Wellington Beekeepers Association
Support and encouragment of beekeeping and beekeepers
April 2024 Newsletter

Next meeting | Wednesday 3rd April 2024
Where | Johnsonville Community Centre
Editor| Jane Harding janeh@xtra.co.nz

Beginners session – Requeening with a Caged Queen – Frank Lindsay

Main Meeting: 7.30pm

Paul Chapman – Pest Proof. Paul will talk to us about dealing with wasps, wax moth, mice and other hive pests.

Honey competition deferred until May.

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President's Message

A big thank you to everyone who helped to make a success of the celebration of Frank Lindsay's New Year Honour, namely, Officer of the New Zealand Order of Merit for his services to the apiculture industry. It was heart-warming to see everyone. Thank you for coming. Thanks also to the people who organised the catering and clean-up afterwards.

The weather seems to feature a lot in my notes. This last month is no exception, the weather has been unpredictable and in the Akatarawa valley there have been two mornings where I have had to hose down the windscreen of the car to remove the ice - it was very frosty. So I am hoping this has had an affect on the wasp population. We have dealt to one nest in our orchard. The way we do it is to put a hose into the nest, compact the earth around the hose, and fill the nest with dishwashing detergent dissolved in water. This may not kill all the wasps but it is a start. We also fill the bottle attached to the water blaster with detergent and water blast the nest. The wasps don't know what has hit them and so they mill around rather than attacking the operator of the water blaster. We, and our neighbours, have also noticed a lot of wasps on our large compost heaps. We used vespex mixed with a small amount of compost and this has reduced the number of wasps dramatically. If you use this method you may want to bury the vespex infused compost in the ground rather than distribute it to feed your plants.

Speaking of wasps, I have thinking about the ongoing challenges to beekeepers in the Porirua area and wonder what wasp poo looks like - how does wasp poo compare to bee poo? I have it on good authority that it is very difficult to tell the difference. And where there are bees there are also likely to be wasps. On February 28 this year *The Post* carried an article where a Christchurch landowner sent a bill for having their windows cleaned of bee poo to a neighbouring beekeeper. In this case which went to the Tribunal. when the beekeeper moved the hives away the neighbouring landowner's house was no longer covered in bee poo. The beekeeper did end up paying something toward the cleaning of the neighbour's house although about a third of the original costs requested. All good. But what would have happened if the bees were moved and the house was still covered in "bee poo" and it was actually wasp poo?

Tricia

Photos from Frank's celebration - courtesy of Janine Davie

Frank and Mary-Ann arrive through the honour guard of hive tools

James Withington and Tricia in deep discussion

Karen Kos speaks at the celebration

Frank replies

Beautiful cupcakes with a bee theme

Frank and Mary-Ann cutting the cake

Mary-Ann with her flowers

The Lindsay family

And there's always some technological challenge....

Thanks, Janine, for the great photos.

Requeening – Frank Lindsay

Here in New Zealand most beekeepers requeen their hives in autumn as the Queens are better mated and are easier to introduce. Traditionally this was done with a mated, laying Queen , however, in recent years some beekeepers are putting in 9 day old queen cells. These are placed at the top of the brood nest and rely on the supersedure impulse to replace the queen. This method is very effective and can result in up to 80% of Queens being replaced successfully. There is an advantage to using this method as it creates a brood break, which makes varroa control a little easier. Mated queens are installed in all those that fail to requeen successfully – if queens returning to the wrong hive, queens lost for other reasons etc..

Varroa has meant lots of changes to beekeeping. There is a huge demand for good queens, yet most queen breeders are not making a very good living from it. With increased winter losses (15-30%) many beekeepers are now over-wintering nucs to make up losses. Nucs are introduced into a failing colony after the old queen has been found and removed.

So, the method recommended for hobbyist for requeening is to make a nucleus hive, introduce the new Queen into this and get her laying for a week or two before dispatching the old Queen in the failing hive and unite the nuc over the existing hive with two sheets of newspaper. The actions are deliberate and done at your convenience – no rush.
As an insurance against the new Queen not being accepted, another nuc could be made with the old Queen instead of dispatching her.

If you buy a Queen, it will generally be sent to you in a small plastic cage that contains attendants and hitherto the cage with the Queen and attendants would be introduced directly into the queenless hive. The hive bees would chew through the sugar plug sealing the cage and in the meantime get used to the new Queen pheromones and accept the Queen when she emerged. New research has shown that queen acceptance goes to 80% if the new

queens held in the nuc hive for longer than 26 days and you also get better acceptance if the attendants are not in the cage with the Queen.

