



**Next meeting** | Wednesday 5<sup>th</sup> April 2023

**Where** | Johnsonville Community Centre

**Editor** | Eva Durrant [edurrant@xtra.co.nz](mailto:edurrant@xtra.co.nz)

**Beginners Class:** 6.45pm

Graeme Chisnal and *Wintering down your bees*

**Main Meeting:** 7.30pm

**Honey competition**

**Please be at the meeting room by 7pm to enter your honey**

Frank Lindsay will judge the honey this year, and Adam Brack-Sinnott from Huxley's Restaurant will taste the honey and give some comments on the honeys and on cooking with honey.

**Phil Lester presents:**

"Tiny Brains, Big Smarts. Bees are much more intelligent than you think"

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## From the President - Tricia Laing

The weather is very cold for this time of the year which pleases me greatly because of the impact it will have on the wasps. So far this season I have lost one of my five hives to wasps despite having robbing guards on the hives. Last week we were getting out the Vespex but we couldn't use it because it started to rain, and the wasps have not yet switched to protein. Hopefully they will find it very difficult to survive in this cold weather.

In the last couple of weeks I have been reviewing all the local authority bylaws for keeping bees. These bylaws range from having next to no content to being very prescriptive and therefore hard to implement. The purpose of having bylaws is to protect the general public, neighbours and property owners from general nuisances and to protect, promote and maintain public health and safety related to keeping bees.

A couple of local authorities have asked for WBA's advice on what to include in their bylaws so the WBA Committee has taken this opportunity to draft some bylaws that we can recommend to any local authority that is interested. My view is that the bylaws should cover the basic issues such as; the legal obligations of beekeepers under the Biosecurity Act 1993, membership of local beekeepers' associations, the number of hives per urban property, the siting of beehives, and the gentleness of the strains of bees kept. In the end, I think that implementing the bylaws depends on us being mindful beekeepers. In all the bylaws that I have reviewed the local body retains the right to investigate any complaints about bees creating a nuisance. Members of the WBA Committee can tell stories of working with local bodies to investigate complaints against members.

As well as recommending bylaws for residential urban properties I think we need bylaws that refers to bees on public land that may be owned by hobbyists or commercial beekeepers. For instance, both of the Club Apiaries at Wingate and Crofton Downs are on public land and there are community gardens that have beehives on them. The arrangements that WBA has with Wellington and Lower Hutt City Councils suggest that a Land Use Agreement can be used as an instrument to manage these set ups.



I would like to take this opportunity to thank all the beekeepers who have assisted in setting up our Club Apiaries on public land, and who have built good relationships with local authorities so that when complaints are notified these can be resolved quickly and usually sensibly.

## Apiary reports

### Chartwell apiary -Frank Lindsay



Mite fall for Hive 1

It hasn't been a productive season thanks to La Niña, with no honey produced after Christmas.

Quite a few hives are showing chalkbrood even though the hives were requeened in the spring. Something that seems to be increasing. Perhaps we have a new variant of this fungal disease as a few years ago you hardly saw chalkbrood.

Mite washes have been conducted on all colonies and numbers are far higher than previous years. 5 to 144 mites in a 300 bee alcohol wash.

The difference could be that I have had oxalic/glycerine staples in the hives in previous years but I don't really know. Hives were given a mite knockdown with 60 mls of formic acid in early February and then three weeks ago apivar strips were put in all hives.



Some hives (the best producing hives) were showing early PMS; spotty brood and bees with deformed wings.

All hives have robbing screens to help prevent mites coming in on drifting bees.

Four hives are being monitored as part of a MPI project with weekly mite drop being monitored using sticky boards.

The mite drop had progressively reduced over the last two weeks, however this week's count showed a slight increase in mite fall in three hives but a massive increase in hive 1 which had a daily mite fall increase from 123 to 298.

This perhaps indicated that these bees are robbing a dying hive and bring back mites. (I'm not sure as I haven't looked in the hive to see if there's fresh honey).

This is matched with a mite wash on another hive during a training session which showed 12 mites; up from the mite wash a month ago which showed 8 mites.

The club apiary is also being used as part of a research project by the Australian CSIRO and MPI to detect by DNA swabbing of entrances and brood frames whether it's possible to identify varroa mites in a hive long before they show in a mite wash.

