and stream flows are likely.

Australian bee industry leaders visit NZ

A group of Australian beekeeping industry leaders toured the North Island over a 10-day period in March. They visited some of our larger beekeeping establishments and other organisations such as HortResearch and AgriQuality Limited. Besides getting an overall impression of how the New Zealand beekeeping industry compares with their own, they were especially interested in learning about the impact of varroa on beekeepers and their management practices, the New Zealand pollination industry, and how the AFB National Pest Management Strategy works.

They visited us in Wellington on their last afternoon, so were all fairly tired of travelling and trying to visit two establishments per day. My first impression on meeting them was that they were all fairly young, which bodes well for their industry.

We summarised how varroa affected us after a log was moved from Northland to Wellington with a feral hive in it and what we did to manage our bees. Rex Baynes then talked of his role as AFB NPMS Manager. Finally we put them through a mock DECA course and they all passed the test, most getting 100%. For most it was the first time they had sat a test since leaving school.

In discussions afterward we talked of their impressions and highlights of their trip. They realised that the high Manuka and pollination prices had made our industry viable but if one or both these were taken away, then beekeepers would find it difficult to survive varroa. They felt that perhaps some Australian beekeepers may not fare as well if varroa arrive. They also said that we are still in a good position to control varroa while our chemical strips worked.

They were most impressed with Arataki Honey's plant and their visitor and education centre at Havelock North in the Hawke's Bay, which they considered a showpiece.

The Australians were taking back ideas that they could use in their own business. Most of them extracted continuously, under-supering and removing the top one or two supers every couple of weeks. Some of their production records were hugely impressive; for example, 600 drums from 1400 hives. However, they were impressed with the price of active Manuka honey.

Hopefully some of their ideas will rub off on to the beekeepers here. Each country does things a little differently. Through these meetings, beekeepers from both countries can take and use the best practices to improve their beekeeping and economic outlook.

-Frank Lindsay

Left to right: Peter McDonald (Victoria), Julian Wolfhagen (Tasmania, Doug Somerville (NSW DPI), Peter Barnes (Queensland), Ian Zadow (South Australia), Des Cannon (NSW), Rob Manning (Western Australia), Colin Fleay (Western Australia). Missing in action in Tauranga Hospital: Col Wilson.

Taking the mock DECA course

Beeswax Wanted

Top Prices - Prompt payment!

We urgently require all grades of beeswax for processing in our refinery, to supply to our growing customer base of manufacturers, both in NZ and overseas. This is a very important and stable market which we are very keen to grow as it is not as vulnerable to the fluctuations of demand and price which the commodity crude beeswax market is.

In order to maintain and develop these markets, we need and rely on loyal suppliers who will supply to us every year so that we can further develop these markets with confidence going forward.

If you are not already a regular supplier – please consider becoming one. In return you will benefit from high average returns for your beeswax year after year, even when the beeswax market is like the bulk pastoral honey market is at present, and the opportunist beeswax exporters are nowhere to be seen! You will also benefit from our prompt lump sum guaranteed payment.

Contact Peter for current prices on 03 693 9189, 0274 733 137, or A.H. 03 693 9080

Total Frames

The wooden Alliance frame with grooved bottom bar and pure beeswax comb foundation totally assembled and ready to use!

Total Frames are now so widely used that we have employed permanent staff to assemble them all year round. Beekeepers regularly tell us how well the bees do on them, especially the Manuka Special, and how the bees are producing much more honey than on plastic. This is a serious consideration no matter what type of honey you are producing, but especially so if you are producing any type of high value Manuka.

If you wish to purchase Total Frames, please order as early as possible, even if you do not want delivery for several months. This allows us the flexibility to better meet your needs.

Please phone to discuss this product and your specific requirements.

Quality Beeswax Comb Foundations

We offer 6 different weights of pure beeswax comb foundations. We have standard dimensions but can also manufacture to your specifications. Phone us to discuss the best comb foundation to suit your needs.

Alliance Beekeepers Woodware

We are a major distributor for Alliance Woodware and are able to supply all of your requirements delivered anywhere in the country at very competitive prices.

Wax moulds – 10 kg

$3.50 each plus GST

Paraffin Wax – 25 kg bags

$2.93 per kg plus GST

We accept beeswax as payment for all our products.

New Zealand Beeswax Ltd

Post: Private Bag 6001, GERALDINE 7956, New Zealand
Factory: 44 Gladstone St South, ORARI, South Canterbury
Phone: 64 3 693 9189; Fax: 64 3 693 9780
Email: info@beeswax.co.nz; Web: www.beeswax.co.nz

The Beeswax Specialists

BK317

Another use for old equipment

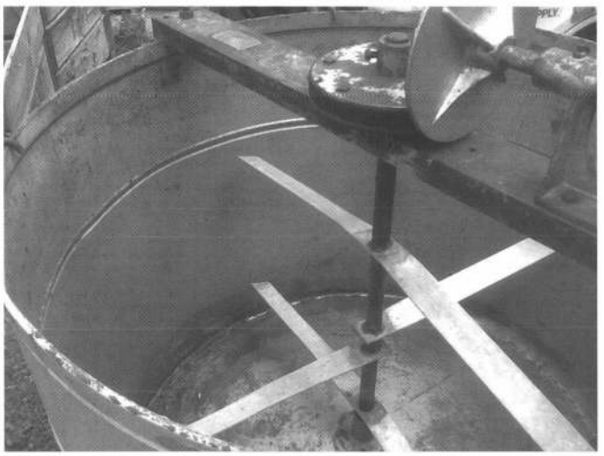
While visiting another beekeeper I spied an innovative use for an old extractor. Many beekeepers have been upgrading equipment over the last couple of years and I know some have wondered what to do with the old galvanised equipment.

Well in this case the inside had been removed and several stirring paddles installed. The shaft at the top was left with the clutch and a new motor mounted on the pallet base that the whole thing was strapped down to.

It's now a syrup stirrer that can handle up to 800 litres. Just pour in some cold water and the appropriate number of bags of sugar and the next morning you have the syrup ready to take out and feed hives.

Photos show the old extractor.

- Neil Farrer



Visual inspection of bees is not a good varroa detection technique.

From the colonies

Auckland Branch

The honey is still coming off—it seems relentless. Hot days stumbling through long grass with full-depth supers, sweat in your eyes, and the shrill of the blower whining in your ears as you blow bees down your shoes onto the thin socks that were all you had left in the drawer. Ah, the joy of it. Only about 13 more apiaries to get through out of about 50. The bees are getting robby at this time of year as their nectar supplies drop off. The weather has been hot and dry for about the last six weeks with barely a drop of rain. I've already had to siphon water from the neighbour's tank.

The dry weather has meant we can plan out exactly what we're doing and not have to work around the rain, although as I write this rain has started to bucket down. The nectar is still coming in at some sites with the bees working the Pennyroyal. From a distance, fields of Pennyroyal have somewhat of a purple haze, almost covering entire paddocks, heightened by the fact the cows won't touch the stuff. The gorse has started to flower also, which is the best winter pollen supply.

- James Harrison

Bay of Plenty Branch

After a busy pollination and most plants looking like they were going to flower well, beekeepers were hoping for a great honey flow. However, the variable weather meant variable honey crops with everything from poor to good. Most hives seem to have reasonable stores so are in good condition, but mite levels are starting to build and treatment time is here.

As the chores get done we are beginning to think about our field day in June—we have set the date for Saturday 16 June but haven't finalised the programme. So set this date aside, and look out for a programme in the next issue of *The New Zealand BeeKeeper.*

- Barbara Pimm

Poverty Bay Branch

Hi to all, hope the harvest went well and varroa has not been a problem. On the East Coast it's been probably an average season, with some areas doing well and others poorly; the top of the East Coast is well down on usual. It appears that the varroa is becoming easier to manage, with hives in good condition after harvest. This situation is due to the feral hives being gone and, if no swarms were lost from the managed hives, no reinvasion. The late summer is still giving us 30-degree days. If the hives can pack out for the winter on what nectar sources there are left, they certainly are packed with pollen.

The worst thing that has happened this summer is the theft of Willie Kaa's hives from near Ruatoria. He has had a third of his crop stolen along with the hives (assorted coloured supers). It's a bit of a worry when a man's livelihood is taken. His MAF number is D6664. Thefts are not just happening in the South Island. So those who have extraction plants, please keep an eye out for this honey as it will need to be extracted somewhere. It is a Manuka crop.

- Don Simm

Additional information from Barry Foster: Willie Kaa has reported 17 hives and 30 supers removed from a site in Makarika, Ruatoria. Also he has reported stolen 17 hives and 44 supers taken from a site down Tapuaeroa Road, Ruatoria. They are marked with his MAF number D6664. If any processor has honey brought in for extraction with this number on the supers please contact Willie on floydie@xtra.co.nz or the Ruatoria Police.

Waikato Branch

Around the region the pasture is drying out and with no rain forecast, it is looking at being one of the driest February/March months on record.

The northern areas have had late Pennyroyal/clover flow, while in other areas the honey flow has stopped altogether. For those beekeepers who think the honey flow is still on in a big way, then it is quite possible that your hives are robbing another, maybe because varroa has weakened the hive.

Varroa treatments continue to be put in hives; however, some beekeepers are noticing other symptoms of high mite counts, with bees having either deformed wings or no wings. Often this is a time too that American foulbrood (AFB) can be mistaken for parasitic mite syndrome (PMS). One slip-up at this stage of the year can lead to much bigger problems next spring.

The branch disease coordinator has been given the list for this year's AFB disease inspection. Even though a new AP2 course is being run in May, there will still be only a few AP2s in the Branch. A lot of discussion over the last couple of years has resulted in the Branch corresponding with the Management Agency asking that a truer indication of costs be realised for the cost of this work (otherwise there will be fewer AP2s).

The branch inspectors feel that the price reimbursed for mileage is not adequate enough when working for the AFB PMS, particularly in the well-spread area of the greater Waikato and the targeted areas. Only time will tell if the minority of beekeepers who audit hives will continue to work for the majority of beekeepers in this important task.

Requeening is well underway, with good matings. Discussion is hot as to preference for Carniolans or Italians. With the weather that we have had, it could be that the crop that many beekeepers have produced is only due to having Carniolans.

Wasps are back once again worrying bees and robbing hives. Some beekeepers report of moving apiaries to protect them.

Lastly and most importantly, we await! The judges' decision has to come, but in whose favour? A lot of time, money and energy has been put into the whole argument of imported bee products bringing disease into New Zealand, whether it be in honey (EFB) or more to the point, it could be in bee semen (viruses). Whatever, it's all about keeping our bees healthier.

- Fiona O'Brien

Hawke's Bay Branch

Summer has finally arrived along with March with temperatures in the high 20s/low 30s. February in many parts of Hawke's Bay was quite disappointing; nevertheless, most beekeepers seem to have got at least an average crop. Some hives have been lost already through people not treating varroa early enough, but most hives are in reasonable order and autumn requeening is in full swing.

- John Berry

Southern North Island Branch

The honey harvesting has been patchy in our area. Taranaki reported an average crop but the Manuka was disappointing.

In the Wanganui area, clover/pasture honey just poured in once the rain stopped. The flow is all over now, but it was great provided there were enough boxes handy to put onto hives. Manuka has been variable. The earlier-flowering areas did not do well at all, but at the top of some of the valleys inland where the Manuka flowers later, reasonable crops were obtained.

The Waimarino area was a bit of a disaster due to the constant showers and the bees never really had a chance. Manawatu areas reported a reasonable harvest, with the later clover crop being very good.

Down the bottom end around Wairarapa there wasn't a green patch to be seen when I was there a couple of weeks ago. The honey flow had finished and harvesting was in full swing. Reports to date indicate an average crop. Wellington suffered from wind and rain, as we all did, but there was a crop to be collected.

Mites are showing up, so it looks as though treatment should be in now, or we will have trouble later with not enough strong wintering-over bees.

- Neil Farrer

Nelson Branch

Most Nelson beekeepers now have a fair idea that their crops are below average. Beekeepers unable to take their bees to their usual honey sites due to the varroa control line have confirmed what is already widely accepted—Nelson honey sources dry up early and provide next to no honey. Most Nelson beekeepers I've talked with say that it isn't the worst honey crop they've ever had, but it is below normal.

