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The NEW ZEALAND BeeKeeper

Looking forward to Conference

Ricki Leahy, Conference Steering Committee and Research Focus Group

Strategic planting for bee feed

Dr Linda Newstrom-Lloyd, Dr Angus McPherson and Marco Gonzalez

Deformed wing virus

Fanny Mondet and Alison R. Mercer


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Front cover: Hawke's Bay beekeeper Daniel Hunter and his children Thea (left) and Ralph examine Ralph's hive. Photo: Emily Hunter. Story and more photos on page 19.

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PRESIDENT'S REPORT

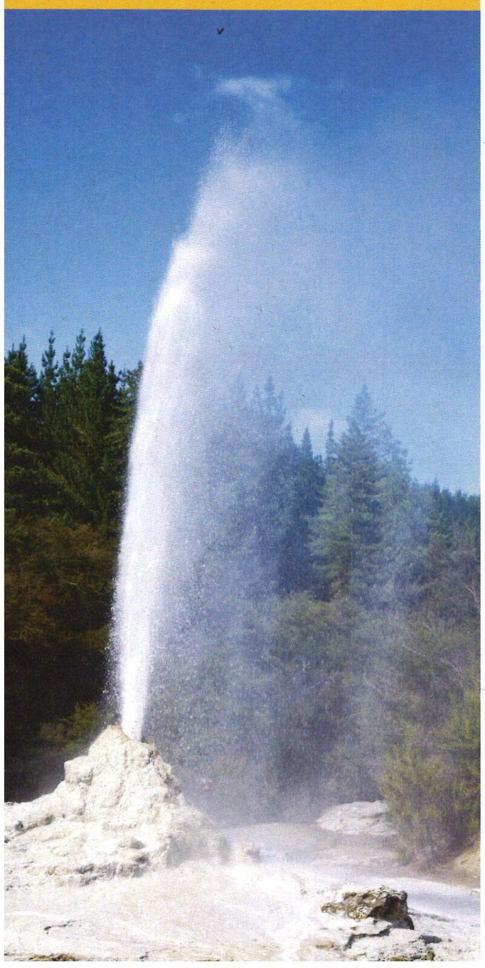
LOOKING FORWARD TO CONFERENCE

Ricki Leahy, NBA President

Some may wonder why I am still being referred to as the President of the NBA when we are now Apiculture New Zealand. It was decided that all elected Executive members would retain their positions during this interim period until the completion of our AGM, at which time there will be a close-off of the past and instalment of the future new elected board. This applies also to the elected members of Federated Farmers Bees who, of course, are members of the ApiNZ interim Joint Executive Council.

Legal challenge update

Last month I wrote about the legal challenge that we are facing. Since then we have obtained an independent legal opinion from a very well renowned Queen's Counsel (QC). We remain confident that our position is rock solid. However, the case still needs to be tested in court through the judicial review process, unless of course common sense wins the day and the challenge is withdrawn.



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APICULTURE NEW ZEALAND

Register for conference!

For those of you who are still deciding whether or not to go to conference, let me encourage you to go. We can look forward to catching up with old friends, which is marvellous no doubt. Also, as conference is the annual peak gathering, it offers you a wonderful opportunity to meet and talk to so many people who hold our same interests.

Attending conference will be absolutely worth your while, regardless of which sector you subscribe to within our industry. It seems that there is always another trick in the book to learn; perhaps a new connection made that leads to a business relationship or new friendships formed.

For those new to the industry, you will find we are a friendly bunch. You will always find someone to talk to who would be keen to help out with those queries that we all have. The sponsors' displays are always a great attraction and getting bigger and better it seems each year. From outside with all the boys' toys, to inside with everything imaginable that any of us could possibly be interested in—it's like wandering around an apiculture supermarket.

There will be three days of topical seminars that will empower you with interesting information and ideas that will stimulate you to crank up your game an extra couple of notches. In my experience I have always come away from conference energised and looking forward to getting back home full of new information and schemes.

Think conference-www.apicultureconference2016.co.nz

ApiNZ memberships growing steadily

The number of memberships being processed is very encouraging. It is important that everyone understands the need to fill in a membership subscription form, even if they are 'rolling over' their NBA membership.

There has been a bit of confusion regarding the necessity of filling out the forms, for which I must apologise, but there is very good reason why this must be done. The subscription form allows you to declare and align yourself to whichever membership sector applies to your particular interest. It also allows the membership database to be updated to ensure we have your correct contact details and whatever information you may wish to give—whether, for instance, you want the membership to be in your business name or you as an individual.

The other key piece of information we need is your selection of sector. This enables you to appropriately communicate within

that sector and, most importantly, take up and use your voting right within that sector.

The doors are open and always will be to anyone with an interest in Apiculture New Zealand. It must be acknowledged that there has been considerable change in a short space of time. Many have probably been too busy to keep up with it all but have put their trust in the work that has been done in good faith, knowing that change was needed to enable us to 'regroup' and move forward as a united industry.

For those who have previously expressed some reservations, please feel welcome to come on board. Really, there are so many of us who believe it best that we leave aspects of the past well behind and focus together on the opportunities of the future. The apiculture industry has too much at stake for us to languish forever in the past.

I am not sure who will write the next report but as I pen this I do understand that it may be my last, as NBA President anyway. So good luck, and I hope we all manage to take some solid time off over the winter so when spring arrives, both bees and beekeeper are set for another season. Happy beekeeping.

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APICULTURE
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Apiculture New Zealand
National Conference
19 – 21 June 2016
Energy Events Centre
Rotorua

Bee Business
Science
Health
Trade

For registration details visit
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If you require a printed copy or assistance with registration, please phone 09 520 9198. If you can't attend the entire conference one day registrations are available.

APICULTURE NEW ZEALAND NATIONAL CONFERENCE

NATIONAL CONFERENCE 2016

BEE BUSINESS—SCIENCE : HEALTH : TRADE

Sunday, Monday, Tuesday 19–21 June

Conference Steering Committee 2016

The Apiculture New Zealand National Conference will be held at the Energy Events Centre, on the shores of Lake Rotorua, starting at 8.30 am on 19 June. The focus of Conference 2016 will be on three important sectors of our industry: apiculture science, bee health and trade.

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Conference 2016—three full days of information, knowledge sharing and camaraderie. Have you booked your tickets and accommodation? If not, act now!

Key topics that will influence your future business decisions:

- Bee Health & Genetics
- Bee Management & Pollination
- Bee Science and Innovation
- Manuka Honey Standards: what is next?
- Market Access & Traceability—Industry responsibility
- Biosecurity, GIA & Exotic Surveillance
- Apiculture New Zealand Inc—where to from here?

Note: *The three days of conference are for all industry participants from hobbyists to large commercial beekeepers, packers, exporters and the supply sector. If you are unable to attend the full three days of conference, day package options are available. There is no hobbyist day.*

Trade & Exhibition—a 'Trade Buzz' Bonanza

The largest trade exhibition ever assembled for your benefit, a showcase of everything apiculture, a centre of information displaying the latest in technology, plant and equipment. This should not be missed.

Social networking

A wonderful opportunity to catch up with friends, to share ideas and to expand your business network. We guarantee you will have fun.

Attending conference is an investment in your business; the cost to participate has been substantially subsidised by our sponsors and trade exhibitors for your benefit.

PROGRAMME

We have four respected overseas speakers, and a large number of New Zealand presenters.

Full programme details are available now on the conference website:

www.apicultureconference2016.co.nz

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APICULTURE NEW ZEALAND

NATIONAL CONFERENCE 2016

Rotorua, Sunday 19, Monday 20, Tuesday 21 June

GO FOR GOLD!

Call for entries...

AWARDS & COMPETITIONS

The Roy Paterson Trophy

An award for the **best innovative idea or invention** to help New Zealand beekeepers, whether in the field or at the factory. Entries close – 8.00 am Sunday 19th June.

ApiNZ 100% Pure New Zealand Honey - National Honey Competition

Where quality, innovation, and pride take centre stage. Entries close for the main competition 2.00pm Sunday 19th June. For the Airborne Commercial Class – Thursday 19th May.