Looking at books like SK and MP Johansson's "Some Important Operations in Bee Management" (1978) and CC Miller's "Fifty Years Amongst the Bees" no mentions is made of direct introduction of queens into large colonies..

Both these books recommend that beekeepers produce nucs, get the queen laying and then requeen by either uniting the nuc to the hive or taking the frame (and bees) the new queen is laying on and placing this into the hive.

Requeening in Autumn

Requeening at this time of the year can be difficult. Queens are produced when there is an ample supply of nectar and pollen coming into the hive. At present we are now into the robbing season with only a dribble coming into the hives.

To match the spring conditions you should feed the hive half a litre of 1 to 1 sugar/ water every third day but as this could cause your hives to be robbed, this has to be done in the evening after bees cease flying and even then, watch the hive next morning to see that robbing hasn't started.

I have just requeened a stroppy (defensive) hive with a new queen using a wire mesh push-in cage. This requires removing the old Queen, leaving the hive for five days, opening and inspecting each brood frame and removing any emergency queen cells so the hive is hopelessly queenless. Then adding the new queen in a pushing cage over a patch of emerging brood. This allows the queen to start laying in the cells under the cage. After five days, inspect the brood frames again for eggs as sometimes when requeening, the hive might have already produced a new queen and you just didn't see her. If none, check that the queen has already laid eggs. Then slowly lift off the cage and watch the reaction of the bees to the queen as she moves through them. If one bee jumps on her, she has not been accepted and should go

back into the cage again for another four days. The reason may be that now you have or had before, a virgin queen in the hive. Leave for another five days and inspect and then let her go. This time she should bulldoze her way through the bees without them reacting to her in any way.

A queen is not accepted by the bees until she is laying so if using a shipping cage to introduce her, it's very important to leave the hive alone for a week after the queen has been introduced to allow her to start laying.

More at the Beginners session.

Frank

Nuc hive

Paul Chapman – Pest Proof

Our speaker this month is Paul Chapman, from the company Pest Proof.

Paul moved to New Zealand from Lebanon. He founded Pestproof™ Pest Control in 2003 and then acquired Antman® Pest Control in 2012 and Fraser Pest Control in 2017. Paul has over 40 years of experience in pest management. He holds the NZ National Certificate in Urban Pest Management and is currently a Councillor at the Pest Management Association of New Zealand Inc. Paul was a regular guest Pest expert speaker on Radio New Zealand National.

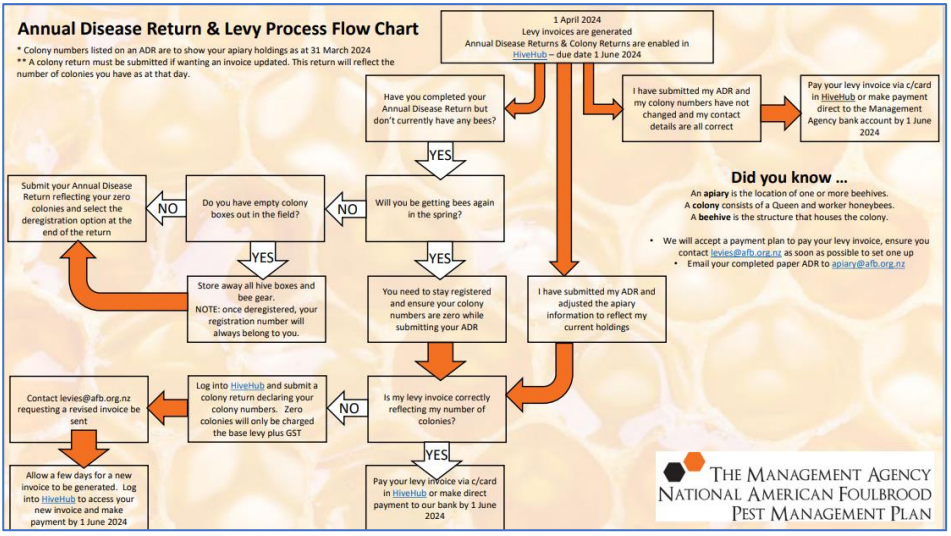
Passionate about the environment, the move to NZ was a natural fit.

Paul and his team report honeybees swarms to the Wellington Beekeepers association and the Wairarapa Hobby Beekeepers Club.

In his free time, Paul loves to look after his Fruit & Nut Grove in Masterton.

Annual Disease Return and Levy Process

The AFB Management Agency has prepared a flowchart to assist beekeepers to navigate the Annual Disease Return and Levy Process which starts in early April.