10 five frame nucs were imported from the Chatham Islands being wasp and varroa free.

This research is just finishing with the last colony now showing mites. It only took robbing of one hive in the first couple of days to show mites in a wash a week later.

This research also showed that a member's colony put into the apiary to be requeened, as it's was very defensive, turned out to be the best robber in the apiary. It has cleaned out (and continues to do so) a number of these and our nuc colonies. We have already lost four to starvation thanks to this robbing and is the

only hive to have put on a super of honey since this experiment was started in January.



Just shows that the best producing hive did it the easy way; robbing instead of collecting nectar from floral sources.

As a side issue some of these Chatham nucs show spotty brood and now one has become a drone layer with one drone sampled showing white eyes indicating in-breeding. An indication of just how difficult it is to keep varroa free bees on the Chatham's.

Those hives with the high mite counts above 30 mites I suspect will die through the winter as deformed wing virus will continue in the bees and this stops them from tight clustering (Thermoregulating). Here's hoping they survive.

We still need to finally winter down the hives, evening up the honey stores or sugar syrup feeding them to get up to weight.

## Wingate Apiary – Richard Baczek

In February we took off around 50 kg of honey which has now been packaged and will be sent up to the Hawkes Bay for those affected by the recent flooding.

We also put in our February varroa treatments. We had varroa count figures for the hives as the Australian Varroa Research Team had visited the previous week. We used Formic Pro for the most affected hives and ApiLife Var for the others.

Our next visit is planned for Saturday 15 April at 10am. All welcome. Contact Richard on 021034311 or Michele on 0210610507 if you are interested in coming along and need more information.





## Honey Competition

There are 3 categories will be judged, liquid, creamed and comb.

The aim of this competition is to encourage members to prepare and present a sample of their own honey. A cup is awarded to the winner of the liquid honey class.



There are three classes in the competition:

1. **Liquid Honey**
2. **Creamed Honey**
3. **Comb Honey**

### Conditions of entry:

1. Entries for liquid and creamed honey are to be presented in a clear, glass jar (around 350ml) with a well-fitting lid. No labels or oodings on the jar or lid.
2. Entries for comb honey are to consist of a complete frame (either full,  $\frac{3}{4}$  or  $\frac{1}{2}$  depth). The frame of comb honey should also be clear of any identifying marks.
3. There is a limit of one entry per member for each class.

### Tips and advice:

- The secret in this competition is to take great care in filtering your honey to remove impurities and to get rid of air bubbles.
- The cleanliness and clarity of the container is also important.
- Start only with the best honey that has low moisture content (so that it will keep).
- Judges' comments from previous years have indicated a high standard of entries, but there have been some recurring problems with impurities such as bee legs, air bubbles and high levels of moisture. Pay particular attention to these things to come up with a winning standard of entry.

The WBA honey competition rules can also be found here on our website

<https://www.beehive.org.nz/honey-competition-rules/>



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## Letter to beekeepers/clubs

From Mark Goodwin



Below is a description of a research programme the beekeeping industry is trying to put together. The industry is looking for people willing to be part of the project, either to catch bees and or to help with funding. As for the funding, even small amounts (\$50/year) are ok, crowdfunding.. We would of course also like to hear from anyone happy offer larger sums.

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**Jane Lorimer, Project Leader writes:** We have a world first project that we believe will revolutionize the honey market. There will be a huge amount of media interest in this project which will be another fantastic marketing opportunity for NZ's honey industry.

We want to take NZ honey from generic to world renowned; much like the coffee industry has exploded from tins of instant to hundreds of different origin stories - with consequent price increases! We want honey to follow suit.

The project's ultimate goal is to give beekeepers a tool to define the predominant floral origins of any batch of honey. This will allow beekeepers, packers, and manufacturers to better label, promote, and sell their honey.

The project is broken into three parts:

1. Capture bees while foraging for nectar.
2. Laboratory test the collected nectars.
3. Provide a testing method to labs to enable people to get their honey tested to determine its floral origins.



## Capturing bees on flowers

For most plant species, this is relatively easy to do. We will be asking anyone who is interested for assistance. They will register their interest on the Honey Characterisation Website (in production) which will enable us to send out a small bee capturing kit.