The weather has been extremely hot and dry since my last report and I don't think I have ever seen such bad robbing. It is almost dangerous to leave a jar of jam on the table after breakfast!

On 5–6 March, Biosecurity New Zealand and AgriQuality Limited presented a free 1-1/2 day workshop to commercial beekeepers. They also gave a public presentation in the evening for hobbyist beekeepers. This same programme is being presented at Marlborough immediately following the Nelson one.

I can't tell you how grateful we are for such a well organised and informative session presented here by Mark Goodwin and Michelle Taylor. More than 30 commercial beekeepers attended and there were very few (if any!) snores throughout the workshop. They presented a lot of theoretical background plus demonstrations.

Michelle got a great deal of respect for her demo of the FGMO fogger: her kudos doubled under a massive cloud of fog. Someone suggested that she might be practicing this new method of keeping her own little mite under control come June!

The case histories presented from the North Island beekeepers created a lot of thought and discussion. We all feel so lucky to have the North Island experience to help us now, and appreciate how hard it must have been when varroa was so widespread when first discovered and how great the hive losses were.

Several of us brought in jars of bees so we could practice the sugar roll technique, and we were relieved to have confirmed that our Wakefield hive still hasn't got varroa. Thanks to Michelle (what woman do you know carries around a bottle of dead varroa in her pocket?), we all got to see what varroa looks like so we can be prepared for when it comes.

The use of a monthly calendar (great idea from Murray Reid, I believe) helped us to start working out our own programme of testing and treatment, using the nine registered treatments now available to us. (We remember that North Island beekeepers initially only had two registered treatments to choose from.)

Hopefully the message of minimising varroa resistance will stick with us as we complete those programmes.

So we now have time to digest the vast information we have accumulated and be ready for a follow-up workshop from the NBA, hopefully sometime in early May.

In the meantime we can finish our honey harvest, get stickies cleaned up, and winter down hives.

- Merle Moffitt

Canterbury Branch

The sun finally came out with a vengeance in the second week of February, just in time to burn off the last few clover flowers and allow the bees that hadn't swarmed to gather a very late albeit very average crop. The amazing thing this year is that swarms have been reported right into February.

Looks as though the second levy (varroa) is set to continue. This must be a triumph in stupidity. I feel really sorry for Nelson beekeepers who have now have to treat and pay a levy that will tell them when they will get varroa. Duh?

The consultation period will soon come around for the other levy we all pay: I refer to the AFB NPMS. Submissions will be sought on whether we want this to continue.

With little help from Government, this strategy and its predecessor have saved us from needing to use antibiotics. The AFB NPMS not only protects conscientious beekeepers

from their immediate neighbours but also from international beekeepers who have always taken the easy option. This has enabled New Zealand beekeepers to keep bees healthy without the use of antibiotics, thus enabling New Zealand honey to become a premium product sought after throughout the world. As other countries struggle with increasing antibiotic resistance in their colonies, New Zealand beekeepers continue to avoid the massive problem of drug feeding.

It seems asinine to me that some beekeepers would voluntarily give up on the AFB NPMS and accept using antibiotics as the inevitable consequence of this action. Can you imagine any of the other livestock industries in New Zealand going down this road? I doubt the Government would allow any other industry to adopt such a short-sighted practise. Aren't controls in place as to how much antibiotic can be given to livestock? I would humbly suggest that this is something of a double standard.

The scary thing about current colony losses confronting the beekeepers in America in particular and Europe, England and Australia in general is that all the best minds in the world can come up with as the problem is give it a new name, CCD (Colony Collapse Disorder). You can bet dollars to donuts that this is not the last bee disease to be identified and worse, have a treatment developed for. We don't need this hassle. I wonder what beekeeping would be like in New Zealand if our forefathers had adopted this practice. One question that springs to mind: would Manuka honey still be considered bee feed? Would the UMF factor have been discovered if we fed antibiotics?

In a world where perception is reality it would be hard to get the consumer to continue to believe in the antibacterial properties of Manuka if beekeepers needed to use antibiotics to control EFB or AFB. The next time you are out with a group of friends, I challenge you to ask them how to cream honey. I'm sure you will get someone who will insist that beekeepers use icing sugar. Who knows where this perception came from? The last thing New Zealand beekeepers need is people to start assuming that antibiotic properties are artificially introduced. Perception is reality.

Remember the goal of the AFB NPMS is to eradicate AFB. It is possible, it is achievable and it is highly desirable.

Hoping for a better future.

- Brian Lancaster

Otago Branch

As I write the season is coming to a close with a wonderful settled month. Day after day of fine weather for much of Otago has seen the bees gathering a last bit of honey, thistle and dandelions mostly, to fill brood nests nicely for winter. Harvesting has been hot work, with temperatures still in the high twenties most days. It seems, with a few exceptions, that the crop will be well down this year. At a recent meeting of the Otago–Southland beekeepers' discussion group hosted by Blair Dale at Middlemarch most reported a yield of about half or two-thirds of last year. "Just above depressing" was one telling comment! The main culprit was the effect of cool cloudy weather in January when the clover was at its best.

Luckily for some in mixed floral source country that weather meant bees foraged Manuka instead and did so well into February. With clover prices down and Manuka prices up the return per hive for them won't be so bad after all. Around Otago the quality of the Manuka looks good this year and already some very good prices are being offered for the limited crop.

While the current clover prices on offer are low, that situation may change. Maybe there won't be that much good quality clover about within a few months as poorer than expected crops come in; certainly this will be true for much of Otago and Southland. So maybe this is a time to sit on some of those drums for a while if you can afford to. If I am proved wrong you didn't read it from me, right!

At the Varroa Agency Incorporated consultation meeting here in Dunedin the general view of those present was that now varroa is established in the northern South Island, a full-scale surveillance program can no longer be justified. Biosecurity New Zealand has the responsibility and budget to fund surveillance around the control line itself to ensure it is still justified and in a useful position. Additional surveillance by the Varroa Agency of the balance of the South Island south of the control line has little merit, as the costs to beekeepers involved would be better used to fund research, education and general preparedness for varroa's eventual arrival. We will all know soon enough when varroa is on our doorstep, and any urgency and the need for accurate early detection is, unfortunately, now gone.

Planning for the NBA Conference in Dunedin this July is well under way and we hope to see a good turnout like our last effort at Queenstown in 2001. Do come and enjoy our fair city and some southern hospitality. Bring your skis? Winter seems a long way off yet on this balmy March afternoon but we are promised snow to 700 metres in a day or two down south. Although I quite enjoy a 'proper' winter I am not quite ready to winter down myself just yet!

- Peter Sales

Deadline for articles and advertising

10th of each month for insertion in the following month

NB: No magazine in January

All articles/letters/photos to be with the Editor via fax, email or post:

Nancy Fithian
email: editor@nba.org.nz

(See page 2 for full details)

Please direct advertising inquiries to: Allan Middlemiss, South City Print Ltd, PO Box 2494, Dunedin. Phone 03 455 4486, fax 03 455 7286, email ckp@xtra.co.nz

Group decision making in honey bee swarms

When 10,000 bees go house hunting, how do they cooperatively choose their new nesting site?

One of the turning points in the life of a honey bee colony is when a queen bee bequeaths her hive to her daughter queen, takes half the worker bees and goes off to start a new nest. The departing bees' process of deciding on a new home seems to take some time.

In the May–June 2006 edition of *American Scientist,* Thomas D Seeley, P Kirk Visscher and Kevin M Passino have uncovered how a swarm comes to a decision. It's not a democracy exactly, but rather a matter of reaching a threshold as bees endorse a particular site using their 'waggle dancing'.

For a group of about 10,000 bees, several hundred fly to scout out potential nest sites, but it takes the build-up of just 10 to 20 bees at a particular site before the swarm starts to move to that location.

Through experiments and mathematical modelling, Seeley's group has shown that the bees' method is best at balancing the need to find a home quickly and choosing an ideal nesting site.

[*Reprinted from* Bee Craft, *October 2006, page 41.*]

Management Agency develops guidelines for selecting Authorised Persons Level 2 (AP2s)

In late 2006 the Management Agency released a set of guidelines to be used when selecting people to become AP2s. Following is an extract taken from the guidelines. It is important to note that the guidelines are a living document, which are likely to be amended over time following industry input and debate.

The apicultural industry is a highly specialised sector. Very few people outside of the industry have the combined set of skills required to:

- work hives efficiently with due consideration for others
- detect bee diseases that are endemic to New Zealand
- detect exotic diseases that pose a threat to the beekeeping industry.

Regular training of people within the industry is needed, therefore, to ensure a sufficiently large pool of competent people is available to carry out American foulbrood detection for the surveillance programme of the American Foulbrood National Pest Management Strategy, surveillance for varroa in the South Island, as well as assisting in the Exotic Bee Disease Surveillance Programme.

The training and funding of these people should be a joint initiative between Biosecurity New Zealand and the management agencies of the Varroa Pest Management Strategy and the National Beekeepers' Association, whose role it is to manage the AFB NPMS.

When beekeepers are being selected to undergo the necessary training to become an AP2, several factors must be taken into account before they are accepted.

It is suggested that the names of prospective AP2s be discussed between ward representatives, presidents and secretaries of branches of the NBA (or the equivalent in other bee organisations in operation at the time).

Selection criteria

1 Those promoting the applicant must have confidence in the applicant's ability in practical beekeeping, as well as having confidence of the person's competence in exercising the powers available to them under the appropriate legislation and understanding when these powers can be used.

2 The applicant must demonstrate an understanding of the aim and objectives of the National American Foulbrood Pest Management Strategy, and be able to give evidence of past conduct that supports the intent of the AFB NPMS.

Or, in the case of the Varroa PMS and Exotic Bee Disease Surveillance Programme, the applicant must also become familiar with the aims and objectives of these programmes.

3 The applicant must be of good moral character.

4 Applicant must have no serious criminal convictions (will be picked up in a police check).

5 Must, on average, have low or no AFB levels evident in hives managed by that person.

6 Must have good beekeeping ethics—looks after hives well, ensuring all needs are provided for, including keeping apiary(s) in good tidy condition that does not allow for the exposure of beekeeping material to potential robbing bees.

7 For semi-commercial, commercial beekeepers (including those who work for these beekeepers), the applicant must have had at least two years' technical competence. Preference will be given to those who have given time to assist in surveillance programmes and delimiting surveys for incursions.

8 For hobby beekeepers, the applicant must have kept bees for at least five years and have had involvement with surveillance programme working with AP2s for two years (so that they are likely to have been given the opportunity to learn from an experienced beekeeper as to signs and symptoms of the various bee diseases, and to improve skills in working beehives).

9 All applicants must realise that they are bound by legislation that determines their rights as an AP2, and that they must not step outside this legislation. For example:

- when are you allowed entry onto private property
- communication with the land owner prior to hive inspection
- requirements of notification of the hive owner etc.

10 Applicant must appreciate the rights of the landowner—display common sense when looking at both sides of a situation.

11 Applicants should also have sufficient skills to determine when an apiary that has been selected for inspection, should not take place, and notification of this to be given to an AP1 or the Management Agency. For example:

- hives have signs of just been requeened
- owner of property is not happy about an inspection being carried out.

