Wellington Beekeepers Association
Support and encouragment of beekeeping and beekeepers
August 2021 Newsletter

August meeting | 4 August 2021
Where | Main Hall, Johnsonville Community Centre, Moorefield Rd
Editor| Jane Harding janeh@xtra.co.nz

Topics for the August meeting

Beginners session Upstairs meeting room 6.45pm
Topic:
Doing a spring check, spring feeding, doing a queen check – Frank Lindsay

Main Meeting In the main hall at 7.30pm
Topics:

Finn Dollimore of Mana Propolis will be talking about propolis and its uses.

Please remember to scan the COVID-19 barcode at the door or put your name on the register.

Many thanks!

Contents

From the President

Firstly, thank you for those of you who attended the clubs AGM last month, and those of you who stood for officer holders' positions and to be part of the committee. As you can see, I have been re-elected again to be the clubs President. Thank you all for your support and I will work one reducing the number of dad jokes during the meetings, maybe.

With the reduced number of attendees at last month's meeting the majority of you won't have seen the new screen that has been installed in the Johnsonville Community Center. You will also see when you arrive that we now face the southern wall. The size of the new screen means you can forget your glasses when attending and still see everything. Special thanks to Tony, Frank and Bob the builder for assisting with the install.

Onto the matter of bees, our winter of warmth seems to be continuing which is causing a few problems in the hives. Firstly, the varroa mite levels. Due to the unseasonal warmth hives continue to have a number of frames of brood with the queens not really slowing down. I have observed a lot of pollen

coming into the hives which supports this theory. The downside is that varroa continues to have brood to lay their eggs in. I urge all beekeepers when the weather enables, to look at your hive and treat with formic or oxalic acid to knock the numbers down. I have heard of a lot of hives, including my own that have succumbed to varroa already this winter. There seems to have bee high number of reinfestation rates despite treatments earlier in the autumn.

Secondly with the hive being so active, please check your food stores, weather also pending. I have found that with the large winter population remaining in the hive, plus the brood rearing the bees are getting through more stores than anticipated. I think the bees are as confused as you about eh seasons as just last week I saw in Porirua several Pohutukawa trees in flower in the middle of July.

A reminder please that members sub were due last month, so if you have not already renewed you either jump online and complete this or see John Burnet at the next meeting.

We are also looking for volunteers to help Barbara out with the suppers roster for the meetings. This is not an arduous task but one where Barbara would appreciate some help. Speaking of baking it was a great to see the baking efforts last month with some people making a fantastic effort, such as Eva who made individual bee biscuits.

Last month's meeting saw Kelda from Rita Café come along and discuss cooking with honey. Some of the tips she gave about balancing her meals between sweet and savory had most people there suddenly start to feel hungry. This was exacerbated when she posted photos of her famous nine-layer Russian Honey cake which she failed to bring along for us to try. Guess

it just gives good reason to go and visit her café on the weekend and purchase yourself one.

At this month's meeting we will have a presentation from Finn Dollimore, who has a small business here in Tawa, using wax products. He will speak about the science of propolis and his experience of using it.

I now have a copy of the keynote speakers' presentations from the ApiNZ conference which I will include in upcoming meetings. These are presented by overseas experts and a number of them center around the varroa mites.

Some of you will be aware that the Kapiti Council are looking for submissions for the keeping of bee on the coast, if the deadline hasn't passed already made sure you put something in otherwise you face the possibility of non-beekeepers impacting on the new rules.

https://haveyoursay.kapiticoast.govt.nz/review-of-the-keeping-of-animals-bees-and-poultry-bylaw-2010/survey_tools/review-of-kapiti-coast-district-council-keeping-of-animals-bees-and-poultry-bylaw-2010

By now you will be wanting to read the rest of the exciting bits contained in this newsletter, so thanks for you time and we will see you at the meeting.

August Guest Speaker – Finn Dollimore

Finn Dollimore runs a company called Mana Propolis and he is passionate about propolis and its benefits. Finn will talk about the science behind propolis, what his company does and how this can benefit people.

A Little History and some Information on AFB – Frank Lindsay

When I started beekeeping in 1970 there were about 40 members in the WBA.