*Figure 1: Bee foraging on Pohutukawa flower*

The bees will be captured using thin plastic bags. The bag will be placed over a bee while the bee is foraging. Once the bee is in the plastic bag it will fly up into the corner where it can then be tied off using a twist tie. The bee collector will also be required to break off the flower, or a reasonable portion of the flower, that the bee was captured on to enable confirmation of the plant species. The flower and bee are best kept in the same bag, separated by a twist tie. If this is not possible then care must be taken to label bags appropriately. The bag with the bee must remain tied off and be immediately placed into a chilly bin/bag to cool it. The chilly bin is for transportation to a freezer for euthanization which should be done as soon as possible.

Once all 30 bees/flowers are in the freezer the collector will notify the honey characterisation team through the website (currently in production) and we will organise collection of the samples back to a central location for processing.





## Extraction of Nectar

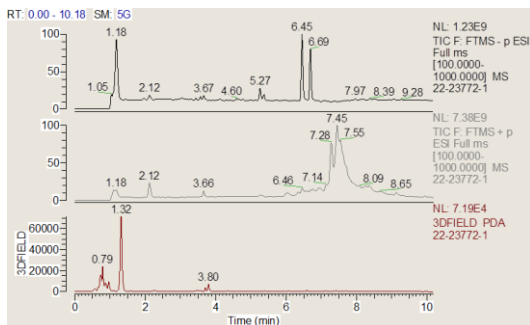
The nectar extraction process is relatively simple. We will lightly push on the bees thorax and abdomen which will cause the bee to expel the nectar that was in its crop. This small drop of nectar will be sucked up using a pipette. Care will need to be taken to ensure that no extraneous material is sucked up into the pipette that will contaminate the sample. This will be completed by trained volunteers.



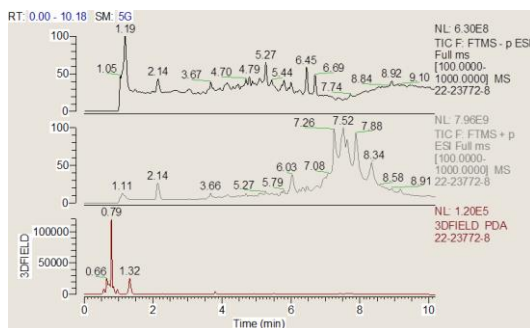
*Figure 2: Globule of nectar from the bee's crop*

## Analysis

Analysis will be carried out on the crop nectar samples by *Analytica* using Untargeted UPLC-UV/HRMS analysis and sugar concentration. This will give us a chemical analysis similar to what has been done for Manuka. It is anticipated that we will ultimately be able to relate this analysis of nectar to the honey it produced.



*Figure 3 Chromatograph of two plant species analysed*



Pictured above are two graphs showing the very different chemical composition of two different nectar samples obtained from two different plant species. This has given Analytica confidence that they should be able to find unique compounds in all of the nectars to enable identification of each plant nectar species.

## Future projects

Once this project is completed we would like to move onto a taste project to profile all the different unique, delicious honey flavours in New Zealand. Additionally, this project may lead to the discovery of nectars that may have nutraceutical properties which will open up further marketing opportunities for the future.



This research is long overdue. Peter Molan started honey research more than 20 years ago, his findings catapulted Manuka, and NZ honey, to the world stage. We need to build our knowledge and investigate nectars further, and for this we need your help.

## **Assistance**

At this stage of the project, we are looking for pledges of sponsorship from beekeepers and honey industry companies (minimum \$50/year over 3 years). We are also looking for volunteers who would be willing to capture bees off flowers and possibly community groups to assist with the nectar extraction.

To apply for large scale funding, we are required to show community interest, so all contributions will form a very important part of this project.

If you are interested in assisting us, please email the below address with your contact details and the amount you are willing to sponsor and/or if you are able to catch bees.

[honeycharacterisationproject@gmail.com](mailto:honeycharacterisationproject@gmail.com)

If you would like to contribute as a major sponsor, we would be very happy to present a pitch at your place of business.

**Jane Lorimer - Project Lead 027 294 6559**

## NOTE

In regard to this research proposal, the WBA committee is meeting on Monday 3<sup>rd</sup> April to discuss the proposal with a view to having a club response also.



## From the CE, Karin Kos

Beekeepers across the country will be ready for a well-deserved break this winter after a busy and fraught honey season. The Apiculture New Zealand's Conference and Trade Exhibition to be held in Rotorua this June aims to provide a space to connect with others in the industry and be inspired by the latest science, research and innovation.