12 The applicant must be able to have demonstrated a level of record keeping and report writing acceptable to the MA.

- Rex Baynes
AFB NPMS Manager

INVITATION AND REGISTRATION FORM

NATIONAL BEEKEEPERS' ASSOCIATION OF NZ (INC)
SEMINARS & CONFERENCE

2 JULY – 5 JULY 2007

'The most important event of the NZ beekeeping year' hosted by the Otago and Southland NBA Branches, to be held at

KINGSGATE HOTEL AND
THE DUNEDIN CENTRE,
DUNEDIN CITY
("EDINBURGH OF THE SOUTH")

PROGRAMME

Monday 2 July: Kingsgate Hotel
Specialty Group Meetings
"Meet 'n' Greet" get-together in the evening
("A wee bit o' muckin' and muggle")

Tuesday 3 July: Dunedin Centre – Town Hall
Seminars – Day One
("A wee bit o' bickerin' prattle")
Sponsors' Buffet Meal & Presentations in the evening

Wednesday 4 July: Dunedin Centre – Town Hall
Seminars – Day Two
("A wee bit more o' bickerin' prattle")
Conference Dinner & Prime Entertainment in the evening
("A wee drop o' the Scotch")

Thursday 5 July: Kingsgate Hotel Conference Room
NBA Annual General Meeting
("A gathering o' the Clan")

May we extend a warm southern welcome to all NBA members & non-members to join us for an exciting and interesting 2007 Seminar and Conference.

www.nba.org.nz

THE NATIONAL BEEKEEPERS' ASSOCIATION 2007 ANNUAL CONFERENCE PRESENTS

TOPICAL SEMINARS

4 SESSIONS:

1) **Bee Research**
2) **Export Marketing and Standards**
3) **Varroa and Bee Diseases**
4) **Technology in Beekeeping**

EXCELLENT SPEAKERS

INCLUDING:

Overseas Bee Specialist
University of Otago Zoology Department Researchers
HortResearch NZ Researchers
AgriQuality Apicultural Advisors
NZ Commercial Beekeepers
NZ Bee Product Processors

SEE THE LATEST PRODUCTS ON DISPLAY FROM INDUSTRY SUPPLIERS AND SPONSORS

If you have a product you would like to display, contact one of the Conference Contacts listed below:

Conference Contacts

Frans Laas (Coordinator and Treasurer)	Ph (03) 489 4597	f-laas@xtra.co.nz
David McMillan (Seminars and Speakers)	Ph (03) 489 8960	david@woodlandshoney.xtra.co.nz
Allen McCaw (Sponsors and Displays)	Ph (03) 417 7198	amccaw@clear.net.nz
Blair Dale (Sponsors and Displays)	Ph (03) 464 3122	bdale@strathdalehoney.com
Peter Sales (Secretary)	Ph (03) 472 7220	foxglove@paradise.net.nz

ACCOMMODATION

Kingsgate Hotel, 10 Smith Street, Dunedin
Phone: (03) 477 6784 Fax: (03) 474 0115
E-mail: dunedin@kingsgatehotels.co.nz
Room Rate: $100 per night — twin or double
Contact the Kingsgate Hotel directly for accommodation bookings.

APRES-CONFERENCE SKI TRIP
Anyone interested in a possible trip to a Central Otago skifield (subject to snow conditions) following Conference, please contact Peter Sales (ph 03 472 7220, e-mail: foxglove@paradise.net.nz) for information.

NATIONAL BEEKEEPERS' ASSOCIATION OF NZ
SEMINAR & CONFERENCE - DUNEDIN
2 JULY - 5 JULY 2007

REGISTRATION FORM

Name: _____ **Date** _____

Partner's Name: _____

Business Name: _____

Postal Address: _____

_____

Phone: _____ **Fax:** _____ **Email:** _____

Please indicate your Conference attendance choices below:

SEMINAR & CONFERENCE 2007				
EVENT (Full participant)	**NUMBER ATTENDING**	**NBA MEMBER**	**NON MEMBER**	**TOTAL**
Registration Fee (all attendees)		**$40**	**$50**	
Seminar Registration (2 days)		**$100**	**$120**	
Seminar Registration (1 day)		**$70**	**$90**	
Mix & Mingle – Monday 2nd July		**$25**	**$25**	
Sponsors Buffet – Tuesday 3rd July		**Courtesy of Sponsors**		
Conference Dinner & Entertainment - Wednesday 4th July		**$95**	**$95**	
NON PARTICIPATING PARTNER – SOCIAL FUNCTIONS ONLY				
Partner Registration Fee (all)		**$20**	**$20**	
Mix & Mingle – Monday 2nd July		**$20**	**$20**	
Sponsors Buffet – Tuesday 3rd July		**Courtesy of Sponsors**		
Conference Dinner & Entertainment - Wednesday 4th July		**$95**	**$95**	
			SUB TOTAL	
Late Registration Fee for payments after 15 June 2007			**$20**	
NBA Membership - complete form over page and send to NBA Secretary				
TOTAL PAYMENT (GST INCL) by Cheque ( ) or On-Line Credit Transfer ( )				**$**

Registration Fee – Includes morning and afternoon teas
Seminar Fees – Includes buffet lunch each day
Mix & Mingle – Includes snacks and one complimentary drink p.p.
Sponsors Night – Includes buffet meal and one complimentary drink p.p.

Send completed registration forms and payments to:
Frans Laas, Conference Treasurer, 102 Gladstone Road, Mosgiel, DUNEDIN.
E-mail: f-laas@xtra.co.nz Phone & Fax: (03) 489 4597
Please make cheques payable to: Otago Branch NBA Conference A/c
For On-Line Direct Credit payment: Westpac Mosgiel A/c # 03 1725 0112354 00
(Please include your **surname or company name** as **Reference Code** for your on-line payment and post the completed Registration Form above to the Treasurer)

2007 NBA Membership and Magazine Subscriptions

Please complete the form below and return it to the Secretary of the National Beekeepers' Association, at the address below.
2007 NBA subscription payment can be made by internet transfer. Please use your name as the reference:

Bank of New Zealand Paraparaumu Branch, Account No. 020733 0057338 00

Tax Invoice

National Beekeepers' Association **GST No. 14-437-525**

Please write clearly

Name: _____

Business Name _____

Postal Address: _____

_____

_____

New postcode: _____

Phone No: _____ Fax: _____

Email Address: _____

Category: _____

☐ Club category. Club has _____ members

Subscription enclosed or paid: $ _____

Paid via Internet banking: ☐ Date: _____

Existing Member: ☐ or New Member: ☐ Receipt required please: ☐

I agree with my contact details being made available ☐

☐ I do not want to be an NBA member but want to subscribe to *The New Zealand BeeKeeper* magazine only

10 Nikau Lane, Manakau Heights, RD 1, Otaki 5581, New Zealand
Telephone: +64 6 362 6301 Fax: +64 6 362 6302
ceo@nba.org.nz secretary@nba.org.nz www.nba.org.nz

Subscription Rates

Category	Hives	2007	Subs
Hobbyist	<11	$100 plus GST	$112.50
Sideline/Commercial	11-100	$200 plus GST	$225.00
Small Commercial	101-250	$400 plus GST	$450.00
Commercial Level 1	251-700	$800 plus GST	$900.00
Commercial Level 2	701-1500	$1600 plus GST	$1800.00
Large Commercial	1501-3000	$2000 plus GST	$2250.00
Mega Commercial	>3000	$3000 plus GST	$3375.00
Hobbyist clubs (receive 4 copies of *The New Zealand BeeKeeper*)		$200 plus GST	$225.00
Magazine only NZ subscribers		$100 plus GST	$112.50
Overseas Magazine		Australia	NZ$125.00
$NZ100 plus packaging & postage		US, UK & Asia	NZ$135.00

Great news for American foulbrood disease eradication in New Zealand

Dr Mark Goodwin and Heather McBrydie
HortResearch

Reported American foulbrood disease levels have been decreasing over the last 15 years as beekeepers try to eradicate the disease from New Zealand. If you still have to deal with infected colonies it might not seem that way. It might feel as though we will never get there. As the old saying goes, it is difficult to keep your mind on draining the swamp when you are up to your waist in crocodiles.

Not only are reported disease levels decreasing but so is the incidence of finding American foulbrood disease spores in honey. In 1991, we purchased 22 packed lines of honey of supermarket shelves and tested them for the presence of *Paenibacillus larvae* spores (the causative agent of American foulbrood disease). Thirty two percent of the honeys had detectable levels of spores. This year the American Foulbrood Disease Pest Management Agency provided us with further samples from shop shelves. Of 45 lines tested, none had detectable levels of *P. larvae* spores (Figure 1).

Figure 1. Commercial honey lines tested for the presence of *Paenibacillus larvae* spores, supplied by the Management Agency for the National American Foulbrood Pest Management Strategy.

A similar trend can be seen with honey samples that are tested as part of the American Foulbrood honey testing programme. These are samples that beekeepers are required to submit as part of their American Foulbrood Disease Eradication Conformity Agreements. In 1999 we tested 429 honey samples provided by beekeepers, of which 12 (2.7%) tested positive. Last year 830 samples were tested. Only one of these tested positive (0.12%). For the current year's testing programme, we have had to use a much more sensitive test in the laboratory in an attempt to find more samples that were positive.

Not only do the decreases in the proportion of infected honeys demonstrate that New Zealand beekeepers are still moving towards the goal of eradication of American foulbrood disease they also mean that discarded honey is now of much lower risk of spreading American foulbrood disease.

Do's and dont's of AFB control

[This excerpt is from the revised edition of Elimination of American Foulbrood Disease without the use of Drugs—a practical manual for beekeepers, *by Dr Mark Goodwin.]*

Do

- Inspect your hives for AFB at least twice a year.
- Inspect hives before removing bees, honey or equipment.
- Carry out full frame inspections.
- Shake bees off frames before inspecting them.
- Train yourself and your staff in techniques to recognise and eliminate AFB.
- Report AFB to the management agency within 7 days.
- Burn infected colonies.
- Feed pollen substitutes rather than pollen.
- Feed sugar syrup rather than frames of honey.
- Use hive and apiary quarantines.
- Only use approved sterilisation methods.
- Use a thermometer and timer when paraffin wax dipping (10 min at 160°C).
- Treat hives to clear up parasitic mite syndrome (PMS) before checking for AFB.
- Become an approved beekeeper. Get suspect AFB samples tested.

Don't

- Don't feed drugs for control of AFB. Don't scorch boxes to sterilise them.
- Don't try to control AFB by removing diseased frames.
- Don't extract honey from infected colonies.
- Don't feed bee-collected pollen to colonies.
- Don't feed extracted honey to bees. Don't let hives be robbed out.
- Don't shook swarm.
- Don't let stock knock over beehives.
- Don't use steam chests to sterilise infected equipment.
- Don't split the equipment from dead hives between other hives.
- Don't allow colonies to die of varroa or any other cause.

Updating the AFB NPMS Apiary Database

The photos on the front cover of this edition of *The New Zealand BeeKeeper* tell the story.

1. OCC: Open Country Cheese, farm owner name and Rapid number.
2. This flooded apiary has now moved location.
3. GPS (Global Satellite Positioning): GPS units are becoming popular with many people, not just fishermen.
4. National Beekeepers' Association website (www.nba.org.nz): use this to add or delete an apiary.
5. Waikato Honey Products Apiary, February 2007.

As we work throughout the beekeeping year, a lot of things happen around us. We don't always remember to update the register when circumstances change:

- we find a new site
- we decide we no longer want a site
- we move a site on the farm because of stock loss; i.e. due to flooding etc
- the farm changes hands
- the farm changes dairy supplier or numbers are realigned from the dairy company
- the farm has been given Rapid numbers (so many kilometres from the start of the road)
- we change to GPS readings for our locations.

It is important for this information to be updated to the database, and it is the responsibility of beekeepers to keep this information current. It can be amended at any time.

The Management Agency is the owner of the database and has a contract with AgriQuality Limited to maintain the database.

Often when AFB surveillance is carried out, comments are made that the hive location details are inaccurate or that the farm gate information is out of date. This information is important in many ways:

- to identify abandoned apiaries
- for beekeeping operations, to locate hives when they either lose trained staff or the self-employed beekeeper meets with an accident
- to do AFB surveillance (when you spend more time trying to locate what you are there to check than to check what you have located).

Some examples of change:

- when NZDG (New Zealand Co-operative Dairy Company) and Kiwi Co-operative Dairies merged and became Fonterra, a 7 was inserted in front of the old numbers to bring them up to five digits, i.e., 4372 became 74372
- new dairy suppliers have come on line; e.g., OCC (Open County Cheese)
- you may have purchased a GPS unit and have all apiaries GPS logged
- over the last 5–8 years many of us now have Rapid numbers, which show how many kilometres we are from an intersection
- farms are bought and sold a lot more frequently than in the past.

Of course you do not have to use all or any of the above references, or for that fact a GPS, the Grid Series Map reference is fine. All it has to be is accurate!

What does the AFB NPMS ask for?