What's Happening Science-Wise – Varroa Feeding

We thought we knew what bee bits Varroa feed upon. But we only knew half the story.

By Phil Lester

Like most beekeepers and scientists, I thought I knew what Varroa mites eat. But a recent paper in Nature Communications has shown us how little we knew.

In 2019, some fantastic work by Sammy Ramsey and a team in the US showed that "*Varroa destructor* feeds primarily on honey bee fat body tissue and not hemolymph". This conclusion was convincingly demonstrated from a detailed analysis of mites feeding on adult bees. The mites were damaging host bees by consuming fat body, a tissue in insects that is roughly similar to our liver.

But it turns out that this work told only part of the story.

In a particularly impressive study, Bin Han and a team from China showed that the bits of bee consumed used by Varroa depends on the bee host's life stage. When feeding on adult bees, Varroa do feed on the bee's abdomen to consume to the bees' fat body, as reported the US group.

Importantly, however, when Varroa are feeding on honey bee pupae during the mites' reproductive stage in capped bee cells, they primarily consume haemolymph (or bee blood). This makes sense as the tissue of the bee pupae tissue during that stage are largely undefined and are being re-formed. It would be hard for the mites to access or eat any fat bodies from the pupae.

The Chinese team examined the wounds caused by mite feeding. They stained the mites with different chemicals to estimate haemolymph and fat consumed. And they analysed the various proteins seen in the parasite (haemolymph and body fats have different protein types). They conclude by proposing a life stage-specific food theory for Varroa. Adult Varroa feed mainly on the fat body of adult bees during their dispersal stage. But adults and mite juveniles rely primarily on the haemolymph of honey bee pupae during their reproductive stage while they are in the capped brood cells.

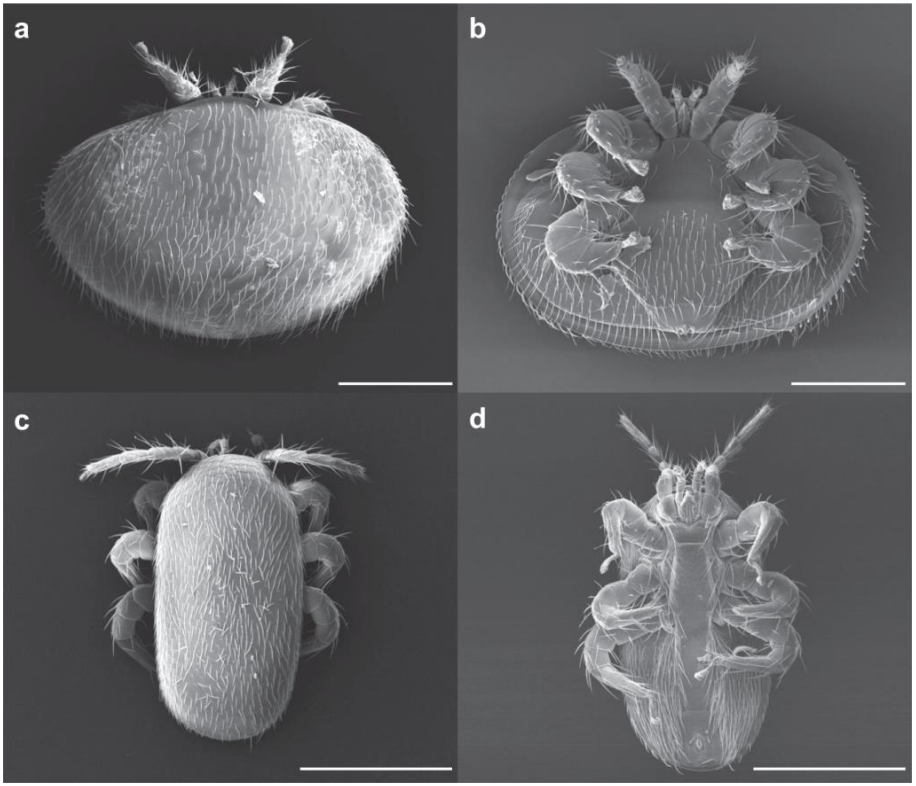
They also analysed the diet of the parasitic mite *Tropilaelaps mercedesae*. This is an emerging parasite worrying scientists and beekeepers around the world. They showed that this parasite also primarily consumes bee haemolymph.

This study improves our understanding of mite biology. It improves our knowledge and might be of special benefit for scientists searching for ways to find new control methods for these devastating pests.