This year's conference welcomes two international experts on social insects. Leading international researchers, Dr David Tarpy (USA) and Dr Peter Neumann (Switzerland), will share their passion and expertise with New Zealand beekeepers. Dr David Tarpy is a professor of Applied Ecology and the North Carolina Extension Specialist in honey bees. Among other initiatives, his programme runs the Queen and Disease Clinic and the Beekeeper Education and Engagement System (BEES). See the article below for more on David's topics.

Dr Peter Neumann is the Vinetum professor at the Institute of Bee Health, University of Bern. His research and teaching cover all aspects of bee health with a focus on behavioural, evolutionary and molecular ecology of honey bees and their pathogens. He is also the president of COLOSS, an international research association focused on improving the wellbeing of bees: [www.coloss.org](http://www.coloss.org).

In addition to a great lineup of speakers, panels and seminars, the Conference's Trade Exhibition provides a wide range of booths with all the products and information a beekeeping business needs, from the latest in hives and machinery to professional development opportunities and pest control. [conference programme can be found](#) here and will be updated regularly.



## Colony loss survey

Full report [Manaaki Whenua Landcare Research website](#)

New Zealand beekeepers once again reported that the *Varroa destructor* mite is the most common reason for overwintering hive losses, according to the recently released New Zealand Colony Loss Survey.

The overall colony loss rate during winter 2022 was 13.5 per cent: almost identical to the loss rate in winter 2021. While loss rates have levelled off, they have levelled off near the highest recorded rates since the survey began in 2015, and the rate of suspected varroa-related losses continues to increase.

The survey estimates that 6.4 per cent of all living colonies (nearly half of all colony losses) were lost to suspected varroa and related complications over the 2022 winter. This is a 20 per cent increase from the 2021 rate of 5.3 per cent. In contrast, losses attributed to queen problems, wasps and suspected starvation in 2022 were close to their long-term averages.

Varroa management rates amongst respondents improved considerably. 4.4 per cent of beekeepers said they didn't treat for varroa in the 2020-21 season, while the latest survey shows that number dropped to only 1.5 per cent of beekeepers that didn't do any varroa management in the 2021-22 season. In contrast to 2021, every beekeeper with more than 50 colonies treated for varroa in 2022.

In the survey beekeepers who lost colonies to varroa were asked what they thought went wrong. The most common answer was 're-invasion'. More than 38 per cent of survey respondents said that they treated for varroa more than once during autumn.

Barry Foster of the Apiculture New Zealand Science Focus Group says this is a timely reminder to beekeepers to "monitor, monitor and monitor their hives for mites."



## Wintering down hives

Frank Lindsay

It's April and the season is drawing to a close. There's still a lot of pollen and nectar from garden sources available and this is stimulating brood rearing. It's time to start doing your final checks. I just peeked into a few nucs. There's new dark honey in a couple of frames. The bees are storing pollen around the brood nest and will soon start restricting the area the queen can lay in. Pollen is essential. For each new bee that emerges, the hives will have used a cell of pollen, a cell of honey and a cell of water, so you can't have too much in a hive and every cell of pollen will be needed when the queen starts laying again in July and more so towards the spring.

Has the hive enough honey to carry it through the winter? Some winter in two or three  $\frac{3}{4}$  boxes with at least a box and a half full of honey. If you haven't got this much in your hives start feeding. An up turned Agee jar with twenty small holes in the lid will do if you don't have a manufactured feeder. Fill the jar  $\frac{7}{8}$  full of sugar and then pour in hot water and stir until it has all dissolved. Place a piece of coreflute the same size as a super. (real estate sign, with a hole the size of the Agee lid) place this on the top of the hive in place of the hive mat, then up-end the jar over the hole in the core flute and place it so the bees can get at the jar top. Sometimes it's necessary to place a couple of small sticks under the lid to create enough space for a bees to get at the holes in the lid. Then place another empty super on top followed by the inner cover and then the roof. Do this just on dusk so the robber bees from other hives are not alerted to this source of food. Check and refill every couple of days until the bees stop taking it down.