ApiNZ Ecrotek - National Photo Competition

A great opportunity to showcase your skills as a photographer, from that classic snap to the proverbial blooper. Entries close 12.00 noon Sunday 19th June.

ApiNZ Peter Molan Award - Excellence in Apiculture Science

Recognition of an outstanding contribution in the field of apiculture science, this is a special award and comes with a substantial Science Grant. Nominations close on Sunday 15th May.

ApiNZ Unsung Hero Award - The Buzziest Bee

Recognises the efforts of a member of the apiculture industry who has gone that extra mile, who has given his or her time for the betterment of industry without seeking recognition or reward.
Nominations close on Sunday 5th June.

For full details on how to enter or nominate an award recipient please go to: www.apicultureconference2016.co.nz

Thank you - Conference Steering Committee 2016

WHO WILL WIN THIS YEAR?

Some of the array of trophies from the 2015 National Honey Show. Have you prepared your entry?

Photo: Frank Lindsay.

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BEES GIVING LIFE

APICULTURE
NEW ZEALAND

NOTICE OF THE 2016 AGM

of Apiculture New Zealand to be held at the Sudima Hotel Rotorua in Rotorua

Wednesday 22 June 2016

The AGM will commence at 10.00am

This AGM marks an important milestone in that it will be the first AGM for Apiculture New Zealand, and will be an opportunity for all members to meet the organisation's newly elected board and to learn more about the Association's intentions.

Daniel Paul
Chief Executive Officer

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APICULTURE NEW ZEALAND NATIONAL CONFERENCE

CALLING ALL BEEKEEPERS! VARROA CONTROL PRESENTATION AND WORKSHOP 19 JUNE

Research Focus Group

We would like to hear your ideas on future varroa control at a presentation and workshop on proposed research into future integrated varroa control.

This workshop will take place on Sunday, 19 June, from 3:00–5:00 pm in the main conference hall.

The research proposal

New Zealand needs to develop new methods of varroa control to avoid similar losses experienced overseas from repeating here. Plant and Food Research is proposing this research in a co-innovation approach along with other research organisations and stakeholders.

The research aim

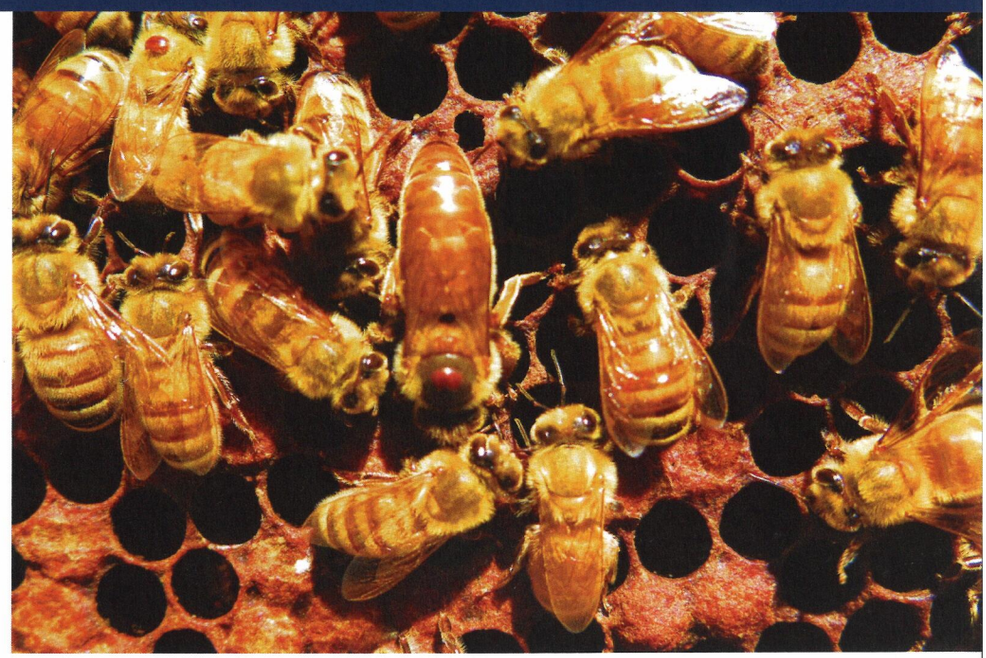
The aim is to develop a validated, integrated set of monitoring methods and controls for varroa that will be cost effective, sustainable in keeping varroa numbers low in hives and will avoid the build up of resistance to controls in the future.

Initial presentations

The initial presentations will be made by Claire Hall and Mark Goodwin from Plant and Food Research, followed by workshops run by Mark Goodwin, David Pattemore, James Sainsbury from Plant and Food Research and Phil Lester from Victoria University of Wellington. There will also be input from our international guest speakers Medhat Nasr and Gordon Wardell, should they wish to contribute.

Workshop aims

To gather ideas on what successful integrated varroa control would look like and how we might achieve that goal, in a free-form, idea-generating workshop from which all ideas and views will be accepted and considered.



A queen bee crowned with a varroa mite. Note the presence of another mite on one of the workers at the left. Photo: Norbert Klose.

Workshop ground rules

1. All ideas are accepted, recorded and valued. No idea is turned down. We need a cross-pollination of ideas.
2. It is a brainstorm and not a rainstorm. People pouring 'cold water' on ideas will be discouraged.
3. Creativity will be encouraged in rising to the challenge of developing new methods of monitoring and control using new technology. The 'moon shot' type of ideas will not be discouraged.
4. Ideas will be captured through an interactive session with options to provide input verbally and in writing through Post-it notes stations, to get as wide participation as possible.
5. All ideas will be collated and initial evaluation of the main themes given at the end of the workshop. There will be further opportunities to provide feedback and ideas throughout the conference and through an online Survey Monkey questionnaire, to be reported in *The New Zealand BeeKeeper* journal and used to shape future research.

TREES FOR BEES CORNER

STRATEGIC PLANTING FOR BEE FEED

Dr Linda Newstrom-Lloyd, Dr Angus McPherson and Marco Gonzalez

Strategic bee planting can stimulate good bee health and build colonies up to great strength. It is more than just randomly or casually picking out a bunch of plants from a bee plant list and planting them out with the hope that it will all work out to cover the seasons for bees. The process of maximising or optimising bee nutrition involves a few steps that will ensure the best results for the time, effort and money spent.

If the apiary site is owned by a landowner such as farmers or councils, then the first task is to encourage them to plant for bees by being clear about the benefits of multi-functional plants.

If the apiary site is owned by the beekeeper, then full control of planning the floral resources is possible. If the apiary site is owned by a landowner such as farmers or councils, then the first task is to encourage them to plant for bees by being clear about the benefits of multi-functional plants. If your landowner is going to plant trees for erosion, riparian protection or shade and shelter anyway, it won't be hard to convince them to plant useful trees or shrubs that will also deliver good nutrition for bees. These multi-functional plants can meet both landowner's and beekeeper's needs, as well as help to provide better pollination services if the timing is right.

The spring flowering tulip tree (Liriodendron tulipifera) *has huge 'super bowl' flowers with whorls of bounteous stamens opening sequentially even when the flower bud is just beginning to open. You can often see multiple bees inside newly opened flower buds. Although the tree does not have many flowers, each flower alone contains a massive number of stamens with quantities of pollen. The tulip tree grows to a large tree (over 30 metres) with golden-yellow autumn colours, and is an ideal specimen tree for paddock shade and shelter, woodland or avenue/laneway. The fastigiated (upright) form is great for avenues or where space is limited. It tolerates some exposure, and grows best in deep, well drained loams with thick dark topsoil.*

The bee layer

There can be multiple layers of different goals for planting. They need to be sorted by priority. If the land is owned by the beekeeper and is dedicated to raising bees only, such as queen raising or nuc sites, then considerations for moderate shade and shelter for hives are important, along with striving for a wide diversity of plants to promote best nutrition.

Clusters of the same species planted together are highly attractive to bees.