References

Han, et al. 2024. Life-history stage determines the diet of ectoparasitic mites on their honey bee hosts. Nature Communications 15: 725. DOI: 10.1038/s41467-024-44915-x

Ramsey, et al. 2019. Varroa destructor feeds primarily on honey bee fat body tissue and not hemolymph. Proceedings of the National Academy of Sciences 116: 1792–1801. DOI: 10.1073/pnas.1818371116



Dorsal (a) and ventral (b) views of Varroa destructor compared to dorsal (c) and ventral (d) views of Tropilaelaps mercedesae indicate many similarities between the two ectoparasites despite the overall size and body shape differences. Both species have have expanded their host use to Apis mellifera and threaten honey bee health. All scale bars represent 0.5 mm. From Han et al. (2024).

Robbing

Most robbing of colonies occurs when nectar supplies are scarce and other bee colonies are desperately searching for food. This typically occurs during the autumn. During this time the Common and German wasps are often out in strength and these too can rob out the hive of both honey and brood.

To restrict robbing you should:

- Reduce the entrance of the hive to a width of 5 – 10 cm. Bees are better able to defend the smaller entrance from intruders.
- Ensure that when you inspect the hive, it is left open for the minimum amount of time.
- Do not leave burr comb, frames of honey or spilt syrup near the hive to attract robbers.

When you are near your hives, keep watching the entrance for unusual activity. Robber bees are very fast and aggressive in their attempts to enter the hive. If you notice this type of activity shut down the entrance to the hive completely for an hour and the robber bees may go away.

Some beekeepers use a robbing guard or screen, a device that is fitted on the front of the bottom box and forces bees exiting their colony to fly or crawl upward instead of flying straight out. Robbing bees and wasps tend to land on the flight deck of the bottom board (following the plume or smell of honey and won't figure out how to get into the colony).

Chartwell Apiary Field Day

Frank and I are planning to hold a Field day at the Club's Chartwell Apiary at 1pm on Sun. 7 April. All beekeepers (novice and experienced) are welcome.

Our primary objective is to insert new Apivar strips in all hives as it appears that previous treatment is not working.

We will also be checking on recently introduced new queens, upgrading bottom boards, installing robbing guards where necessary, replacing rotting or damaged supers and redistributing honey frames if required.

There will be some spare suits and gloves for members who don't have any.

Chartwell Apiary directions -
Turn off Churchill Drive into Chartwell Drive opposite new BUPA Crofton Downs Retirement Village. Drive about 1km up Chartwell Drive to Chartwell Reserve (on left after end of footpath and centre white line). Park at side of road and walk past Reserve boom gate and down 4WD track about 400m. Club apiary is on the left at the bottom of the track.

For any questions contact:
John Burnet
Ph. 0274-379-062

Club Services

A reminder to all members that the club offers the following services to members as part of your membership:

Extractor Hire. The Club has two manual four-frame extractors for hire. Cost is $20 per hire and hire periods are usually Mon - Thurs or Fri – Sun. Hire includes a cappings bin and tool, and nylon capping strainer

bags which allow you to spin the cappings themselves at the end of your extraction session. You will need to buy or borrow your own filter strainers and buckets. Full operating instructions are provided. Extractor bookings should be made to the Treasurer (treasurer@beehive.org.nz). Because each extractor stands over 1100mm in height and the legs splay about 700mm (width) to transport an extractor you will need a station wagon or hatch back with a wide opening door.

Varroa Treatments. Treasurer has a stock of Club-owned varroa treatment – currently Apivar ($50 for a 12 strip packet – four strips are required for the usual double brood box hive) or ApiLifeVar ($5 for a two dose wafer). Both these products will be available at the next meeting on Wed 3 April.

Tutin Testing. Treasurer is currently arranging tutin testing for $20 per sample. Free plastic screw top sample jars are available from the Treasurer for this purpose and samples are submitted to the lab in batches of ten for composite testing. If you are planning to sell or barter your honey tutin testing is a legal requirement. To date the club has this year submitted 30 samples from members and none have tested positive for tutin.

Extractor for Sale Treasurer has a used Chinese-made electric four-frame honey extractor for sale. Original price $750 – currently available for $350 (incl GST).

All enquiries for any of the above to the Treasurer – John Burnet Ph. 0274-379-062

What's Ahead in 2024

May - Beginners – Wintering Down
Main meeting – tbc

June- Beginners – Equipment Session, including using polystyrene boxes
Main meeting – Update on Varroa Research –

July- No beginners session
Main meeting – AGM and Photo competition. Winter Social

Who can I speak to?

President - Patricia Laing president@beehive.org.nz
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