There were only three beekeepers in the Johnsonville area. A fellow with 10-12 hives in Middleton Road where the reserve is now on the corner of Silverbirch Road on the flat area above the creek. Churton Park was a farm in those days. There was another beekeeper in West Johnsonville and the third in Philips Street. The beehives were down the bottom of his half acre section at the end of a big veggie garden. I remember attending a field day there.

At that time there was an increase in new members and a lot of us newbies attended a live-in weekend at the Massey University run by Ted Roberts our MAF District Apiary Advisory Officer and Kerry Simpson and others. We had lectures and visit to a very nicely setup hobbyist honey house. Found the fridge in the hostel full of beer and thought how generous of the University to supply us with this at the end of the day. They hadn't, it was some student's beer we were drinking.

Joe Bodman had been the club's President for thirty years and the club was full of old men. They went through the basics like requeening with the paper bag method. *Get a lolly paper bag and put 20 odd pin holes in it. Half fill the bag with bees scooped off a frame and shake then so the were disorientated and stayed in the bag. Allow the queen from the cage to enter the bag, fold over the top and shake for 30 seconds to put the hive smell on the queen, then pop the bag between two frames of brood. The bees chewed their way out in about ten minutes and the queen was accepted.*

However when you asked any other question, the answers was "you'll find out. A lot of us younger ones were frustrated with this and asked at this weekend camp what we could do. Vote them out at the AGM was the answer and to their astonishment, that's what we did.

We introduced a number of new more inclusive things like club picnics for the whole family and more field days and streamlined the meetings. I became the club secretary and newsletter editor. All typed up and printed on a gestetner. The foolscap paper was folded in three, staples and posted.

To obtain bees one was usually given a hive, or you went out and cut a feral out of a tree or removed it from the wall of a house. Mine came from the Home of Compassion in Island Bay. There were four hives beside the swimming pool and a child had been stung so this hive had to go. It had a concrete base, super and lid with a sheet of pinex under the roof for insulation. It lasted a few years until the base broke and is now buried in the garden somewhere.

American Foul Brood

In the 1990 the club started doing diseaseathons to find and eliminate AFB from the Wellington area. Teams of four with an AP2 as lead, would inspect all the hives in an area. The club supplied all the disinfectant, brushes and buckets, etc. At that time AFB was in the Pauatahanui area, (we found the source at the top of Bradey Road in abandoned hives), in Belmont and Normandale (we never found the source but beekeepers burned a few hives each year) and in Wainuiomata down the Coast Road in some hives and a feral in a tree nearby. I can't remember what we did in Upper Hutt but it had been a hot spot for a few years. None in the Wellington city area itself.

The Wellington area was mostly clear of AFB after about three years but in the last 10 years, AFB has returned with the influx of commercial hives chasing manuka. It hasn't helped that there are hundreds of dead feral nest sites out there which a swarm can find and if it gets AFB, the area will remain a hot spot every time a swarm established in the cavity.

It's very upsetting when you are told to burn your pride and joy and some members took this quite hard, quitting beekeeping. That was the reason we started the AFB fund, to get a beekeeper back into bees again.

Today through scientific research, we now know that AFB can spread at least one kilometre by the time visually clinical signs are seen in a hive. AFB spores can remain in a hive for up to three years before something stresses the hives and clinical signs show. The sort of things that can stress a hive are during the spring build up when conditions are poor (storms, shortage of pollen, etc.) or when hives are split into say five nucs. This is why it's so important to visually inspect each frame during the spring build-up (Late September to October).

Today thanks to Prof Dr Phil Lester PhD students we know there are three variants (Enterobacterial Repetitive Intergenic Consensus (ERIC) sequences of this disease in NZ which initially show differently.

ERIC I which kills the larvae in 12 to 14 days but there is another, ERIC II which kills the larvae in 5-6 days.

ERIC I exhibits the classic signs we normally see but ERIC II can manifest it's self initially as spotty / patchy brood. I.E. the bees clean up the dead larvae so that it doesn't show clinically. Change the queen and if the spotty brood persists, send some bees into a lab to get tested.

It is only when the hive becomes stressed, when it cannot control the disease, that the clinical signs in the form of ropey pupa show.

So what can we do?

The pictures portrayed in most books on AFB generally mean that it's been in the clinical form for at least six month or more. We want you to find it before this stage.

Know what healthy brood looks like under the capped cells

Check the books and look at the different stages of a developing pupa. From white to purple eyes and then the final moult when the bees are dark just before emerging.