If the plot is small, then bee plants with the highest density of flowers and the highest protein content in the pollen would be a top priority. Clusters of the same species planted together are highly attractive to bees. Bees often go first to the largest clumps of suitable bee forage that are easy for them to find.

For arable farms, the priority would be to attract beneficial insects that keep insect pests in control and to avoid attracting seed-eating birds or other animals. Arable farmers do not want large trees that take water away from the crop. In contrast, sheep and beef farmers have the space to plant huge trees that will provide shade and shelter, avenues, or diverse plantations for riverbank protection or erosion control. Councils have a range of goals and priorities including water quality, soil conservation and planting park-like plants for shade and beauty, among others. The bee layer might be the last priority for the landowner, but many plants that are good for bees also fulfil the other goals quite well.

The flowering calendar

The flowering calendar is the sequence of plant species within foraging range that supply pollen and nectar through the seasons. This calendar will differ according to climate, vegetation, floral diversity and micro-habitat.

The four steps to planting a balanced flowering calendar for a given bee feed budget are:

- explore the existing bee feed supply at the site and identify the timing of any deficits of pollen or nectar
- determine the timing of your target goals for pollination, honey harvesting, or queen raising
- create a flowering sequence in a table that illustrates how they will meet the life cycle needs of the colonies
- make sure the bees have nothing major around to distract them away from the target plant when it flowers.

The flowering calendar needs to be looked at in three different ways. First, is there enough diversity of plant species in each month to take care of any non-flowering years in some species or the loss of some plant species due to diseases or frost, etc? Many of New Zealand's native plants have peak flowering years followed by several poor or no flowering years, and some exotic cultivated plants have alternate bearing years. Planting high diversity of plant species (five to 10 species flowering per month) can cover these issues.

Second, is there enough quantity of pollen and nectar in each month for the number of beehives desired on the site? This is about carrying capacity and experienced beekeepers are quite good at estimating this. From a scientific point of view, it is possible to estimate quantity of pollen or nectar and match it to the seasonal demands of an average hive. However, we are only in the early stages of this research and have attempted it only for flax flowers and willow catkins to date. Planting in large clusters of the same plant species allows efficient foraging (for example, 10 to 15 or more plants per cluster depending on the size of the trees or shrubs).

Third, is there a reasonable mix of plants that mature to flowering quickly with those that mature to flowering slowly? Planting large-grade plants are more expensive but can start delivering flowers in the first year (for example, manna ash and lacebark). Often shrubs come into flower in the first year (e.g., rosemary, California lilac, Tree Lucerne) although some of these are short-lived plants and will need to be replaced after five years or so. Other species may take three to five or more years to start flowering but they can keep going for decades or even more than 100 years (e.g., oaks).

Floral resources are still declining in many areas with land conversions, agricultural intensification and weed elimination programmes.

Beekeepers are currently facing the overcrowding effects of a doubling of hives (from 300,000 to 600,000) in the last five years. This is without a concomitant doubling of floral resources. Instead, floral resources are still declining in many areas with land conversions, agricultural intensification and weed elimination programmes. Strategic plantings of high-quality, fresh, natural pollen and nectar sources are part of the solution to combat these two trends that are compromising bee health and colony survival.

The spring flowering Christmas berry (Photinia beauverdiana) *is covered with a dense mat of flowers closely packed together, which attracts bees. The flowers have an open dish shape with whorls of numerous stamens typical of other Rose family species such as apples and pears. It is a medium shrub to small tree, growing to three to 10 metres. It is deciduous with excellent orange-red autumn colour, with late summer fruit loved by birds. It can be planted as a small specimen, a garden border or woodland plant, or used as screening or hedging. It grows best in full sun, but will also grow in partial shade. It tolerates drought, but prefers medium moisture and free-draining average soils. Photos: Valentine Tournon.*

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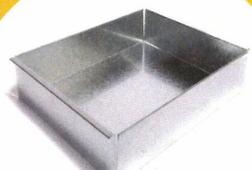

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RESEARCH

DEFORMED WING VIRUS: IS IT MORE IMPORTANT TO KNOW HOW MUCH VIRUS OR WHAT TYPE OF VIRUS IS PRESENT IN OUR COLONIES?

Fanny Mondet[#+] and Alison R. Mercer[+]

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[+] Department of Zoology, University of Otago, Dunedin, New Zealand

Varroa's spread across New Zealand has been accompanied by an increase in the number of virus species that can be identified in New Zealand bees and by dramatic changes in viral loads[1]. The predominant viral infection affecting colonies throughout the country is now deformed wing virus (DWV), a virus strongly associated with the collapse of varroa-infested honey bee colonies. A grant from the NZ Honey Industry Trust is enabling us to gain a better understanding of the biology of DWV and its impact on colony production and survival.

Interestingly, the DWV genome can display considerable variability and this sequence variability can have a significant impact on pathogenicity. Hence, variants of the same virus can have very different consequences for honey bee and colony health.

In collaboration with Yves Le Conte and Cédric Alaux at INRA Avignon and with Joachim de Miranda at the Swedish University of Agricultural Sciences, we are investigating whether the arrival of varroa in New Zealand has modified the type of virus variants found in honey bee colonies across the country and if so, the impact of these changes on colony health.

We are assessing whether the arrival of varroa can be linked with changes in virus variability and importantly, whether one particular variant has become predominant since the arrival of varroa.

Varroa mite attached to adult bee showing symptoms of deformed wing virus (DWV).
© Bayer Bee Care Center, Bayer AG | Source: Brochure <<The Varroa mite>>

This project involves the identification and sequencing of viruses recovered from bee samples collected from across the country before and after the arrival of the varroa mite in New Zealand. The sequencing techniques we are using will enable us to quantify the amount of variability for each known virus species found in New Zealand bees, including DWV. We are assessing whether the arrival of varroa can be linked with changes in virus variability and importantly, whether one particular variant has become predominant since the arrival of varroa.

Comparing our findings with those reported in other parts of the world will help determine

continued...

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whether New Zealand is likely to host any particular DWV variant that has the potential to be more detrimental to colonies than other variants, and whether we should be more concerned about what type of virus is present in our colonies, rather than how much virus can be detected.

To gain further information about the threat caused by viruses to honey bee colony health, we are investigating in parallel whether virus infections affect the ability of bees to defend themselves against varroa. Our preliminary results suggest, for example, that DWV may impact the bees' ability to develop hygiene responses targeted to varroa-infested brood[2]. If this is the case, it will be important to understand why the virus has such an effect so that breeding strategies can be adapted to improve selection for varroa-resistant bees.

Our preliminary results suggest, for example, that DWV may impact the bees' ability to develop hygiene responses targeted to varroa-infested brood.

We are very grateful to the NZ Honey Industry Trust for supporting this research. These studies are enabling us to gain a better understanding of the mechanisms that underlie varroa-sensitive hygiene behaviour[3], and the impacts of varroa-associated viruses on honey bee and colony health.

References

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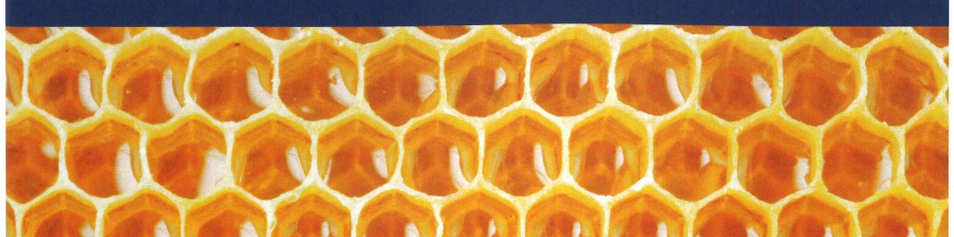

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WE WANT YOUR **PHOTOS!**

The Publications Committee welcomes photos for the journal. Pop a camera in the truck and snap away when you find something interesting.

The safest way to supply a digital file is in a high-quality jpeg format. If you're thinking big (such as a potential front cover photo), these need to be as large as possible (300 dots per square inch (dpi) at the size they are to be used, in portrait format (vertical rather than horizontal).