Make sure the queen is laying (look for new eggs) and that there are enough bees to fill a complete super. At the same time look for signs of disease in the area of emerging brood. (check the AFB manual or the AFB website if you don't have a book). If there are individual cell that haven't emerged flick off the capping and have a look at the larva underneath. Should be pearly white if still a larva or



ie going through the colour changes if older. If you are not sure contact another member for help.

Check that you hardly have any varroa. Fork out some brood with a cappings fork, if you have mesh bottom boards, monitor the mite fall. It should be down to just a couple of dark mites per day. If you have other beekeepers' hives close by, leave your strips in the hive until after the first frost, this causes the bees to form a cluster. Even though it says to remove the strips after 8 weeks, if you have hives within a kilometre of you, leave them in. It could be that one of the hives in the area is badly affected by varroa and there's a likelihood that your bees could rob it out. The only problem with this is that your bees could bring back a load of mites and a month later your bees will be dead. Protect your hive, close entrances down to a couple of bee widths.

If you find that the population of your hive has dropped by half and that you can see bees running around with deformed wings, you need to treat the hive again and also add some more nurse bees from another hive just to boost the population a little and get brood rearing going again.

If you have a normal wooden base, put a piece of wood under the back of the hive so that it slopes towards the entrance. This allows the rain to run off the hive and not into it. If you have it put some insulation under the roof. We all know what a difference it makes to our homes. Put away your spare honey supers in a dry, light airy place so wax moth don't devour the wax.



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## An English beekeeper

I'm an English beekeeper from Kent, on holiday with my wife and we have enjoyed a warm welcome from the members we have had the pleasure to meet.

I had wanted to keep bees since the age of six and sixty-odd years later I attended a Beginners Course, taught by a Master Beekeeper [MB]. I joined the club, which has about 50 members and spent a year under weekly supervision on club apiaries before acquiring bees. We use Commercial and National hives. I chose the Deep National, which is based on Langstroth design principles, with 14"x12" brood frames, providing some 90,000 cells. We use Shallow 14"x5.5" frames in honey supers. Plastic frames have recently come to the UK market and are gaining popularity mainly with commercial keepers. Poly hives are slowly gaining popularity, but poly nucs are now widely used.

At monthly Branch meetings I listened to speakers like our Area Seasonal Bee Inspector on pests and diseases, an MB on fun with observation hives (of which we have 2 for taking into schools and markets) and members bringing 'essential' kit that they have never used! I also enjoyed the camaraderie and debates amongst the wise. I quickly learned that there is no right, or wrong way and the bees always know best!

I joined the apiary team and passed my National exam and practical assessment. I was then invited to mentor Beginners and Novices at the University teaching apiary. Last summer I was acting-Manager for the club's 22 colonies and am grateful for the learning opportunity. We extracted over 230kg from 8 productive colonies. The honey is distinctive at each of the three apiaries. We sell it as the club's main source of income and donate some to local charities. Two of my own garden colonies, a swarm and a split, yielded 41kg of faintly lemon-tasting honey. I hope to expand this to six colonies this year.





We have similar issues with bee-health. *Varroa destructor* has been in the UK since 1992 and we usually treat with Apiguard (*Thymol*) or Apilife-Var (*Thymol & essential oils*) or Apivar strips (*Amitraz*) in Spring and after the summer flow and by sublimating Api-Bioxal (*Oxalic acid dihydrate*) in December. Wasps are becoming a growing problem in the autumn, overwhelming weak colonies, robbing and eating winter eggs and larvae.



Maintaining/uniting strong colonies seems to be the best defence. In 2016, the first Asian Hornet was discovered in England and we have a major education and awareness programme that has tracked and destroyed 13 nests since then.

We don't have to worry about tutin poisoning and you don't have an Asian Hornet threat, but beekeeping seems to be practiced and enjoyed with the same enthusiasm and kindred spirit.

**Michael Toh**

**Whitstable & Herne Bay Beekeepers**



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# May Meeting

## **Beginners Class**

Apparatus, materials, building and repair of hive ware with Graeme Chisnall

## **Main Meeting**

Anaphylactic Shock, Bee Allergies, Bee Sting responses.

Speaker tba



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## Who can I speak to?

President - Patricia Laing [tricialaing48@gmail.com](mailto:tricialaing48@gmail.com)>

Treasurer – John Burnet (04) 232 7863 [johnburnet@xtra.co.nz](mailto:johnburnet@xtra.co.nz)

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