Day 13 pupa forms, eyes and body white

Day 14 eyes pink

Day 15 eyes lilac

Day 16 eyes purple body begins to turn yellow

Day 17 eyes dark purple

Day 18 body begins to brown

Day 19 6th moult – casting pupal skim

Day 20 adult formed, antenna darken, wings extended

Day 21 adult bee emerges

When Inspecting a hive, it's very important to look at the capped brood around the patch of emerging brood. Take the hive tool and gently scrape of the cappings of 20 to 40 capped cells and look at the pupa underneath. If you do not damage the head of the bee, the bee will emerge normally. If you do, it will be one of the thousand bees that die each day.

Look to see that the developing bee has a pupal skin. Especially check any pupa that are off-white or darkening. Gently touch the larvae with the tip of the hive tool or a tiny stick. The skin will present some opposition.

The bacteria of American Foul Brood produces a proteolytic enzyme that assists the bacteria to dissolve the protein in the larvae. This also produced the sticky glue that causes the ropiness and why scale when the diseased larvae dries out, sticks to the bottom of the cell. This enzyme also dissolves the pupal skin. No other bee disease in NZ dissolves the pupal skin. Look at

sac brood, the skin becomes hard and rubbery. Chalk brood remains as a mummy.

What makes AFB harder to diagnose? High levels of Varroa Mites can cause similar looking problems in the brood but the pupa should maintain its skin.

The loss of the pupa skin will be the first sign of the disease

If the larvae is turning brown then for conformation, by a kit or do the Holst Milk Test. Randy Oliver has a YouTube:
https://www.youtube.com/watch?v=eTc5gK129-Q

Holst milk test for AFB

*The test is conducted by suspending a suspect scale or **a smear of a diseased larva** in a test tube or glass vial containing 3 or 4 ml of 1-percent powdered skim milk in water.... The tube is then incubated at 37° C. If AFB is present, the suspension should clear in 10 to 20 minutes. (from Wikipedia).*

What follow-up action can the beekeeper apply.

The MPI pathogens programme found that we only have AFB spores in inficted hives. the vast majority are free of AFB spores. If you are notified by the AFB Manager that AFB has been found within 3km of your hive, you should adopt an apiary quarantine system. I.E. mark all hives with a number or code and the honey supers and frames that come off that hive go back on that hive for the next three years. Any nucs made should have the original hives number and a prefix for easy traceback. Every time you open a hive, check a frame of emerging brood for disease by flicking off a few capped larvae.

Beekeepers should also be changing 30% of their brood frames each year as normal maintenance to keep their hives relatively free of pesticides (varroa treatments contribute the most but gardeners and council contractors spraying may also contribute), and viruses spread by varroa at a low level. This action will also remove any AFB spores if they have been secreted into the comb by developing pupa in the old dark frames.

Dead-outs

Hives die during the winter through viruses caused by high mite numbers (they cannot thermoregulate) or starvation, however they may also have AFB present.

Signs of starvation: clump of bees with their heads in the cells.

High mite levels: Brood half emerged with the proboscis (tongue) sticking out of the cell. Cells with holes in them with small shrivelled pupa inside.

Investigate the pupa in any capped cell with a hole in it.

If you are not sure why the hive died, bring a frame of brood into the meeting wrapped in newspaper and we'll try identify the problem.

Photo Competition at the October Meeting

Reminder to everyone that the club photo competition will be held at the October meeting. There are four classes of entry:

Bees
People and environment
Open / creative
Photo story (a sequence of four photos)

So get out there with your camera or phone and start snapping! Upload your photos here https://www.beehive.org.nz/photo-competition-upload/

The competition rules can be found here https://www.beehive.org.nz/photo-competition-rules/

Book Review from Judith de Wilde

The Honey Bee

Understanding the Ultimate Engineer

David Cramp – published Australia/New Zealand 2020

The first two chapters introduce the reader to the human impact on our environment and the alarming rate of insect decline. The third chapter is when this exceptional book really came to life for me.

Beekeeper David Cramp takes the reader on an amazing complex journey, exploring the origins and evolution of honey bee and man's interactions, including some of the bizarre practices of our predecessors. Cramp talks about the egg selection process, cast development, the life of the Worker, Drone and Queen bees. There are extensive explanations on various pheromones and the roles they play. How the colony behaviour is controlled by the collective is discussed.