Regular digital photos are only 72 dpi, so are not suitable for the front cover.

Please provide a caption and the name of the photographer so we can credit them.

Email photos and captions to editor@apinz.org.nz

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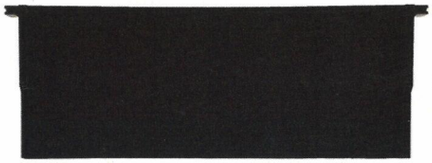

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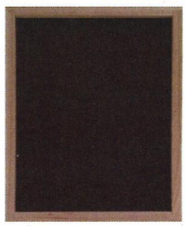

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PHOTO ESSAY

NEXT GENERATION BEEKEEPING

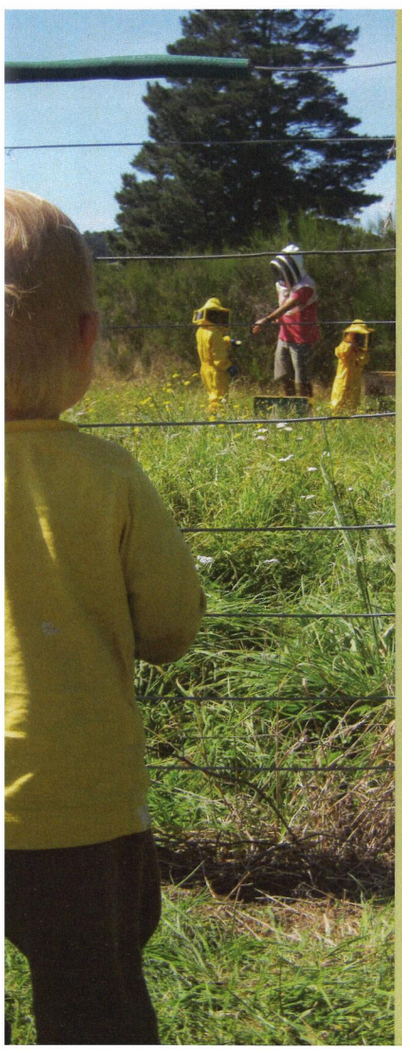
Emily Hunter (née Dobson) of Hawke's Bay recently took these photos of her husband and children. Emily takes up the story …

"We gave the kids bee suits for Christmas as they had been getting very keen on helping Dad (Daniel Hunter) with the bees ... and they were a hit!

When our son Ralph recently turned seven years old, we thought it would be great to have a hive to manage (with Dad's help!). Ralph also got given a mini smoker a couple of years ago.

Accompanying Ralph is Thea (four and a half years old), with one-year old George watching. They are Ian Berry's great grandchildren and Percy Berry's great-great grandchildren.

Daniel has been working for my dad, John Dobson, for the last seven or eight years doing queen production. The kids were helping to check the hive, finding the queen and having some fingerlicks of honey! Soon we will take the honey off and do the Bayvarol treatment."



Editor's note

When Emily was growing up, she also worked in the family business (Arataki Honey) during the school holidays. Before Emily married Daniel, she moved to Wellington to attend Victoria University, where she earned a degree in English Literature and an MA in Creative Writing before being awarded the 2005/2006 Schaeffer Fellowship to the renowned Creative Writing Program at the University of Iowa.

Emily's first book of poems, *A Box of Bees*, published by Victoria University Press, won the Adam Foundation Prize in Creative Writing in 2004. It was named one of the best books of the year by the *New Zealand Herald*.

A Box of Bees is available for purchase for $17.95 plus shipping. Go to http://vup.victoria.ac.nz/box-of-bees-a/

OPINION

TRANSITION OF THE AFB PMP MANAGEMENT AGENCY

Frank Lindsay, NBA and Apiculture New Zealand Life Member

Editor's note: As readers will recall from the public notice printed in the April edition of the journal (page 6), the Ministry for Primary Industries (MPI) has instructed that in light of changes to the NBA's constitution, the AFB Pest Management Plan Management Agency must change from the NBA to Apiculture New Zealand.

MPI sought feedback on this change and is in process of reviewing submissions received before conveying feedback to the Hon Nathan Guy, Minister for Primary Industries. The Minister will assess this feedback and then be in a position to amend the AFB PMP to reflect the change outlined above.

Following is an abridged version of Frank Lindsay's submission to MPI concerning the transition of the AFB PMP Management Agency. Some typographical errors have been corrected along with some tidying of punctuation to aid readability.

"I am not against the change from NBA administration to Api New Zealand. However with the legislative change required to keep the PMP legal, I feel that our new organisation Apiculture New Zealand and MPI should review the whole AFB PMP with an objective of developing a new Pest Management Plan.

Some of the issues I would like to see addressed:

1. **The PMP Board.**

   The present board should come up for election. They were previously appointed by the NBA executive and the majority have been in place for at least ten years, yet some beekeepers feel we are no further down the line to eliminating AFB than we were before varroa arrived. There are now hundreds of thousands more hives and thousands of new beekeepers, which all present a greater threat to spreading this disease.

   The majority of the present board members do not have any biosecurity experience. I feel their present actions aren't directed to eliminating this disease in managed hives but to perpetuating the PMP. They haven't presented a coordinated approach to eliminating the disease; instead applying a hit-and-miss, shotgun effect to outbreaks. Where is their five-year plan?

   At present we just spot test areas as problems arise. There is no follow-up during the next season. This is frustrating our existing AFB inspectors and affected beekeepers. Problems are reported to the PMP Manager but are not followed up.

2. **There are no regulatory teeth.**

   The Biosecurity Act was written for all applications but is failing for the beekeeping industry simply because MPI have been reluctant to take a case and for them, this is a financial expense where success in an action does not bring money back to MPI. Disease control in other countries has moved on. In some states of the USA and in New South Wales, Australia, regulations have been enacted to provide instant fines. *[Frank Lindsay attached regulations from Montana as a reference.]*

   MPI need to take more control of this disease. They need to appoint Regulatory Officers who can lawfully give out instant fines where a flagrant breach of the regulations has occurred.

   Unregistered hives should be impounded and either burnt or sold to recover costs of the Regulatory Officers' time and expenses. The present system of removing a beekeeper's Disease Elimination Conformity Agreement (DECA) provides some inconvenience but all a beekeeper needs to do is employ another beekeeper to perform this function.

3. Management of the Plan.

In the last review, MPI reduced the instance of reduction each year from 10% to 5%. If you were getting near your target, surely you would increase efforts to control AFB.

I would like to see a proper plan developed and for this to be put out to tender. There are other biosecurity companies in New Zealand that could tender for part of this work.

I look across at the success of the TB *[Tuberculosis]* Board has had in reducing the instances of TB in the same time period that our AFB PMP Board have been operating. *[The TB Board]* have set in place movement controls and police them.

We need a new approach. The new organisation needs to formulate a proper biosecurity plan that follows basic biosecurity principles like those developed by the TB Board. I suggest we start with a relatively clean area like Southland or Otago, clear it up and work outwards. Prevent entry of hives that have not been tested. Set up movement control between the North and South Island. Hives going either way must be free of AFB. This can be done in a few minutes using a trained dog (ref: https://www.youtube.com/watch?v=rtYVhej-9bY).

4. Use of Technology.

We are not getting the surveillance/inspection coverage industry wanted so the PMP Manager has engaged more inspectors at the suggestion of the industry, but these inspectors haven't been given the work they were promised so *[there has been]* no real change.

The *[AFB PMP]* Board have been very slow to use alternatives other than to physically look in beehives, which is expensive and time consuming and only finds the disease when it is no longer under control by the bees. (I say this because we have never see minutes of board meetings so we don't know what is happening, nor have we seen the yearly review report that goes to the Minister.)