1. Whether your site is Permanent or Spring/Summer/Autumn/Winter
2. Landowner name/occupier
3. Rural Property Number
4. Property Name
5. RD/Street Number and name
6. Locality/Area
7. Location of hives on property
8. 260 Series Map Sheet Number
9. Grid Reference
10. Number of hives

- Fiona O'Brien

(Cover photos: Fiona O'Brien and Frank Lindsay)

About the Apiary

Autumn is a beautiful time of the year. Mornings are crisp and the deciduous trees are turning gold and losing their leaves. The bees are out trying to find those last sources of nectar from Lacebark, Pennyroyal and some late Eucalyptus to pack into the outside frames of the brood nest and to cover the stored pollen so that it will remain preserved for winter use. In going through my hives it's intriguing to find the odd hive that has fresh nectar being stored in the frames, while others have no fresh nectar at all. Just goes to show that not all bees lock onto a nearby nectar source.

It's robbing season

Not all bees are actually out looking for nectar. It's robbing season in the apiary. Some bees are probing the defences of nearby colonies, looking for free nectar. When we came home the other day, the front lawn was full of flying bees. It didn't take long to identify that the bees were attacking a little mating nuc with a queen cell in it. I moved the nuc a couple of metres and put a plastic bee escape over the entrance to confuse the robbing bees. It didn't take long for the bees to find the nuc again, but this time they were not able to get in and the two tiny entrances allowed the defenders to repulse the invaders. It took a couple of days for the main body of robbing bees to stop trying to enter the nuc, but each morning it's noticeable that a few bees are still hovering around, probing the nuc's defences.

Wasps are also hovering around hive entrances. They are probing also, but most probably swooping on any bees that fall on to the ground in front of the hive. There aren't many insects around now and a hive can provide enough protein to keep a wasp nest growing. At this time of the year they also need sucrose to produce queen wasps. Overripe fruit lying on the ground will be hollowed out in no time (bees also take advantage of this source). When there's no more fruit, the wasps will start probing beehives. If you haven't already done so, close all the entrances down to a minimum 100 mm by 10 mm. This will also prevent field mice from getting into the hive at night with the intention of building a winter nest high up in the top supers.

In the next few weeks the temperature will drop further and the bees will have given up this robbing practice. Beekeeping becomes easy again. You can leave the hive open longer as you winter them down or remove the last of the surplus honey.

AFB brood check and preparing for winter

It's also time to do your final brood check for AFB. Look at the capped brood in a patch where the bees are emerging. Any bees that haven't emerged (those that remain capped) should be investigated by flicking off the capping with the tip of the hive tool. If there's healthy brood underneath, all is well, and the bees will emerge successfully even with the capping removed. If you are not sure, get a second opinion or contact your nearest AgriQuality Apicultural Officer. Don't forget to wash all bee gear after closing the hive.

Inside the hive, the bees will be removing honey from the outside frames, bringing it down and packing it around the brood nest as it gradually reduces in size.

I like to leave my hive three supers high with plenty of honey. This means they overwinter with a large population of bees and build up quickly in the spring, ready for the first flow in October. In other areas, the main flow starts in December and hives can be overwintered in single or two high because they have time to build again for the main flow. Often these hives are easier to manage than those that will be working early flows, as these flows also stimulate swarming. It's a fine line—keeping the hives strong but just under that magic number where they will go into swarming mode.

Sometimes during your inspections you will also find two or three capped queen cells. Leave them there, as the hive is most probably superseding the old queen. Mark the hive and check it again in three weeks' time. If you don't find brood or eggs during this check it means the hive is doomed. Unite another nuc on top of it using two sheets of newsprint.

I'm also putting nucs into full-depth supers with additional frames of honey on the outside so they have six frames of honey to overwinter on. I'm placing smaller mating nucs into five-frame nuc boxes, with a strip of oven foil over the frames to reflect heat from the small colony down onto the frames. Later I'll move them to a warm area for wintering.

Generally after the honey crop is off, wintering down continues. Clear grass away from the hives to provide a good air flow underneath; check the bases of the hives and slope them forward a centimetre so the rain doesn't accumulate on the bottom board. Check supers for rot and inspect aluminium roofs, as they tend to pit after a few years in our salt air and should be replaced.

It's also important that the hive remain dry inside during the winter. Bees need a change of air through the hives every hour to remove moisture-laden air and carbon dioxide given off by the bees. Too much airflow and the bees will consume more of the stores to keep warm. Too little ventilation and moisture congeals under the crown board and drips onto the bees, the result being that the bees consume more stores also. All geographic areas are different and you will have to work out just how much ventilation is required. Start off by putting twigs under the crown board or roof so that the hive remains fairly dry inside during the winter. It's OK if a bit of moisture builds up on the super walls but the frames should remain dry. I have found by trial and error that a cutting a 25 mm x10 mm slit in my crown board provides just enough ventilation for conditions in our part of the country.

My crown boards are just a split board upside down; that is, I make my own split boards to use in spring. Beekeepers split very strong colonies during spring to prevent swarming. Nowadays some beekeepers take frames of brood and honey, put them in a nuc box and move them to a different apiary so the field bees on the frame will not return home to the original colony.

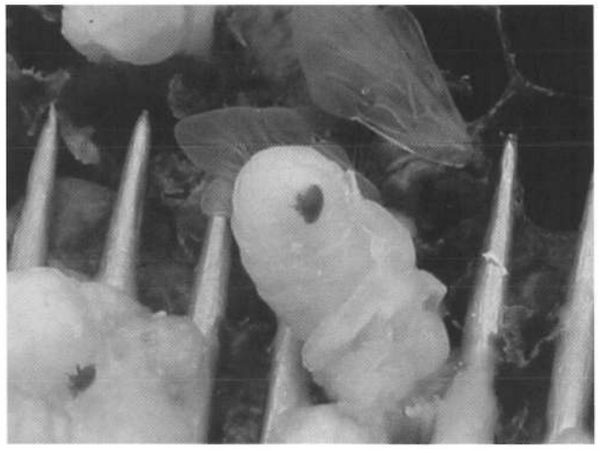
This method requires extra equipment. I use a 'split board' which is just a crown board with an entrance. By turning the crown board over and putting a super on top, you can create another hive without needing extra equipment. Also, the heat from the colony below keeps the nuc in the super above warm, and putting a plug of grass at the hive entrance discourages the bees from flying for a couple of days and reduces drifting back to the original colony.

You can also use this principle for keeping nucs warm in the winter; i.e., put them in a super on top of a strong hive. Just make sure the hive below has top ventilation that is not near the entrance of the top nuc.

So that's all that is required to winter down: a young queen or a year-old queen with a good laying pattern, young healthy bees to winter over with and plenty of stores of pollen and honey. If your hives are short of stores, feed them thick sugar syrup until the bees pack out at least a whole super. The alternative is to feed them in the early spring but this can be uncomfortable for you and if you don't get your timing right, your hive can end up as a dead colony. Beehives die only through beekeeper neglect.

Varroa mites

Most beekeepers will be removing strips now after two months of treatment. It's possible that some mites have become resistant to the strips, so it pays to check your hives to determine just how successful your treatment was. If you do not have mesh floors on some hives (an easy method to determine the total mite population is to multiply the natural daily fall at this time of the year by 100), then you will have to use an uncapping fork to lift out 100 drone pupae and check for mites. One or two mites or less is OK, anything more than five and you will have to consider re-treating. If you haven't any drones you will have to use worker bee pupae, but you will find fewer mites as the mites prefer drone pupae. Basically you want fewer than 100 mites in your hives at the start of winter—less is better.



If you are not sure how successful your treatment was, leave the hive(s) for a month and put in another lot of strips for 10 days. Put a piece of greased cardboard, plastic coreflute (use an old real estate sign), or a sticky board on the bottom board(s) and count the mite fall for the first 24 hours. If you have only one or two mites (up to a maximum of 20 mites) you can immediately remove the strips, seal them up and store them ready for a seven-week spring treatment. If you have slightly higher numbers, leave the strips in a little longer. It could also mean that there is a feral hive collapsing nearby, causing absconding or robbing bees to bring in as many as 200 mites a day. If you have this situation, leave the strips in for another full two-month treatment, and purchase an alternative treatment to use in the spring.

It really pays to recheck your hives for mite fall after each treatment. I lost 50 hives the second year we got mites to feral hives collapsing around my hives. Rechecking through the winter could have saved these hives. Don't rely on just checking one or two hives in an apiary. All hives have different rates of infestation.

Things to do this month

Winter down hives. Check feed. Do an AFB check. Slope bottom boards and fit mouse guards. Replace rotten or damaged supers and bottom boards. Attend to fences, check for wasps and control grass. Freeze stored supers to kill wax moth eggs and larvae or store in a shed that is open and has a good airflow through the supers. Those in the upper half of the North Island will have to watch more closely for wax moth infestation.

- Frank Lindsay

Auckland Beekeepers' Club 60th anniversary

Over the weekend of 17–18 March, Mary-Ann and I were invited to attend the Auckland Beekeepers' Club 60th anniversary celebration at the club's apiary in the grounds of UNITEC at Point Chevalier.

Barbeque lunch

Their apiary and club buildings are situated on a grassy area surrounded by high trees next to the organic gardens. The hives are neat and tidy sitting out in front of their buildings, but have one added security feature that home apiaries don't. Each hive has a security chain over it, which is embedded into the concrete plate they stand on to deter vandalism.

Saturday 17 March was a lovely warm autumn day, making it very comfortable for the members and visitors who enjoyed the afternoon. The proceedings began with a barbeque lunch under their marquee, followed by speeches, presentations and competitions such as "find a word", frame assembly and smoker lighting. At the same time the honey competition was being judged by Dennis Wait and Graham Cammell.

Honey competition judges Dennis Wait and Graham Cammell

The club has a great management committee and members pitched in to make everything run very smoothly. A most enjoyable afternoon.

On Sunday I had a real treat visiting Clyde Mitchell, an electronics engineer who is using his talent to monitor hives using web cam, temperature, humidity and most interestingly, the sound of the bees on a constant basis. Then we were off to BeesOnline for lunch (www.beesonline.co.nz). The carpark was full and the café was humming with mostly young families enjoying the food and surroundings, despite a shower of soft rain.

We were accorded special privileges by Maureen Maxwell and the staff, had a lovely lunch which included honey in the cooking and were given a quick personal tour.

We perhaps do not appreciate just how much time Maureen puts in to marketing 'our' New Zealand honeys. Apart from the striking building she designed to process and promote honey to the public, she spends a lot of time doing radio and television interviews for overseas organisations. To top it all off, she has just heard that BeesOnline's Manuka honey has been voted as one of the top 12 honeys of the world (out of 200 mono-floral honeys) by *Saveur Magazine* in the USA. Quite a coup, which should have ramifications for all New Zealand beekeepers.

All too soon we were off to catch the plane home. I had a great time, and came away on a high having learnt lots. Special thanks to the Auckland Beekeepers' Club for allowing me to participate in their celebrations and to Carol and Lynn for their hospitality.

Vice President Kim Kneijber and President Carol Downer

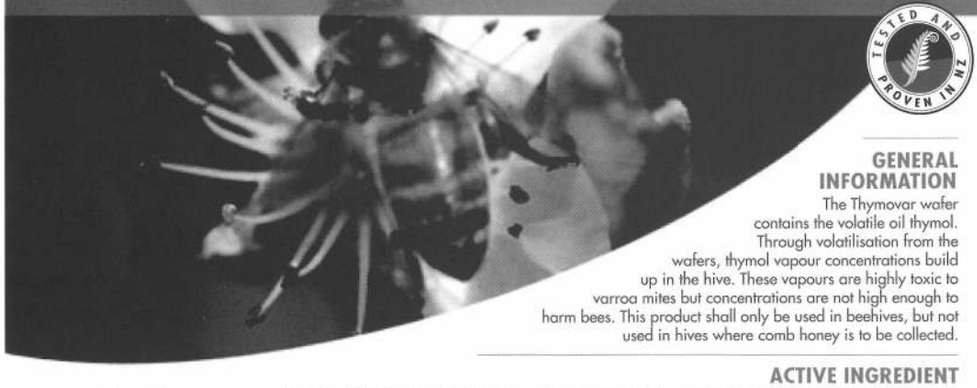
Footnote: often the greater beekeeping public is not aware of what's going on in the hobby clubs, but there are some very interesting developments and advanced thinking going on by some very talented individuals. Some of these could in the future help us all in the management of our hives and will even bring us closer to understanding how bees tick and relate to their environment.