There is an enormous wealth of information in these pages.

Cramp takes an extensive look at genetics, why variation is vital for survival. This gives a clue into why the Queen must mate so many times. There is a fascinating look into why the sterile female worker works so selflessly to fulfil the needs of the colony. Explore the sub-family groups within the hive. It is interesting to learn that research has shown that bees know their own paternal sub-groups. When a colony becomes Queen-less, workers will select larvae from their own sub-family group to raise as the new queen, thus promoting their genetic lineage.

The text is full of titbits of interesting facts like;

- On average nurse bees will check a single larvae 1300 times in one day
- Wax Scales are about 3mm across and 0.1mm thick and about 1,100 are required to make 1 gram of wax.

Many questions are answered, like;

- Do bees sleep?
- Why are cells engineered hexagonal?

Cramp teaches the reader about the sophisticated communication and navigation systems of honeybees. They really are very intelligent insects. Honeybees know left from right, understand the concept of zero, can count up to four, can memorize landmarks and have neurons in the brain that detect speed and direction. The potential of magnetoreceptor cells in the abdomen is introduced. Honeybees have special vision allowing for navigation even in cloudy conditions. The forward-facing section of the eye, being used for analysing flowers' colours and patterns, are descriptively detailed. This leads onto a discussion around the relationship between pollinators and flowers, and the incredible evolution both have undertaken. It would appear that caffeine is a good selling point in the nectar-bee world too.

There is no underestimating the significance of this special relationship between flowers and pollinators, and its importance to the environment. The myth that humans will starve (die) without bees is corrected. Cramp reminds us that the 12 main crops which supply nearly 90% of the world's food do not use bees for pollination. But he reminds us in great detail that most flowering plants do. 80% of all plants are flowering. Whilst most flowering plants are not human food crops, most of our natural ecosystems are flowering plants. Life on our planet does depend on flowering plants and their pollinators - the bee, of all types.

> *There are 7 species of Honeybee, 250 species of Bumblebee, 300 species of stingless bees and over 20,000 species of solitary bees.*

David Cramp wrote this book so people could learn about the ultimate wild engineer, "the honey bee", as a starting point to knowing more about Nature. He has done an incredible job. He does have a propensity to wonder off subject occasionally but the interspersed personal anecdotes are delightful and wonderfully spaced. His story of transporting bees over the Pyrenes had me laughing so hard, it hurt my sides. These anecdotes and side drifts into other insects/creatures give the text a personal touch and a connection with the reader.

I'd like to finish with a special quote out of this book, originally from Albert Einstein

"We cannot solve our problems with the same thinking we used when we created them"

This is a fascinating read. I highly recommended it.

Five Stings

Review of the Kapiti District Council Keeping of Animals, Bees, and Poultry Bylaw 2010

Many of you will be aware that the KDC is proposing to introduce a licence requirement for beekeepers in the Kapiti District. WBA has submitted to the review in opposition to this proposal, along with ApiNZ and others. We hope that the combined voices of the submitters will dissuade the KDC from introducing a licence requirement.

Dutch honey bees resistant to varroa mite imported to Australia to help guard against the pest

We'll be watching with interest this development from across the ditch. Australian queen bee breeders are importing new queens from The Netherlands and artificially inseminating them in an attempt to breed varroa resistant bees. The queen bees are progeny bred in the Netherlands.

They're the first successful importation of bee genetics into Australia in 15 years.

The queens have been developed by Dutch apiarist JanBart Fernhout, who's prized queens were killed by varroa mites. Enlisting the help of amateur beekeepers across Europe and joining forces with American entomologists, he identified then selectively bred bees which, through fastidious hygiene, could counter varroa.

Australia doesn't have varroa, so Australian apiarists are very keen to do everything they can to keep it out.

We wish them the best of luck!

Supper helpers wanted!

Barbara, our super organised supper maestro, would appreciate some help from time to time in the kitchen and with the supper. Go and introduce yourself and find a slot that you can help with in the supper roster.

Next Meeting

Our next meeting will be on September 1st.

September is Bee Awareness Month, so we'll have information about what's happening in Wellington for BAM.

Tricia Laing will also be demonstrating skin care products made from beeswax.

Who can I speak to?

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Meeting location

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