The Southern North Island Branch have put a number of Notices of Motion to the NBA executive at AGMs, but few have been enacted by the PMP Board. We suggested that a dog be trained to detect AFB similar to those in everyday use by MPI at ports of entry. Nothing has happened so a beekeeper in the South Island has trained their own dog. (I now believe there are two trained dogs in New Zealand, one in the North Island and one in the South Island.) The South Island dog was demonstrated last year at the Wairakei conference. Dogs can detect AFB long before visible signs are present. Hives detected by the dog but not showing physical signs of the disease can be isolated for 18 months to see whether the disease appears or the bees clean up the infection. These should not be allowed past movement control boundaries.

New technology where beekeepers can test hives for themselves by using sound technology may be available within two years. Trials hopefully will be undertaken using a cellphone app this year.

5. Training.

The PMP does this well although I do not see any relevance to training people who do not have bees or have not achieved the knowledge and experience that a couple of years beekeeping gives you.

Different ERIC types of AFB.

Recent research by a Victoria University PhD student under the guidance of Professor Phil Lester has discovered we have three different ERIC *[enterobacterial repetitive intergenic consensus]* types of AFB in New Zealand. In one, ERIC type 2, the larvae dies at the 6–7 day stage and could be missed unless the hive is severely infected. Should we be moving hives from one area to the other which do not have all the ERIC types?

Nothing has been added to the training course to cover this new research. The excuse given was that it would confuse beekeepers if they knew larvae die at 6–7 days as well as 12–14 days (as it does with ERIC type 1). This is very poor. You either train to cover all instances or you cannot possibly achieve our goal of eliminating AFB if a beekeeper doesn't know what he/she is looking at. And it is increasingly difficult when Parasitic Mite Syndrome enters the picture, as larvae symptoms can be very similar.

6. Changes to the regulations. I would request MPI and ApiNZ look at the Montana regulations and adopt some of these to strengthen the AFB PMP regulations. (These are perhaps the best in the world.)

We have beekeepers placing hives on roadsides and unauthorised on private land during the manuka flow, effectively stealing nectar from the beekeeper nearby who is legitimately on private land. Having the property owner/lessee sign consent would be a start. The 30-day rule for registering apiary sites allows this. The 30 days was to save paperwork for pollination work but is being abused in some cases by unethical beekeepers.

continued...

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Hole in the AFB Regulations

> At present, hives and equipment can only be destroyed if visible symptoms are showing.

At present, hives and equipment can only be destroyed if visible symptoms are showing. This has worked when beekeepers follow the rules and burn all associated honey boxes, but we have had three instances where the beekeeper extracted the honey before the disease was detected/notified and refused to destroy the honey boxes. No markings were on the honey boxes; hence the beekeeper's reluctance to burn. In these instances almost all the beekeeper's hives were burnt but not the honey boxes. Under the present regulations the beekeeper can only be asked to destroy them.

We have three lots of stored honey boxes (in one instance from 200 hives) that can at some time be reused or sold to some unsuspecting beekeeper, which will only perpetuate the problem. Recent reports *[are]* that some of the stored supers from the Bulls outbreak have been sold.

> We need to change the regulations so that when the majority of hives are destroyed, associated honey supers must be destroyed as well.

We need to change the regulations so that when the majority of hives are destroyed, associated honey supers must be destroyed as well.

New technology that uses chips in each super could be used to trace infected supers, provided all frames went into the same supers they came out from. This technology could also be used for honey tracing from apiary to extracting plant, instead of enacting regulations to double honey house inspections and register beekeepers supplying RMP premises that will come into force shortly."

APICULTURE NEW ZEALAND

OVERVIEW OF APICULTURE NZ VOTING RIGHTS

Apiculture New Zealand Management Team

Much has been written in the past few months regarding the perceived loss of voice for beekeepers as a result of the revised Apiculture NZ constitution. Unfortunately these comments are often misleading and for that reason the interim board feels it is necessary to explain how the voting entitlement will operate in the future.

Under Clause 12 of the constitution, changes have been made to the way Members' votes are counted to ensure the investment by commercial beekeepers in their industry is protected. Each Member retains one vote for AGM and Special Meetings; however, that vote is weighted according to the Sector in which they are voting.

In the case of Non-Commercial Beekeepers, their vote carries 10% weight, while the Commercial Beekeeping and Market sectors carry 45% weight each. These weightings are in line with the number of board positions available for each Sector.

While it would appear on a simplistic basis that the Commercial Beekeeper and Market Sector votes are worth the same, that only applies to individual votes. In reality, the much larger number of Commercial Beekeeper members means that as a voting bloc, their voice is significantly stronger.

As an example, if 130 Commercial Beekeeper members voted in particular way, their total vote would be 130 x 0.45, or 65 votes. If 40 Market members voted in a different way their total vote would be 40 x 0.45, or 18 votes. While their individual voting entitlement is the same, a much higher number of Commercial Beekeeper members means a stronger position.

Ultimately this change to voting entitlement was designed to address the imbalance previously in place due to a weighting on hive numbers, as well as reflecting the wider member base for Apiculture NZ. It is, however, intended to ensure that Commercial Beekeepers remain central to the decision making and direction of our organisation in the future.

INTERNATIONAL BEEKEEPING NEWS

MALAIKA HONEY: **HELPING UGANDAN RURAL BEEKEEPERS**

Media release from Malaika Honey, 11 February 2016

Most people take honey for granted. They slap it on their toast each morning without giving it a second thought. However, for thousands of farmers in rural Uganda, it's a vital source of income that can ensure that the local people have a proper home to live in and can send their kids to school.

Typically, those beekeepers have used traditional methods, but these are often ill-efficient and wasteful. Even more of a problem is the fact that the farmers live far away from their main markets, and are at the mercy of middlemen who buy the honey for cheap and keep prices down.

Fortunately, social enterprise Malaika Honey is on hand to help the farmers to get a fairer price for their honey, and train them in modern beekeeping techniques. Malaika has a direct link with the beekeepers, cutting out the middleman. The company also runs workshops across the country to train up farmers, and supply them with beehives and equipment so that they can work more effectively.

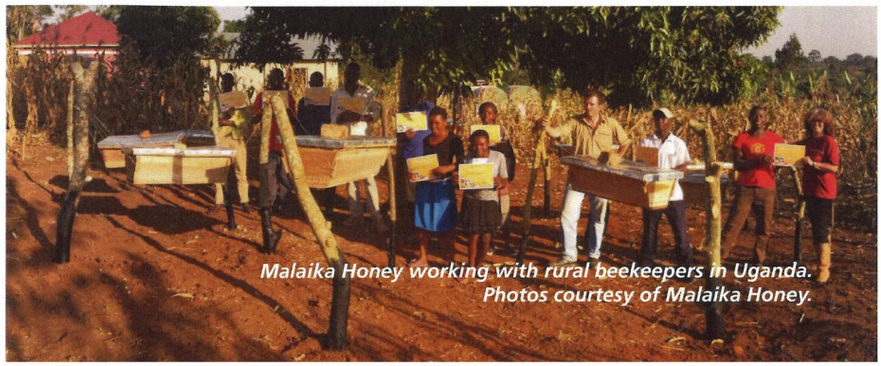
Malaika Honey is currently attempting to use the crowdfunding Indiegogo to finance the creation of a honey resource centre as a permanent place where its staff can train up and help equip farmers. It will also be used for research and the development of beekeeping equipment and techniques through transitional beekeeping applicable for poor farmers. This will enable farmers to go from just scraping by to providing their families with a regular income. Perhaps it marks the beginning of a new era in which Ugandan beekeepers will finally be able to earn a decent living from their toil and hard work.