- Frank Lindsay

Club hives festooned for the occasion

Thymovar®

FOR THE CONTROL OF VARROA MITES IN BEEHIVES

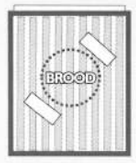


TESTED AND PROVEN IN NZ

GENERAL INFORMATION

The Thymovar wafer contains the volatile oil thymol. Through volatilisation from the wafers, thymol vapour concentrations build up in the hive. These vapours are highly toxic to varroa mites but concentrations are not high enough to harm bees. This product shall only be used in beehives, but not used in hives where comb honey is to be collected.

SINGLE-STOREY (1 CHAMBER)



MULTIPLE-STOREY (2 CHAMBERS)

ACTIVE INGREDIENT

Contains 721g/kg thymol in the form of a vapour-releasing wafer. (Each wafer contains 15g thymol).

Bio Gro Certified

Registered pursuant to the ACVM Act 1997, No. P7303. See www.nzfsa.govt.nz/acvm for registration conditions.

Thymovar®

FOR THE CONTROL OF VARROA MITES IN BEEHIVES

HARMFUL AND CORROSIVE

KEEP OUT OF REACH OF CHILDREN - ECOTOXIC

DANGER: This product is corrosive and may cause skin burns and eye damage.

HARMFUL: May be harmful if swallowed or inhaled.

TESTED AND PROVEN IN NZ

PRECAUTIONS: Store in unopened original packaging away from foodstuffs. Avoid inhalation of product vapour when opening the sealed sachet. Avoid contact with skin and eyes and wear goggles and latex gloves when handling the wafers. Wash hands thoroughly after handling and before eating or drinking. Harmful to aquatic organisms and terrestrial vertebrates.

DIRECTIONS FOR USE - GENERAL

DOSAGE RATE: Two applications of one wafer per brood chamber at a 3-4 weeks interval. Open the sealed sachet containing 5 wafers. Place one wafer (cut in half) on top of the brood chamber as depicted in the diagram. Use two wafers uncut for a double storey box of chambers. Wafers can be cut with a pair of scissors.

APPLICATION: The first part of the treatment is to put the wafer(s) on the top of the combs of the brood chamber. Close the hive as usual. Open floors have to be closed. Repeat the application of wafer(s) 3-4 weeks later. Remove used wafers after 3-4 weeks. After opening the sealed sachet all wafers should be used immediately.

TIMING: Application can be made in the spring before honey supers have been added for the first honey flow. Alternatively, an application can be made in the late summer to early autumn period immediately after all the surplus honey has been removed. Apply when maximum daily temperatures are between 12°C and 30°C. All hives of an apiary should be treated with Thymovar at the same time, to avoid robbing.

Factors such as temperatures dropping below 12 °C for a longer period during the treatment can lower the effectiveness of treatment. Also temperatures higher than 30 °C increase the sublimation of the thymol, and can have negative effects on the bees (e.g. robbing). It is recommended that the natural mite fall be monitored 2 weeks after completion of the Thymovar treatments and if more than 1 mite per day is recorded alternative non-thymol based treatments be applied. If the mite drop is not checked, all colonies have to be subjected to a follow-up treatment. Otherwise sufficient efficacy for all colonies cannot be guaranteed.

WITHHOLDING PERIOD: Not for use when honey supers are present in the hive.

STORAGE: Store in a cool dry place out of direct sunlight, avoiding temperatures above 25° C. When stored appropriately, this product should show no significant degradation for 4 years from date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

Approved under the Animal Products (Ancillary and Transitional Provisions) Act 1999.Approved pursuant to the HSNO Act 1996, Approval Code: HSR001727. See www.ermanz.govt.nz for approval controls.

® Thymovar is the registered trademark of, and is manufactured by, Andermatt BIOCONTROL AG, Stahlermatten 6, CH-6146 Grossdietwil, Switzerland.

Bio Gro Certified

Current Prices:

10 to 90 wafers	$4.25 plus GST each
100 to 490 wafers	$3.85 plus GST each
500 to 4990 wafers	$3.40 plus GST each
5000 + wafers	$3.15 plus GST each

Ecroyd Beekeeping Supplies Ltd

Distributors, Exporters & Importers of Beekeeping Equipment

Distributors of Bee Healthy & Beeway Honey & Bee Products

E B S

www.ecroyd.com

www.beehealthy.co.nz

P.O. Box 5056 Papanui, Christchurch, New Zealand • 6A Sheffield Crescent, Burnside, Christchurch

Phone: (03) 358-7498 • Fax: (03) 358-8789 • Free Fax 0800 233 929 • Email: ecroyd@beehealthy.co.nz

News from Telford Rural Polytechnic

Six students recently completed a four-week block course at Telford as part of the Certificate in Queen Bee Rearing Level 4. Students learnt grafting and non-grafting techniques, made up nucleus hives, split hives, caught, marked and introduced caged queens and instrumentally inseminated queen bees. During the course the students reared 465 queen bees, requeened Telford's 350 beehives with protected cells and provided surplus cells for local beekeepers. Students also harvested royal jelly and assessed hives as potential breeders looking at factors such as drone and worker colour, brood viability, temperament and honey and nectar stores. Students undertook several experiments to determine whether potential breeders had hygienic behaviour (uncapping and removal behaviour) and assessed honey production records from the previous season using computer spreadsheets.

As part of their course, students were also introduced to a new book written by tutor Dr David Woodward and published by Telford Rural Polytechnic on 8 March 2007. The book, entitled *Queen Bee: Biology Rearing and Breeding*, was written as a textbook for students on the Certificate in Queen Bee Rearing Level 4 course and also for students on the Queen Bee Rearing Knowledge Level 4 correspondence course.

The book covers three main topics:

(1) *Biology*: including development, anatomy, reproductive systems, mating, egg laying and pheromone production;

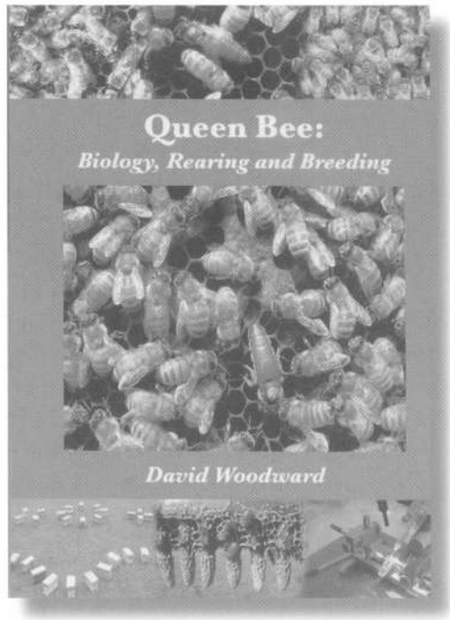
(2) *Queen bee rearing*: including equipment, grafting techniques, non-grafting techniques, capture and transport of queen bees, swarming and nucleus hives and honey bee nutrition;

(3) *Queen bee breeding*: including genetics, reproduction, stock selection and improvement, breeding programmes and instrumental insemination.

The book is available for purchase through the Telford bookshop (contact: Sue Giles 0800 TELFORD, extension 850) and should be available shortly through beekeeping supply outlets. The cost will be approximately $40.

Students on the recent Certificate in Queen Bee Rearing Level 4 block course (12 February–9 March 2007) at Telford Rural Polytechnic with tutor Dr David Woodward. Dr Woodward is holding a copy of his new book published by Telford entitled *Queen Bee: Biology, Rearing and Breeding*.

Left to right:
Loren Andrews (Blenheim), Terry Beddek (Auckland), Blair Simpson (Te Anau), Dr David Woodward (Telford), David McRae (Katikati), Terry McColl (Auckland) and Brian Blair (Huntly).



ADVERTORIAL

Breakthrough for honey industry water disinfection and clarification

Until recently, using membrane for small business/community or whole home residential water clarification and disinfection has not been an option for the market. Recent technical advances made by GE's Zenon Membrane Solutions in hollow fibre membrane technology for its large-scale municipal and industrial plants (such as the Tuakau Water Treatment Facility installed in 2002 to purify Waikato River water for Auckland municipal supply) have changed this. Membranes are now being used in the company's Homespring™ POE (Point of Entry) systems, providing a new, exciting and cost effective solution for the removal of bacteria, viruses, turbidity and pathogens to provide crystal clear and biologically safe water. There are honey factories in New Zealand with this proven technology installed already since the system was introduced to the country.

Homespring™ was developed by GE's Zenon Membrane Solutions as a two-stage whole home water filtration system. The system can be used on treated municipal water and untreated surface, bore or lake water. The first stage uses granulated activated carbon (GAC) to pre-filter the water and remove unwanted taste and odours, such as chlorine. The second stage uses thousands of strands of Zenon's

ZeeWeed® hollow fibre membranes, which filter down to 0.02 microns (nominal) and physically remove 99.99999% of bacteria, 99.999% of viruses, turbidity and cysts from the water. Using only the inlet water pressure, the systems can filter up to 42 litres of water per minute without using electricity to save energy. Innovative and 97% efficient, the patented system design enables the purifiers to automatically self-clean usually resulting in maintenance-free operation for an entire year.

GE's Homespring™ Central water Filtration System is the first and only POE water filtration certified by the Water Quality Association (WQA) as a Microbiological Water Purifier. The system is also certified to NSF/ANSI Standard 42 (Chlorine, taste, odour and particulates) and NSF/ANSI Standard 53 (Cryptosporidium, Giardia, lead and others) for drinking water.

These advances have generated interest outside of the water treatment industry. In 2004, the Homespring™ filtration system was handed the "Best of What's New" award in the Home Tech category by "Popular Science" magazine. Literally thousands of products were considered and the winners are those judged to be one of the products that "represented a significant step forward". The system is also the ideal solution for food manufacturers, wineries, bottled water factories, restaurants, resorts, and rural schools where the owner has to rely on their own water treatment system to provide purified water.

For more information contact: Home Spring (NZ) Ltd. Tel: 0800 89 88 89. Visit: www.homespring.co.nz. Meet us at the National Fieldays 13–16 June, Mystery Creek Pavilion Site PE81.

IMPORTANT DATES FOR YOUR DIARY

- NBA subscriptions are due now! See page 4 and the last page of the conference insert in this issue for details.
- Register for the NBA Conference now! See conference insert in this issue. Late fee of $20 applies for registrations received after 15 June 2007.
- AP2 training courses (see page 8 of this issue for dates and locations)
- Bay of Plenty field day: Saturday 16 June (programme will be in May 2007 issue)
- NBA RMP workshop, 2 July 2007, Dunedin (see page 4 of this issue).
- Apimondia 2007, Melbourne, 9–14 September 2007: early bird registration closes 15 May 2007. Register at www.apimondia2007.com to avoid late registration fees (see page 36 of this issue for details).

The Honey Bee Exotic Disease Surveillance Programme—Autumn 2007

Byron Taylor, Apicultural Officer, AgriQuality Limited

The field component of the Honey Bee Exotic Disease Surveillance Programme is under way with the testing of 650 apiaries to be completed this autumn.

The programme is very similar to the one undertaken last year with the South Island inspections being carried out in conjunction with the varroa surveillance programme, while in the North Island the inspection programme is 'stand alone'.

A major difference this year is that we begin the programme in the knowledge that varroa has been found in apiaries in the Nelson area, and is thus no longer considered an exotic pest in the South Island. The implications of this on the future of the Honey Bee Exotic Disease Programme is that surveillance costs cannot be shared with the Varroa Surveillance Programme in the South Island. Extra funding may have to be sought to maintain the programme.

The exotic pests and diseases that we are concerned about are the same as in previous years and are outlined below:

- Africanised Honey Bee (*Apis mellifera scutellata*)
- Asian mite (*Tropilaelaps clareae, Tropilaelaps koenigerum*)
- Cape Honey Bee (*Apis mellifera capensis*)
- European foulbrood (*Mellisococcus plutonius*)
- other Apis species (*cerana, dorsata etc*)
- other Varroa species (*Varroa Jacobsoni, Varroa underwoodi, Euvarroa sinhai*)
- Small Hive Beetle (*Aethina tumida*)
- the Parasitic Fly (*Braula coeca*)
- Tracheal mite (*Acarapis woodi*).

Surveying for these pests and diseases not only provides us with the best chance of detecting an infection/infestation that can be eradicated, but also enables us to make country freedom statements which help facilitate the negotiation of more favourable overseas market access requirements.