Further information

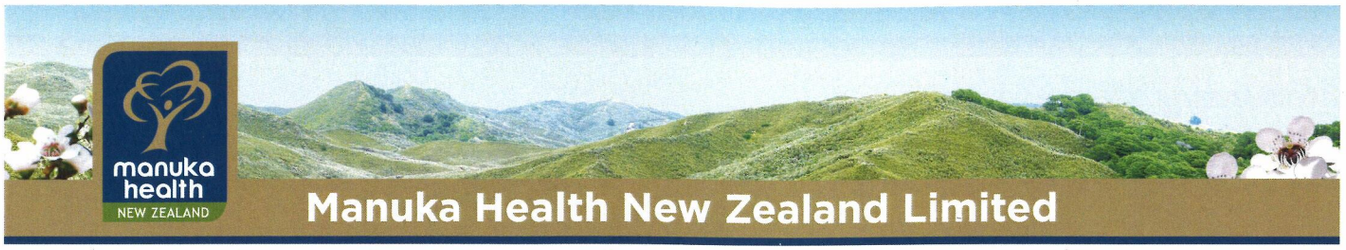
For more information about Malaika Honey and the Indiegogo crowdfunding campaign, visit these URLs:

Indiegogo: https://www.indiegogo.com/projects/honey-center-for-ugandan-beekeepers-re-launch/x/13153440#/

Malaika Honey: http://www.malaikahoney.com/



Malaika Honey working with rural beekeepers in Uganda. Photos courtesy of Malaika Honey.



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REGIONAL HUB REPORTS

FROM THE COLONIES

WAIKATO

In the report I wrote in April I began with the weather and indicated that there was a whiff of autumn in the air. Two months on, it seems we are still waiting for summer to end. The bees must be thoroughly confused. One beekeeper I have just spoken to believes that winter seems to start later and summer doesn't seem to crank up until February. This has meant a late crop for some, although crop results in the greater Waikato are very varied. In some cases beekeepers are still taking honey off.

Reports are that crop yields are down on the previous year, but with the prices as good as they are at present there are no complaints. Manuka crops have been OK in the eastern areas, but a complete non-event in the west. It has been a dark honey year on the west coast, primarily bush.

Everywhere the giant willow aphid *(Tuberolachnus salignus)* has created issues, one of the main ones being the attractiveness of the honey dew to wasps. As soon as the aphid numbers drop, the wasps invade the hives. It still seems that if there is an alternative nectar source, the bees will collect a mix of nectar types and not just fill frames with 'concrete' honey. However, one of the usual autumn sources, pennyroyal, has been lacking in the past two to three years. This could be weather related, or could be the result of farmers applying selective herbicides to paddocks.

With regard to the giant willow aphid, I have just read (and this time absorbed the information) that this aphid appears to only reproduce parthenogenetically; in other words, the females reproduce on their own. No male aphids of this species have ever been found. And in autumn, the aphids disappear in a matter of days and no one knows where they go or how they overwinter. However they do it, they seem to move fairly rapidly. They were first found in New Zealand in 2013 and are now found over much of the country. We were in Wanaka a fortnight ago and observed them there on cricket bat willows.

Package bees production has finished for the year. Mites are an issue for some, with wasps also an issue so frosts are needed, but overall the season has been described as not too bad. It's now time to plan for next year and then relax maybe.

- Pauline Bassett, Life Member

Giant willow aphids at Whakatane Nursery, January 2016. Photo: Barry Foster.

BAY OF PLENTY

BOP weather has been wet and warm. Kiwifruit picking is a couple of weeks late with the fruit slow in gaining the required condition for picking. A bit of cold should sort this out.

I am hearing of more varroa mites than normal and beekeepers are having to re-treat hives to keep the little buggers under control.

Hives are wintering well but wasps are becoming a nuisance as they get stronger just before winter. I am having mixed results with the new wasp poison but have only just started using it.

Gorse is starting to flower and rata has been going for a few weeks—a nice food source for the bees.

After a mixed season, everybody is looking forward to a break.

- Bruce Lowe

continued...

POVERTY BAY

Honey harvest

This season has been a mixed bag. Some beekeepers who put strong hives onto the manuka flow have had good results but any hives not up to full strength have given very mediocre results. There are a lot of new beekeepers who do not fully appreciate the importance of hive strength and timing. UMF® levels are generally lower than last year. Hives harvesting multifloral crops have done well.

Queen mating

Autumn queen mating conditions have been very good, with long periods when the bees have been flying.

Trees for Bees

This project at Patutahi, one of Dr Linda Newstrom-Lloyd's demonstration sites, is now into its fourth year. We have had hives on scales over this period on the demonstration site and also on a control site with the aim of getting data to demonstrate an improvement in spring performance as the spring flowering plantings mature. We have seen some improvement but with the difficulty of getting plants established through a couple of dry years, this has been slower than expected. We have decided to suspend the use of the weighing scales for a couple of years to let the plantings mature. This trial is continuing.

Giant willow aphid

The GWA showed up again in late spring and built up to large numbers by late summer. Some farmers are reporting a few willow trees dying out prematurely. With the warm autumn, wasps are still feeding on the honey dew but may be a problem when we get a cold snap and the aphids disappear. The hives have topped up with honey dew and are generally heavy going into winter. This is saving some winter feeding, but is of poorer quality feed-wise.

- Paul Badger, Hub President

HAWKE'S BAY

It's very hot and dry at the moment and we are heading for a fairly serious autumn drought. Wasp numbers are huge in some places and have already caused some losses.

The Hastings District Council is attempting to impose some fairly draconian rules on beekeeping, especially but not exclusively in urban areas. At least it is stirred up the local beekeeping community to get together and try and convince the council there are more sensible options than what they have chosen.

If the council does go ahead with the proposed changes, it will almost certainly push a large number of hives under the radar screen, which will make disease control even harder.

- John Berry, Hub President

SOUTHERN NORTH ISLAND

Branch AGM

Life membership of the Branch was bestowed on Gavin Lambert and Neil Farrer at our AGM on 18 April 2016. The last meeting under the NBA banner was a fitting opportunity to recognise their long-standing contributions to the Branch.

We also farewelled Peter and Judi Ferris, who are moving to the Northland area. A bouquet of flowers was given to Peter to pass on to Judi, who was home packing up the last of their possessions ready for the move. We wish them well in their new adventure.

- Frank Lindsay, Life Member

Below: Peter Ferris (left) receiving flowers and chocolates from Allan Richards.

NELSON

The Nelson meteorological data is in for April. Not only was it quite dry (47% of average rainfall) but broke the long-standing record from 1948 on warmth and also set a new record of sunshine hours at this time of year.

It's no wonder that most hives have been busy and still gathering what nectar they can find. I just hope there's not too much willow aphid dew in it. Most beekeepers have managed to check hives, have varroa strips in, and are ready for winter when the temperatures cool down.

Annual General Meeting

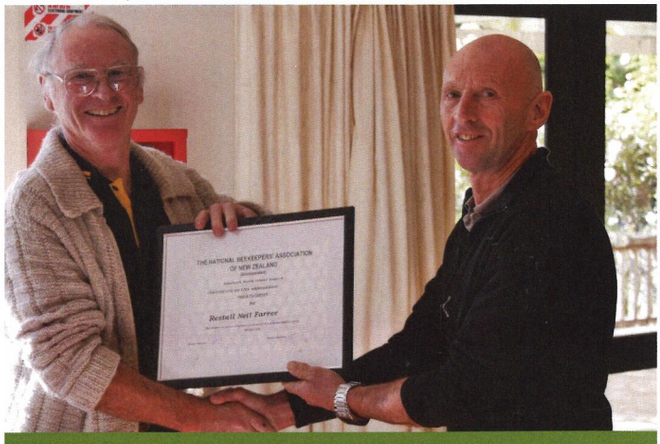
The Nelson Branch/Regional Hub recently held its AGM. Murray and Nicky Elwood were reappointed as Branch President and Secretary, respectively. Similarly, Hans Claus will remain as Treasurer and me as scribe. Emmanuel Kelly was elected as Vice President. There was some interesting discussion about Apiculture New Zealand, with Ricki's presence greatly appreciated.

Neonicotinoid discussion

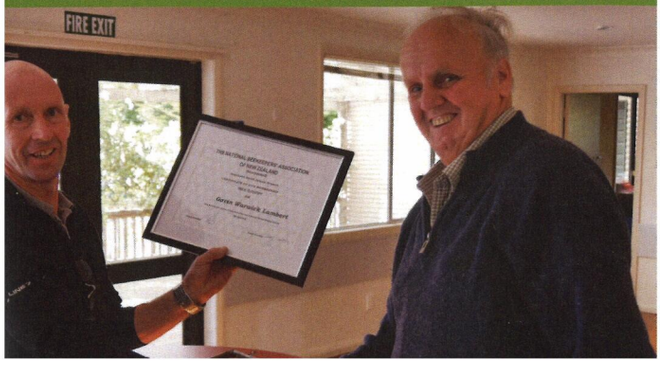
The local Nelson/Tasman Bee Club heard an interesting talk on neonicotinoids at its regular monthly meeting, presented by Green Party list MP Steffan Browning. His talk provided some useful knowledge about these pesticides and how commonly they are used in the New Zealand environment. Most members are looking forward to the upcoming annual honey/mead competition in June.

That's about the key news from the region. Rotorua conference is not far away for those attending; hopefully we will begin to move forward as a united body and build on the work that has been conducted so far.

- Jason Smith



Neil Farrer and Gavin Lambert presented with Branch Life Membership by outgoing President Allan Richards.



CANTERBURY

According to a TV weather report on 27 April, the current El Niño weather system is waning. We have had three successive months of record-high temperatures from January through March, and April continued to be unseasonably warm. Is climate change now making itself felt more intensely?

Good relations

Any opportunity taken to maintain good beekeeper–landowner relations, along with some educational reminders, should go some way to preventing problems that can emerge later.

One hive requires up to 25 kilograms of pollen per year—that's a lot for an apiary of 16 or so hives. Bringing a farmer's attention to this fact might prevent that patch of gorse or group of willow/wattle trees in some corner of the farm from being taken out by an excavator. This happens often enough as an adjunct to development work happening nearby as a 'tidy up'.

A report of spray damage to beehives whilst still in place as pollinators in a seed crop highlights the danger of possible non-compliant insecticide spray use.

This particular crop had re-sprouting growth due to a substantial rainfall in mid January, which necessitated extra aphid control measures. Determining the cause of bee deaths is difficult but those were the circumstances. With time pressures on at certain times of the growing season, some procedures can have a blind eye turned to them.

While on the subject of good relations and education, Apiculture New Zealand life member Frank Lindsay wrote an article in the *Farmers Weekly* entitled 'Keep bees local and long-term' (Lindsay, 2016).

Frank's article is timely, well written and worth a read. The essence is to "look after the local beekeeper who has his hives on the property year round".

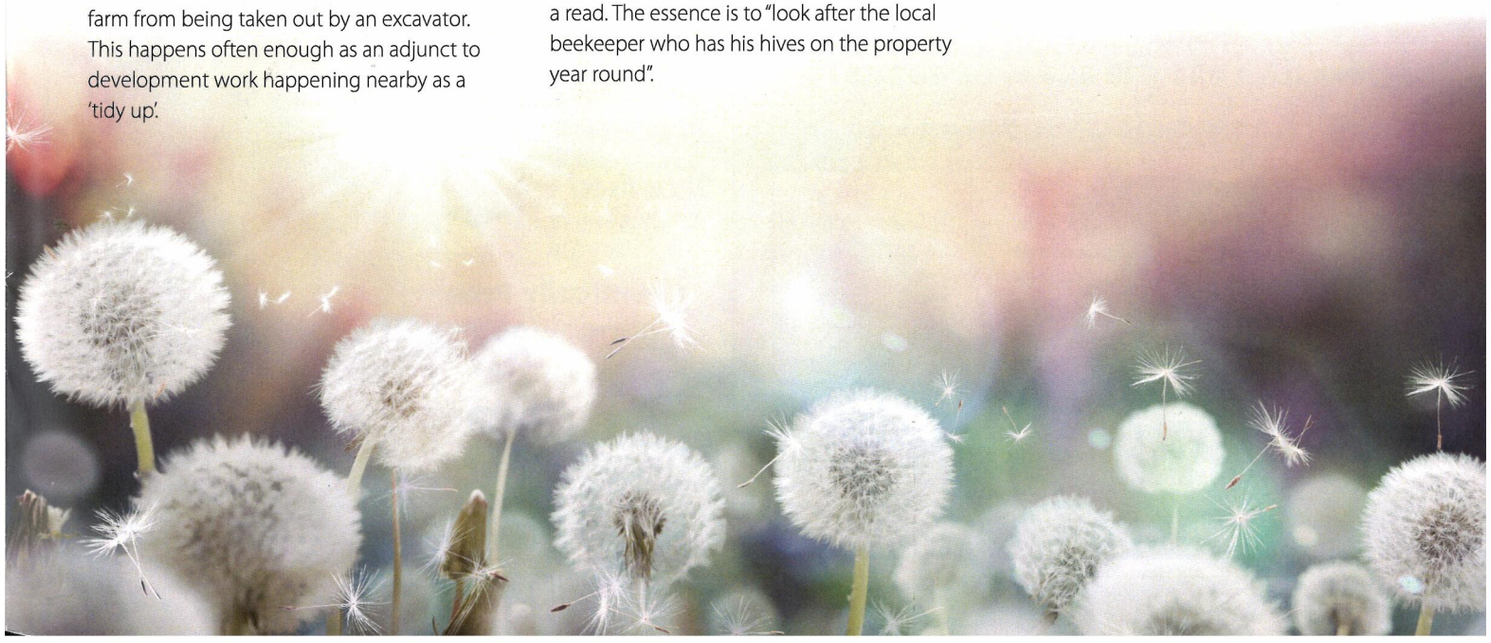
Another area of concern is the increased incidence of changes to land use. More land is being taken up for the growing of winter feed crops for livestock, replacing land that would otherwise be supporting dandelion, catsear and other pollen-bearing plants that provide invaluable winter stores for the bees.

Now it's time for those winter maintenance jobs. Happy farmer relations,

- Noel Trezise

Reference

Lindsay, F. (2016, April 25). Keep bees local and long-term. Retrieved May 25, 2016 from http://viewer.zmags.com/publication/075e812d#/075e812d/18



Maureen Conquer, then the President of the Apimondia Oceania Commission, won the Unsung Hero (Buzziest Bee) award at the 2015 conference. Who will win this year? Barry Foster presented Maureen with the trophy.

Photo: Frank Lindsay.

ABOUT THE APIARY

WINTERING DOWN AND CONTROLLING PESTS

Frank Lindsay, Life Member

It's been a prolonged autumn with beautiful, warm weather. On the warmer, northerly facing slopes in some areas, Spanish heath has just started flowering and is already being visited by bees. This is a winter source that generally starts in July. Tree lucerne, gorse and some of the wattle species are also starting to flower. All these sources stimulate brood production, which uses valuable winter stores.

Normally bees only start chewing through the winter stores when major brood rearing starts in August. I'll have to watch the hive reserves in these areas.

Winter preparations

Up until mid-May the bees were flying well, probing neighbouring hives and robbing weak hives. I have had to close entrances down to a little under 25 millimetres to allow smaller hives to better protect themselves from both robbing bees and wasps. I used a soft plastic foam that the bees can remove when they want a bigger entrance.

I have also been inspecting nucleus hives and setting them up for winter. Some were heavy and plugged out with honey while others, made later, were hanging on with just a half frame of wet honey. This gave me an indication of the honey flow in some areas, with nothing put on since early December.

In one apiary I found that nearly all hives had wet honey. My first thought was that perhaps the bees had been robbing hives and that I had better watch them in case they had robbed an AFB hive. I did a full, slow brood inspection of every frame but found nothing.

Looking around at the bottom of the hill, I noticed that the bees were collecting willow aphid honeydew. Knowing that this generally sets solid, I replaced the frames in the nucs with capped honey combs produced earlier in the season to take them through most of winter. Normally I would have fed sugar syrup, but these nucs were too far away to visit every couple of days to replenish the feeders.

I have also been marking the best hives in each apiary as potential drone producers. These hives produced well, had good brood patterns, were full of bees and brood and were easy to handle. Some had spare bees in the top (Miller, dry sugar) feeders. I used these extra bees to boost some of the smaller hives; that is, the ones most affected by the late placement of varroa strips. I gave the bees and hive a quick spray with an air freshener and the bees united as if they were from the same hive.