Most of these diseases are detailed in the "Honey Bee Exotic Diseases and Pests" pamphlet and the Cape Bee supplement that were distributed to all beekeepers. The pamphlets are also sent to all new beekeepers when they register. If you would like another copy of the pamphlet please contact your AgriQuality Apicultural Officer.

Inspection programme outline

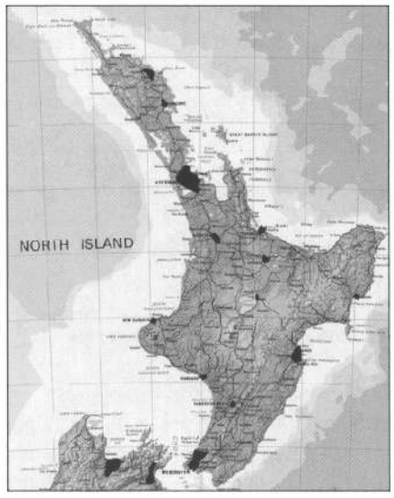
The inspection and sampling programme is split into two components:

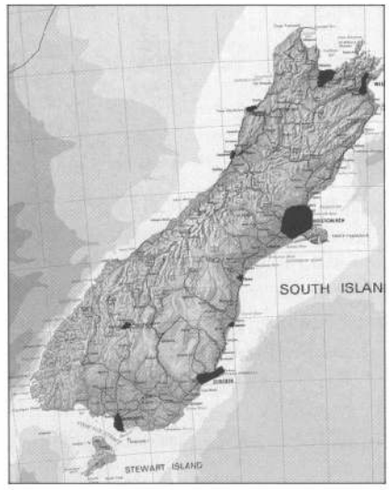
1) the inspection and sampling of a number of apiaries in high-risk areas, as shown in the following maps
2) the testing of bee samples provided from apiaries for which clearance is required to supply bees for export.

High-risk areas

350 apiaries from within high-risk areas will be inspected and sampled for the exotic pests and diseases mentioned above. 183 of these apiaries come from 13 high-risk areas identified in the North Island, with the other 167 coming from 10 high-risk areas identified in the South Island. High-risk areas are areas that have been identified as most likely points of introduction of an exotic bee disease and include:

- seaports
- airports
- large population areas
- tourist areas.





Inspections are carried out by beekeepers who are recognised as Authorised Persons (Level 2) under the Biosecurity Act and as such have the legal authority to enter property for the purposes of inspection and sampling hives under the direction of an Authorised Person (Level 1). These beekeepers are acting under the direction of AgriQuality Apicultural Officers and will endeavour to contact the beekeeper prior to the apiary being inspected.

In order to achieve the required detection sensitivity, every hive in each of the selected apiaries is to be tested. These hives will each receive a 24-hour miticide and sticky board test to detect possible infestations of external mites. These hives also will have an adult bee sample taken to be tested for Tracheal Mites (*Acarapis woodi*).

In addition to the routine sampling, hives will be inspected for signs of European foulbrood, Small Hive Beetle, Africanised Honey Bee, Cape Bee, other Apis species and Braula. In some cases, suspect samples will be taken while in others (particularly if there is a threat to human safety), the hive will be reassembled and marked for further investigation and/or sampling. An extra composite sample of adult bees may be taken from a few apiaries to test for the recently discovered Deformed Wing Virus.

If your apiary/apiaries are selected to be inspected you will not be advised of the results of the tests unless they are positive. If a test does come back positive, an exotic disease response will be undertaken.

Bee samples from export supply apiaries

300 apiaries from the population of apiaries supplying bees for export will have an adult bee sample taken and tested for both internal and external mites. Each supplier is required to provide samples from up to 25 apiaries that they use to harvest bees for export.

As with the high-risk samples, beekeepers are not informed of negative test results.

What you can do

As important as it is for the surveillance programme to inspect and sample hives, it is even more important for beekeepers to always be on the lookout for an exotic pest or disease. Read the pamphlet on exotic bee pests and diseases of honey bees, and when you are inspecting your hives always look for signs of an exotic disease. If you suspect an exotic pest or disease, ring the MAF Exotic Disease Hotline 0800 809 966.

Thank you to all those beekeepers that are taking part in the 2007 programme.

Melbourne, Australia, 9–14 September, 2007

Information sheet no. 8

The magical date of 15 May for the close of Early Bird registrations for Apimondia 2007 is fast approaching. Looking at our website www.apimondia2007.com shows the cost for registration increases after 15 May. I am sure that all beekeepers would want to save money on their registration costs by making the Early Bird cut off date.

Registration is easy online but if you do not have that facility, you can ask for a registration form to be faxed or posted to you. Contact:

Apimondia
GPO Box 128
Sydney 2001
New South Wales
Australia

Phone: 1300 799 691 (within Australia)
+61 2 9265 0890 (international)

Fax +61 2 9265 0880 (international)

oooooooooooooooOoooooooooooooooo

There are still sponsorship opportunities available for Apimondia 2007. Have a look at the website www.apimondia2007.com and click on "Sponsorship" to see what is available. One that could be attractive to some businesses is the opportunity to insert a double-sided A4 page in the conference satchel for the reasonable price of A$1100.

It is a good opportunity to put your business before the beekeepers of the world.

oooooooooooooooOoooooooooooooooo

Has your group entered a lady in the Honey Queen Competition? Our website www.apimondia2007.com has the Conditions of Entry and the Entry Form can be downloaded from that site.

- Trevor Weatherhead (Organising Committee)
queenbee@gil.com.au

Varroa fertility severely limited

My beekeeping hobby started in South Africa when I was about 14 years old, where I used to keep between 10–110 hives as seasons fluctuated. These hives were migrated between five major honey flows per year, yielding about 10 kg (a small super) per flow. Currently, South African beekeeping problems are: the Cape bee invasion, honey badgers, theft and vandalism (about 20% hives per year) and imported Chinese honey.

We immigrated to New Zealand in 2002 and I started my beekeeping as soon as I found the time. I was impressed with all the friendly people I met here in the bee world, also with the user-friendly Italian bee. The prospect of beekeeping looked bright until I learned about varroa and soon saw its devastating effects.

My mind started working towards a solution. Chemicals didn't seem the best option. It will only be a short-term solution until mites become resistant. On the other hand, breeding a bee that will survive varroa will be better in the long-term. This last thought became my new dream and I dedicated my spare time to gaining knowledge about varroa and bee breeding. All leads were followed up on varroa-resistant bees, abandoned hives that survived and different lines of bees. Looking for the best hive to breed from, I regularly sampled all my hives to check the infestation levels.

The method I use most is to capture ±300 bees in a jar with a mesh lid as for the ether roll and sugar shake methods. Inside the jar, I put a fresh Apistan strip and leave the jar for ±10 minutes in a cool place. I then shake the fallen mites out onto a light-coloured surface to count them. The bees can be released back into their hive.

The following problems stood out:

- I was not a good bookkeeper over long periods
- reinvasion mucked up all information gathered on a hive
- the position of a hive in the apiary has an influence on the mite load—it can be affected by drifting.

Drifting was a major factor. My best resistant hive was standing behind the others. I changed its position. It became one of the worst in no time. I suspected that a bee with a varroa mite on its back could become disorientated more easily than a healthy bee when returning to its hive.

Suppression of Mite Reproduction (SMR)

In March 2005, I talked to Dr Mark Goodwin from HortResearch and learned that in their varroa resistance project, they focused mainly on the SMR trait.

Not every female mite that enters a brood cell produces offspring and some produce only males. Suppression of mite reproduction is a trait that some lines of honeybees possess whereby they limit the mite's reproductive ability. In these hives, one can count the number of non-reproductive mites against the reproductive mites to find the percentage of SMR that your bees have.

In their search for varroa-resistant bees, the US Agricultural Research Service carefully measured the growth of bee and mite populations. They defined resistance as the ability to significantly limit the growth of mite populations below the average. They measured the characteristics known to be associated with varroa resistance (like hygiene, grooming, reduced post-capping period, etc). It was found that the SMR trait correlated most strongly with mite population growth.

My project took a new turn. I had to learn how to count non-reproductive mites. I learned a lot online; see: www.ars.usda.gov/Services/docs.htm?docid=2744&page=13 and www.ars.usda.gov/Services/docs.htm?docid=2744&page=14.

To cut a long story short, you need: 2x–4x magnification—visor magnifying glass works well or a low-power stereo microscope is best, good light to see inside a cell, and a forceps or tweezers fine enough to uncap and pull out pupae. Find a frame with purple-eyed pupae or tanned body colour pupae. Uncap the pupae and pull them out one by one. Inspect the pupae and cell for mites. You soon learn to identify the dark-brown mother mite and her offspring. With a reproductive mite you will normally find a complete varroa family. This includes the oldest brother. (The first egg that she lays is unfertilised and becomes a male.)

- A male has a much more rounded body shape than his oval sisters and he will never become dark coloured like his mature sisters.
- There will also be eggs looking like a small round white ball.
- Protonymphs are almost the same size as the eggs, but with feet.
- Deutonymphs are the next size up from protonymphs and still white coloured.

Reproductive Mites:

- purple-eyed pupae—oldest female progeny is at least a protonymph.
- tan-bodied pupae or older—oldest female progeny is at least a deutonymph.

Non-reproductive Mites:

- purple-eyed pupae—no offspring or oldest female progeny is an egg; or only males are present.
- tan-bodied pupae or older—no offspring or oldest female progeny is a protonymph or younger.

Very enthusiastically I started looking for non-reproductive mites in all my hives. According to literature one should find these non-reproductive mites at a rate of between 10–40% in most hives. My opinion is that non-reproductive mites in New Zealand are as scarce as hen's teeth. You will find them at a rate of 0–18%. One hive in particular stood out and of course, the percentage SMR went up when I counted this hive. I made an appointment with Michelle Taylor at

Continued on page 39

Continued from page 37

HortResearch and took her a brood frame from this hive. My bubble burst when only 12% SMR was found. I learned not to be biased towards a "best hive".

In April 2005 I became the proud owner of a 23% SMR hive (23% is still too low to reduce the mite load, but it is higher than the average hive). I tried not to treat the hives for varroa in the spring of 2005. All hives (±30) were checked constantly and only treated when mite loads were higher than 20 mites per 300 bees (see method explained above). The 23% SMR hive was measured at three mites per 300 bees. This hive received two full combs of drone cell foundation that were kept in the brood nest in the outer frames throughout the season to promote drones for breeding.

As the season progressed I had to treat all but one of them. This became my first hive that could skip a treatment and still flourish. Because 23% SMR is not sufficient to make a high flier out of a hive, I suspected this hive of having other undetected properties that suppressed varroa. The naturally dropped mites were checked under my microscope but unfortunately I found no tooth marks (indicating damaged mites).

I kept on buying new bloodstock and also rearing queens from my best hive. Eighteen months passed and still I could do no better than 23%. It was clear that the problem was the control over my mating process. Dark drones would make their appearance in some hives, while I knew that I had no dark queens. This highlighted the issue of unwanted drones. One of my biggest dreams came true in the form of a Schley insemination set. I sacrificed 20 production hives for it.

After the first batch of inseminations I found one hive that indicated 30% SMR. More varroa was needed in the hive to get a better count. I introduced a frame, well filled with varroa and unknowingly parasitic mite syndrome (PMS) also. Soon my nuc had the signs of dying brood all over it. I lost the whole hive and the queen too.

In early November 2006 a second batch was inseminated. Early in 2007 I started checking this latest batch of inseminations for non-reproductive mites. My disappointment turned into joy when I found myself counting one non-reproductive mite after the other in number 14 nuc. The SMR had more than doubled. I had found a winner! With more queens of this calibre, I can save on varroa treatments. As I write this, two weeks later, I still can't believe the extremely high success rate of my project!

Where to from here

It is suggested that beekeepers breed from a 100% SMR breeder queen and mate the virgins with their local stock. This mating should give them a stock with an average of 50% but may vary from 30–80% SMR. With these queens in the hives, there will be lots of SMR drones in the air and a much higher SMR can be expected the next time when mating takes place. Information on this is available on www.ars.usda.gov/research/publications/publications.htm?SEQ_NO_115=143809 or www.members.aol.com/queenb95/smr.html (then click on the link 'An Evaluation of Commercially-Produced Queens That Have the Smr Trait').