Yes, some of my strips went in late. This autumn I have been relying on weekly formic acid treatments to knock off a few mites each time. In some hives, the varroa mites built up to an extent that deformed wing virus was showing, while others still had strong populations with lots of brood and only a small amount of mite damage starting to show. Other hives had completely ceased brood rearing and were forming a loose cluster, while a few had eight frames of brood. The difference was amazing. Those with brood had been stimulated by willow dew, perhaps, and were starting into their winter stores.

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A bad year for wasps

Wasps were particularly bad in some areas this year due to the hot, dry summer and autumn. A quick glance at the hive entrance tells you whether your hives are being bothered, as there will be lots of bees at the entrance with only a few water carriers flying.

I walked around one property and powdered eight wasp nests. My pedometer showed I had taken 2100 steps walking up and down all the farm tracks in the bush. After a few years, I now know that they are likely to build their nests in the soft soil along the edges of the bush tracks. It's a fair walk but there is satisfaction in cleaning out an area and seeing the difference in the hive activity when the nests have been killed.

Wasps are easy to spot in the morning, highlighted by the sun against the dark leaf cover of the bush. You can also hear them—they make just as much noise taking off and landing as bees do, only at a lower frequency.

If you tiptoe to the nest and give it four or five puffs of wasp killer, the nest will be dead in an hour. For really big nests, use a smoker to calm the wasps as you work from entrance to entrance: sometimes you can't help but disturb them, so smoke helps.

In the days when sacks were used on farms for grain and wheat for the chickens, farmers used to hang the sacks on fences and the queen wasps would overwinter in the folds. It was easy to reduce the following year's wasp population by eliminating a few queens on a frosty morning when they were inactive.

I don't want to give the impression that I'm against wasps. They fill a niche in the ecosystem, reducing caterpillar and fly numbers (we used to be plagued with flies years ago), and perhaps they help to reduce scolypopa numbers when these first start to appear in the spring. Everything has a place in nature so when the wasps start to rob beehives, I reduce their numbers.

Controlling other pests, including varroa

I have put rat baits in plastic bottles in all my apiaries. It has been a good breeding season for these pests and now it's time to get rid of them before they chew a hole through a super and make their winter nest in a hive.

It's easy to tell whether you have mice or rats around the apiary. Rats will try to remove the plastic bottle with the baits inside, whereas mice will just eat the baits, leaving the bottle in place under the hive pallets.

> June and July are important months to monitor varroa mites.

June and July are important months to monitor varroa mites. It may seem unnecessary given that we treated our hives months ago but in winter, when the weather warms for a few days and bees can fly for a few hours, they will seek out weak feral hives (escaped swarms) and rob them, bringing back a load of varroa mites.

I have observed that just one hive collapsing nearby has enough varroa to affect a whole apiary of 16 hives. One or two hives robbing

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will collapse in a month and when these too are robbed, the whole apiary collapses rapidly.

If your hives are situated along the coastal strip, it might pay to monitor a few of the strong hives that are flying well for varroa mites. If mite numbers are between two to five percent, I would re-treat the apiary. Beekeepers whose hives are in the colder, inland areas need not worry as their bees will hardly be flying.

Winter tasks

Most beekeepers slacken off during the winter, work fewer hours and take a holiday at some stage in a warmer place, but there's still work to do. A key task is hive maintenance—making up frames or waxing plastic frames, replacement boxes, pallets and lids, and dipping and repainting boxes.

It used to be that I could get away with honey supers with extra entrances (rotten or chipped corners). However, with the increase in beehive density, with so many new beekeepers and commercial beekeepers expanding their bee numbers, any extra entrances are a potential robbing point. I even have had to block the top entrance in the split boards I use as hive mats until robbing from wasps and bees diminishes.

Regular comb replacement means your bees are being produced in a clean environment.

You can save time by ordering fully made-up gear. Order early so it arrives in time for you to use it: this can save weeks of work.

I still prefer to use wooden frames with wax foundation in my brood boxes, but wooden frames with plastic inserts are just as good. When wax frames become dark with brood rearing, they can be ditched easily and melted out. Regular comb replacement means your bees are being produced in a clean environment.

I'm going to leave most hives with plenty of honey in the hope that they build during the winter and will be making preparations for early swarming. As soon as I see queen cells with eggs, I will remove all the queen cells and buds and put a graft into these hives to make early queens ready to mate in the first or second week of October. This task is also timed to hit the first bush flow in my area, which provides good nutrition, good nectar flow, and everything required to raise good queens and healthy big drones.

Be prepared for spring

Around the third week of October, the equinoctial winds start and the temperature drops for another two to three weeks to less than 20°C. My hives are particularly affected by this change because of the nearness of the ranges and our proximity to Cook Strait. They don't call it windy Wellington for nothing!

After the winds start, the weather is reasonable for nectar collecting but not good for queen mating. It's also unlikely that the hives that had high mite numbers in the autumn will have recovered completely so won't, I hope, be in swarming mode. This will give me time to muck around queen rearing by putting in cell bars into every colony likely to swarm. Those colonies that build early drones can be split to accommodate the queen cells.

All of this requires knowledge of your area and observing the conditions of your hives when you first inspect them in September. You have to know when your first honey flow starts in each area (as this induces swarming in strong hives), where the warm sheltered spots are for mating queens, and where the drone-congregating areas are.

If you know the location where drones congregate, you can flood these areas with drones and then place nuc hives on the outskirts of these areas, hoping that your queens are far enough away to mate in the areas you flood with drones. Otherwise, spring matings can be a 'hit and miss' situation.

Rapid changes in the weather can see queens lost or matings delayed. It's not until you try to raise a few queens yourself that you really appreciate how much our professional queen breeders have to go through so that you end up with a queen in your mailbox.

Take a break

Some commercial beekeepers take their annual break during the winter and head for warmer climates to relax and recharge the batteries. It's not until you are away for two weeks that you relax enough to be able to put some concerted thought into planning for the coming season.

Don't take too much time off. Have everything ready for spring, as you don't have time to do this once the rounds of hive inspections start.

So that's it for the season. Get away for a decent break. Start by going to conference. Even though a conference programme may have a topic you're not interested in, it can really surprise you. One little thing learnt can repay your investment many times over.

Things to do this month

Render down cappings and old combs. Check stored frames for wax moth. Make up new equipment for the coming season. Have at least three frames of foundation on hand, or even a box of new foundation frames for each hive to reduce the toxins, spores (Nosema, chalkbrood and AFB) and viruses in your brood frames.

Check the effectiveness of your mite treatments for the odd hive that has not responded to strip treatments as well as expected. Bees dead in brood cells with tongues extended is a sign of varroa. Mite resistance to strips is increasing.

Hives are dying in the Waikato and other places, I suspect because of varroa resistance to both Apistan and Bayvarol.

It's very important to do either an alcohol wash or a soap wash of 300 bees.

Check the strongest and weakest hives to start with if the weather allows.

Re-evaluate apiary sites for winter access. Plant pollen and nectar sources for spring and autumn. Consider working with the farmers to plant long-term sources. A single willow can support the development of an apiary when it's 30 years old. A group of camellias provides both colour and food for bees in the autumn. Learn more about Trees for Bees at conference.

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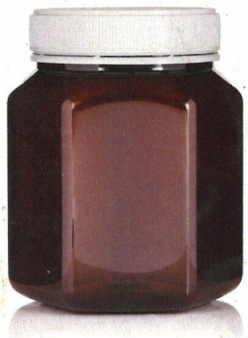

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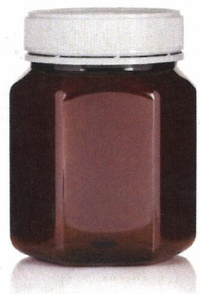

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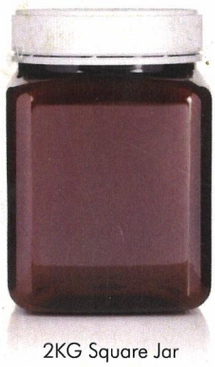

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