My next objectives

1. To free mate some of my queens in one of Graham Cammell's apiaries and then compare their mite resistance and honey production against the normal hives. While this is happening, I will concentrate on improving the existing SMR level.
2. Make available some SMR queens to get a broad base of feedback and keep on incorporating this trait into Graham Cammell's honey production line.

I have no information or figures on what success rate could be achieved with inseminations. However, it is clear to me that something very unusual took place in my project when it made a giant leap from 23% to more than 66% SMR. The credit for this I give to my Maker, the Creator of bees. I also want to thank the team at HortResearch. Their passion and dedication inspired me to persevere. Thank you, Michelle.

We must be all a little proactive in finding SMR bees. Don't leave it all to Michelle Taylor and HortResearch. When you have taken off your honey and are checking the brood just before you put in your strips, why not sample a few of your best-producing hives for SMR?

- Farney Lottering
21 Kewa Road
Albany
Auckland
Home phone: 09 448 5754
Email: lottering@xtra.co.nz

North Island Registrations
AgriQuality Limited
Private Bag 3080
Hamilton, NEW ZEALAND
Phone 64 7 850 2837
fax **64 7 850 2801**
E-mail derryb@agriquality.com
taylorby@agriquality.com

South Island Registrations
AgriQuality Limited
Private Bag 4718
Christchurch, NEW ZEALAND
Phone 64 3 358 1835 **or** 64 3 358 1937
fax **64 3 358 6222**
E-mail **ropert@agriquality.com**
gonzalezm@agriquality.com

AgriQuality

TO: REGISTRAR OF APIARIES

APPLICATION FOR REGISTRATION OF NEW BEEKEEPER OR NEW APIARY

DETAILS OF APPLICANT

Tick the appropriate box: ☐ New beekeeper
☐ Existing beekeeper - Code number: _____

Surname: _____ Given Names _____ _____

Company name (if applicable): _____

Postal address: _____

_____

Physical address (if different to Postal) _____

_____

Telephone number (home):(0____)_____(work) (0____)_____

Fax: _____ Mobile: _____

Email: _____

DETAILS OF APIARY

Name of owner or occupier of property where apiary is situated:

Surname: _____ Given Names: _____: _____

Property name (if applicable): _____

Road/Street Name & No. (Include Rural No. If applicable): _____

Locality or area _____

Location of hives on property: _____

_____

_____

260 Series Map sheet no. (**see overleaf**):_____ Grid Reference: _____

No. hives in apiary: _____Apiary name (optional) _____ Beekeeper apiary ID No _____

Apiary is permanent/seasonal. If seasonal: summer, autumn, winter, spring (delete not applicable)

Bees or beehives obtained from_____ Beekeeper code _____

Signature of applicant: _____ Date: _____

USING GRID REFERENCES TO LOCATE APIARY LOCATIONS

Grid references can pinpoint locations to within 100 metres anywhere in New Zealand.

1. Land Information NZ 260 series maps (1:50 000) can be hard to find but try Land Information NZ (LINZ), some stationers or sporting goods shops or view in some libraries. You can also buy these maps online. See a list of maps available and map distributors at www.linz.govt.nz and specifically at http://www.linz.govt.nz/rcs/linz/pub/web/root/core/Topography/TopographicMaps/260mapindex/indexpage/index.jsp. Try a search engine such as Google with key words like topo maps NZ for more information.

2. Record the number of the map on the front cover following the 260. It will be a letter and 2 numbers e.g. T13. Now locate your apiary.

3. Locate the first **VERTICAL** grid line to the **left** of the apiary location and write down the number of that line which is on both the top and bottom margins of the map e.g. **52**.

4. Apiary locations usually doesn't fall exactly on grid lines, so divide the distance between the grid lines to the left and right of the location into 10ths and estimate the number of 10ths your apiary is from the **left hand line**. Let's say the apiary is 2/10ths of the way from the left hand line, so the number is **2**.

5. Locate the first **HORIZONTAL** grid line **below** the apiary location. Write down the number of that line which you will find on both the left and right margins of the map. E.g. **03**.

6. As in 4 divide the distance between the grid lines found above and below the location into 10ths and estimate the number of 10ths your apiary location is from **the bottom line**. If our apiary is 8/10ths of the way up from the bottom line, the number is **8**.

7. You now have a full grid reference for your apiary. In our example, you would write T13 as the 260 Series Map Sheet No., and 522038 as the grid reference. **Remember to always put the numbers along the bottom of the map first in the grid reference, followed by the numbers up the side of the map. 'E' for east comes before 'N' for north, or as the Boy Scouts remember it, "along the hall then up the stairs".**

8. You can go online and plot your apiary on Topo maps at http://www.nztopoonline.linz.govt.nz/website/nzmgtopo/viewer.htm

As you move the cursor you will see a series of numbers appear under the map. The first series are the eastings and the second series are the northings. Forget the 2 numbers after the decimal point, and discard the first and last 2 numbers in each series of 7 numbers. Record the middle 3 numbers, eastings first then northings to give the 6-digit grid reference e.g. the corner of Tongariro St and Spa Rd in Taupo has a series like 2777171.47 and 6275350.9. Disregard the decimal points and drop the first and last 2 numbers in each series, to give the 6-digit grid as 771753. You can't get a map sheet number off this site but if you describe the area then AgriQuality can usually find a map sheet number from our mapping program.

USING A GLOBAL POSITIONING SYSTEM (GPS) *available from places like Dick Smiths*

If you use a GPS unit to locate your apiary, please find and include the map number or at least describe the location well enough so we can assign one for you. You would be surprised how many roads there are called Forest Rd or Beach Rd. Again Main Rd Taupo is not very helpful. We need to know about how many kilometres from the nearest main town and whether north or south or even east or west.

Don't forget to calibrate your GPS datum to GD'49 not the default WGS84. NB NZ is replacing GD49 with datum GD2000. The 2 differ by 200 metres (10 m to the east and 190 m to the north).

Reminiscences of a former Apiary Instructor

American foulbrood disease

American foulbrood disease has been a problem since beekeeping began in New Zealand. During earlier times when bees were kept in skeps, foulbrood was less of a problem. At the end of each season, the strongest and weakest hives were killed for their honey, leaving the average hives for the coming season. This eliminated those weaker hives most likely to have bad disease and the stronger ones more likely to have robbed others.

However, when beekeeping started in New Zealand it also coincided with the change to moveable frame hives, based on the discovery of Langstroth who realised the importance of the bee space.

With the moveable frame hive also came the spread of American foulbrood disease. Then came the advent of the Apiary Instructor.

Apiary Instructors were, in some cases, a peculiar lot. Remember that each Apiary Instructor was an individual so anything was possible. The first Apiary Instructors were particularly energetic. Two instructors were appointed, one for each island. They travelled from one district to the next by train and then bicycled to the various apiaries to be inspected. Those days most farms had a few hives for honey for the table. Commercial beekeepers still used horse and cart so they had to cover the horse to keep them from being stung. I expect a stung horse would have given new meaning to the company name "Airborne Honey".

In later years when commercial beekeeping was more widely practiced, the government appointed Apiary Instructors who covered areas with around 20,000 hives per district. It is the activities of those instructors that I found fascinating.

Identifying foulbrood was difficult for some beekeepers. I know of one who burnt hives containing sacbrood disease as he couldn't distinguish between sacbrood and foulbrood. They didn't have the DECA exam then. Another invited local beekeepers to his own apiary for a field day, and they found all his hives had foulbrood, so he showed them how to burn hives.

Another beekeeper was into modern techniques: none of this physical work of lifting off boxes and taking out brood frames. He used colour therapy. If a beekeeper accidentally mixed up combs from diseased hives with others in his honeyshed, the Apiary Instructor would check each box with his coloured wool and the beekeeper would take out the diseased boxes and burn them.

Speaking of colour therapy, we came across diseased hives and alongside of each was a car coil and coloured wool attached. Anyway, we burnt the hives and the owner was quite cross that we had not given time for the therapy to work. A pity that there were unbelievers amongst us.

Another instructor used to inspect hives in a certain area every year faithfully. Following on, I found that there had been no hives in that area for many years. He liked trout fishing and alongside was a very good fishing river. Was there a connection?

Bureaucracy, Cyanogas and borer bombs

The Apiary Instructor reported to the local Superintendent of Horticulture. I remember one Instructor having a heated three-way conversation with the Superintendent downstairs and the Director of Horticulture in Wellington over being denied the use of a government car. From memory, the Instructor won.

Government cars were a problem. They were generally governed at the then top speed of 50 miles an hour. Great if you wanted to pass another car: just as you drew level, the governor would stop the engine. You then had to try to get back into the position behind without upsetting other following cars.

Government cars were serviced in the Public Service garage. Sometimes work was booked in that never took place. Perhaps it coincided with what was needed on the mechanic's own car?

I remember an Instructor being asked by the Superintendent to take him out for the day to see what went on. The Apiary Instructor drove through the town, not giving way to left or right, then drove just in front of the express train. The Superintendent then remembered he had urgent business back at the office and asked to go back. Obviously he didn't like living dangerously.

Another time an Instructor was inspecting during a nice warm spring day and the wife of one of the beekeepers said he shouldn't touch the hives as it was too cold. The Instructor said that he would have to check them as there were diseased hives in the nearby apiary. She then rang her husband, a prominent doctor. The doctor also forbade the hives being touched, emphasising his position in the community. Anyway the hives were inspected and the next day the Superintendent had an irate call from the doctor saying how badly the hives had been affected by the cold. This was one of the few times that taking the Superintendent out for the day had its benefits, as the doctor was told that he was talking a lot of nonsense.

One Instructor was a real fishing–hunting type. If it moved, he shot at it. Standing on a beach shooting at seagulls did not seem a good idea with a 'Wildlife Refuge' sign directly behind.

Another time an Instructor saw some nice trout in a stream. He had heard that using Cyanogas (calcium cyanide) would bring them to the surface. Unfortunately he was a bit generous and trout popped up everywhere, resulting in frantic burying of trout in the sand. What a shame. Later on he heard that it was a trout hatchery.

In the past all the Apiary Instructors suffered from bad headaches. When Cyanogas was no longer used, the headaches stopped. One Apiary Instructor used Cyanogas to kill a wasp nest, using a set of pipes to blow it into the nest

entrance. Later on he was sitting in his car eating a pie for tea. Next thing he knew it was morning. It appears that there was enough Cyanogas crystals left in the pipes in the boot of the car to put him out to it.

Another person connected with the beekeeping industry used to like living in a hut he built near a river. One night the frogs kept him awake, so he sprinkled Cyanogas around the hut to kill the frogs and that night had a nice undisturbed sleep. He was lucky it wasn't permanent.

On one occasion two instructors found around 60 diseased hives in an apiary. They killed the bees with Cyanogas and as they were carrying the hives to the fire, both suddenly sagged at the knees. They managed to crawl out of the area and recovered, but it gave them a real fright.

In the past beekeepers used to remove their honey crop and stand the supers over a tray of Cyanogas and all the bees would drop down dead and were dumped out on the ground or in the local stream. Seemed a shame. This is how you got rid of excess bees. Today we just downsize the hives and the excess bees congregate on the front of the hive until they die or the bees are shaken and exported.

One Apiary Instructor who spent time away from home used to like writing letters to the local papers. He would criticise some favourite aspect of the town he was in, and then wait for the letters arguing with him.

In the early years a lot of work was done on pollination of clover and brassicas. On one occasion an Instructor went into a chou moellier (kale) crop to measure bee activity and wasn't seen for ages. Eventually they heard him calling out. He had lost his bearings and was wandering around inside the crop, unable to find his way out until someone shouted directions to him.

Generally Apiary Instructors tried to be helpful. In the days when cars were left unlocked with the keys in the ignition, an Instructor saw that someone couldn't get out of the park because the car behind was too close, so he got into the other car and reversed it a little and the other person drove away. Then the woman who owned the car that he was in arrived and wanted to call the police, as she thought he was stealing her car. With the other car gone he had difficulty explaining, and was a worried man for some time.

*****

One Instructor would have fitted into the cast of 'Last of the Summer's Wine' quite easily. He and a beekeeper were checking willows for wild hives, as there was a lot of disease in that area. They had to walk back and forth through a small river, checking willows on each side, and the water was freezing. The Instructor had a brainwave and suggested they use the extension ladder as a bridge, so they took it to the edge of the river. They dropped the ladder over, but it didn't quite reach so they pulled it back. The Instructor said "give it more oomph," and they did, but neither held onto it and it sat nicely on the other side. They then walked around the corner and found a small bridge, so they gaily walked to the other side, figuring they could collect the ladder later. Soon after they saw willows that needed checking on the other side. Nothing for it, so the Instructor started walking through

the water but the beekeeper had disappeared. Perhaps a call of nature? Then the Instructor heard a sudden splash. The beekeeper had climbed a tree and jumped. He was definitely not a kangaroo, as he landed in the centre of the river. After that, walking through the river was easier. We are told that there are few diseased hives in wild hives. In that area they found that most were diseased. At the end of the day the valley was full of smoke.

It is also said that willows don't burn down. A very big tree near the road had a feral hive in it and was set alight. The next day half the tree was lying in the paddock and the other half was still standing. Looks are deceptive. Next visit it was seen that the road went in a wide loop past the tree. Apparently a stock truck that had gone under the tree regularly got hung up in the branches of the willow, which had gently lowered towards the road.

Another time the Instructor in the same area was sitting in the pub having lunch when the County Engineer turned up and said, "you have burnt one of our bridges". We envisaged that the bridge was a very long wooden structure over the river, so sighed with relief to find that a fire in a tree had followed long grass and burnt the end off each board over a farmer's access bridge. It still took some explaining to the Horticultural Division bosses, who had to pay to fix the bridge up.

*****

Lindane borer bombs were used to kill bees in the roofs of houses. On one occasion there were three swarms in the roof of a large country estate, so three borer bombs were lit and then the Instructor lost the manhole. Eventually smelling fresh air, he followed it to the manhole and freedom.

Lindane borer bombs were great for killing white butterflies and aphids on cabbages. Just light the bomb and speed along the row of cabbages with the smoke and all pests gone. I have heard that Lindane is likely to accumulate in the body (must have been poor quality).

One Instructor used to divide his district into five areas and inspected only one area each year. By the time he reached the fifth area there was plenty of disease to burn. He never did get the disease level down. The Instructors who replaced him were given a very hard time by the beekeepers in the district until they realised that progress was actually being made.

The 'Royal Highland Fling'

Two officers visited a city house to inspect the hives. One spotted that the owner had Corgis and hung back while the other went in to introduce himself. The Corgis came racing out and attached themselves to his ankles, one on one side, two on the other, despite the gentle cooing of the woman owner to "be good little doggies, be good little doggies". The officer didn't know which leg to lift, first one then the other to get them off. From a distance it looked like he was doing the highland dance.

Overall, the Apiary Instructors of the past were an interesting lot and made quite a contribution to the industry, both in disease control and as advisors, and usually as family friends. With the change to the AFB NPMS we have lost something very valuable. Government would be well advised to consider reinstating well-trained Apiary Instructors if the industry is to progress and prosper.

- by "Oneofim"

Crossing the Cook Strait to attend conference in Dunedin?

The Interislander (www.interislander.co.nz) has a special for 27–28 June on all sailings where all vehicles under 5.5 metres in length can travel for $185. This price includes two passengers.

The Bluebridge ferries (www.bluebridge.co.nz) have not yet posted their prices for June.

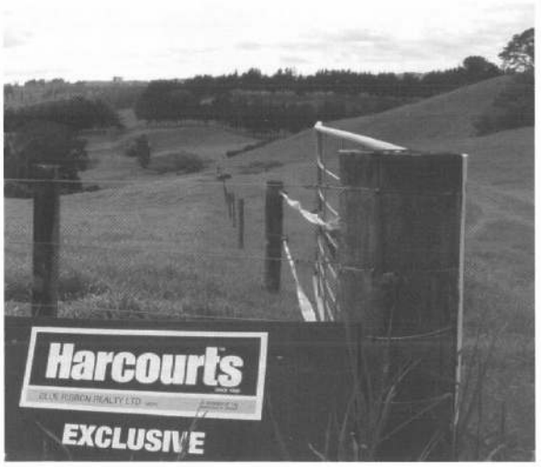
Don't bring any little round red passengers with you!

Two-legged mouse trap

In the Buller region there's no need to put out baits or mouse traps as they have 'portable mouse traps' there already. Most apiary sites have a resident family of weka that quickly clean up any rodents or scraps from hives. These cheeky birds will follow the beekeeper around, pecking at his leg until offered some drone brood.

Photo supplied by Gary Jeffery, Westport

Is this your abandoned apiary?



Is this your abandoned apiary with 'woodware only' on the farm I purchased last year? This is just to let you know that along with all the scrub, gorse, old fencing, and anything else I wanted to try my secondhand bulldozer out on, that I have pushed it all into the same rubbish pile and lit a match to it all. Actually that was after I tried to bury the bully in the creek, doesn't matter no harm done. "What?," you protest! Well, they were scattered around the place, obviously not looked after and left for me to do what I needed to do in tidying up the farm. That was your intention wasn't it? You couldn't be bothered coming back and picking everything up, or was it that it cost too much to come and remove the rubbish?

As for the hives, blame my sister if you like. She told me she could do nothing about them, but I could do whatever I liked as they were on my property. However, she was pretty annoyed that a careless beekeeper had just left them to die out. Actually, her words probably weren't that carefully chosen. Her first thoughts were for the two commercial beekeepers who have hives on farms within a 2–5 km radius. Then she made some comment that an apiarist would never leave their bees to just die out.

Anyway as this will be published in black and white, I just thought that I would let you know that the colour of the boxes were green and cream, the plastic frames were white, and the comb wasn't that dark, and they are now disposed of. If I knew who you were (or if the guy who owned the farm before did) I could send you a bill for disposal. Well, the bully did get a bit wet!

Cheers,
My sister's brother!

PS: there was no name or number on any gear.

Trees and Shrubs of New Zealand

Metrosiderous spp.

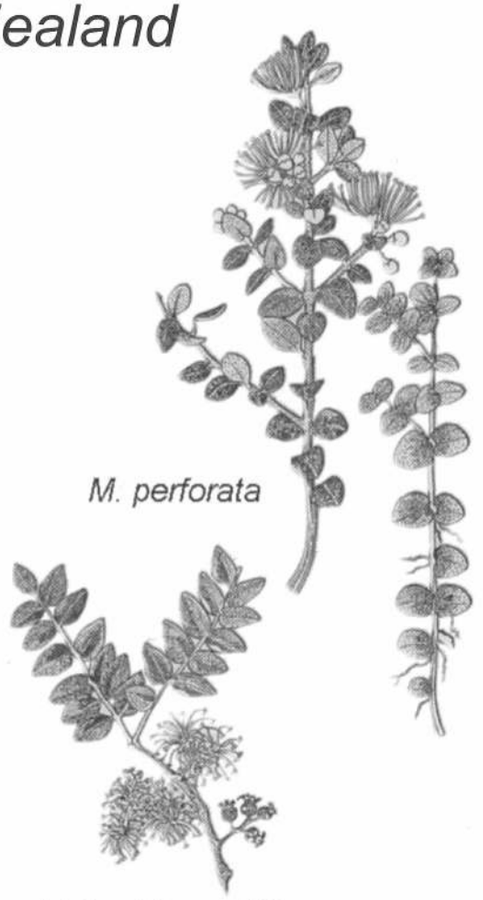
Small Leaf Rata vines

The small leaved Rata vines, of which there are six species in New Zealand, are not the ones that strangle their host tree. The vines either start in the decayed leaves in a cleft of a tree, or start on the ground and grow up the tree, covering the trunk with their fine stems and shiny leaves.

The flowers are either bright crimson as in *carminea*, pink in *diffusa* and white in *albiflora*, and the nectar is amber-coloured. Depending on the area they flower from August to January.

The sap from the Rata vine was used to stop bleeding and ease pain. The leaves and stems were boiled and the liquid drunk for blocked bowels. It was not recommended to carry on drinking this fluid once the bowels had cleared!

- Tony Lorimer



Metrosideros diffusa

The presence of parasitic mite syndrome in a hive can make the diagnosis of other brood disease such as AFB very difficult.

Club Contacts & Beekeeping Specialty Groups

WHANGAREI BEE CLUB Meets: 1st Saturday each month (except January) Time: 10.00 am, wet or fine (we are keen) Contact: Mike Maunder Phone: 09 437 5847 Arthur Tucker Phone: 09 438 4283 Kevin & Melissa Wallace Phone: 09 423 8642 (Wellsford)	**AUCKLAND BEEKEEPERS CLUB INC** Meets 1st Saturday monthly at Unitec, Pt Chevalier, Auckland. Contact: Carol Downer, President Phone: 09 376 6376 Email: fairy-angel-peewee@xtra.co.nz	**FRANKLIN BEEKEEPERS CLUB** Meets second Sunday of each month at 10.00 am for a cuppa and discussion. 10.30 am open hives. Contact: Peter Biland Phone: 09 294 8365
WAIKATO DOMESTIC BEEKEEPERS ASSOCIATION Meets every third Thursday at 7.30 pm. Contact the Club President: Brian Fowles Phone: 07 854 9071 (evenings)	**HAWKES BAY BRANCH** Meets generally on the second Monday of the second month at 7.30 pm, Arataki, Havelock North Contact: Ron Phone: 06 844 9493	**TARANAKI BEEKEEPING CLUB** Contact: Stephen Black 685 Uruti Road RD 48, Urenui Phone: 06 752 6860
WANGANUI BEEKEEPERS CLUB Meets on the second Wednesday of the month. Contact: Neil Farrer Phone 06 343 6248	**MANAWATU BEEKEEPERS CLUB** Meets every 4th Thursday in the month at Newbury Hall, SH3, Palmerston North Contact: Alastair Macpherson 25 Te Arakura Road, RD 5, Feilding Phone: 06 323 2563	**WAIRARAPA HOBBYIST BEEKEEPERS CLUB** Meets 2nd Sunday of month (except January) at Norfolk Road, Masterton at 1.30 pm. Convenors: Diana and Neale Braithwaite Phone: 06 308 9101 Fax: 06 308 9171
WELLINGTON BEEKEEPERS ASSN Meets every second Monday of the month (except January) in Johnsonville. All welcome. Contact: John Burnet 21 Kiwi Cres, Tawa, Wellington 5028 Phone: 04 232 7863 Email: johnburnet@xtra.co.nz	**NORTH CANTERBURY BEEKEEPERS CLUB** Meets the second Monday of April, June, August and October Contact: Mrs Hobson Phone: 03 312 7587 Email: n.hobson@slingshot.co.nz	**CHRISTCHURCH HOBBYIST CLUB** Meets on the first Saturday of each month, August to May, except in January for which it is the second Saturday. The site is at 681 Cashmere Road, commencing at 1.30 pm Contact: Jeff Robinson 64 Cobra Street Christchurch 3. Phone: 03 322 5392 Email: alpinebee@hotmail.com
SOUTH CANTERBURY REGION Contact: Peter Lyttle Phone: 03 693 9189	**DUNEDIN BEEKEEPERS CLUB** Meets on the first Saturday in the month September–April, (except January) at 1.30 pm. The venue varies so check phone or email contact below. Contact Club Secretary: Margaret Storer Phone: 03 415-7256 Email: flour-mill@xtra.co.nz	**www.nba.org.nz**
ACTIVE MANUKA HONEY ASSOCIATION (INC) Contact: Moira Haddrell, Chairperson P O Box 862, Cambridge Phone: 64 7 827 3286 Email: info@haddrells.co.nz or Denise Tryer-Harding, brand manager P O Box 19-334, Hamilton Phone: (07) 957 9999 or 0800 747 377 Email: dharding@piperpat.com	**NZ COMB PRODUCERS ASSOCIATION** Contact: John Wright Phone: 09 236 0628	**NZ HONEY BEE POLLINATION ASSOCIATION** Contact: Russell Berry Phone: 07 366 6111
NZ HONEY PACKERS AND EXPORTERS ASSOCIATION INC Contact: Allen McCaw Phone: 03 417 7198 Contact: Mary-Anne Thomason Phone: 06 855 8038	**NZ QUEEN PRODUCERS ASSOCIATION** Contact: Russell Berry Phone: 07 366 6111	

Is your group or Branch missing from here? Or have your details changed? Please contact the National Beekeepers' Association—inside front cover.

Have you done your AFB Recognition and Competency Test yet?