

Townsville and District Beekeepers Association (Inc.)

www.beesnorth.com.au



PO Box 1115, Aitkenvale QLD 4814

Newsletter No 7, July 2019

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Next Meeting:

Annandale Community Centre

2:00 pm, Sunday 21 July

[Annandale Shopping Centre, 67 - 101 MacArthur Dr.](#)

Annandale, 4814

Bring a chair – and a plate of arvo tea if you can
Coffee, tea, milk, cups, conversation etc provided free

Varroa Tick... The Beekeepers' Nightmare

By Dr John Hill (British Bee Veterinary Association) and Dr John Carr (James Cook University)

Invasive species can cause havoc to the new environment that they happen to fall into. None more so than the movement of a small maroon coloured tick called *Varroa destructor* or *Varroa jacobsoni* on to the western or European honeybee, *Apis mellifera*. The tick was believed to be a mite, but further analysis indicates that a tick is a better biological designation for Varroa. They belong to the spider family of arthropods, whereas the honeybee belongs to the insects. So the tick has 8 legs and no wings whereas the honeybee has 6 legs and wings.

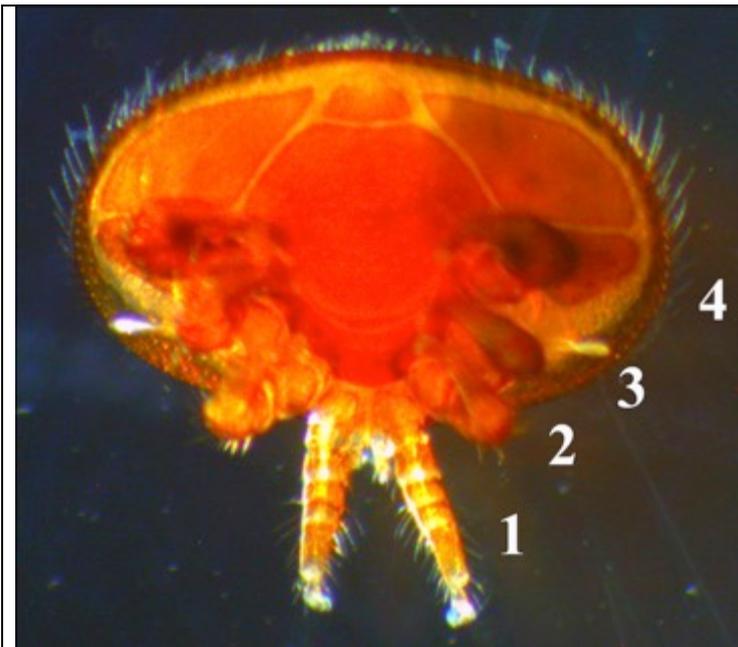


Fig 1. Varroa tick down the microscope counting their legs



Fig 2. Varroa tick on the thorax of the honeybee (UK)

There are many ticks and mites that infest the enormous bee family, but only a few are pathogenic. Our story begins with the eastern Asian honeybee called *Apis cerana*. This is a smaller, more hairy bee to *A. mellifera* and has a slightly shorter life cycle. Colonies of western honeybees have been moved round the world because of their fecundity and good honey production. Many colonies came to the Far East and entered into the *A. cerana* environment. At some point, about 50 years ago, a mutation took place, possibly in Korea, and the Varroa tick was discovered to have jumped species to *A. mellifera*. It was then named *Varroa destructor*; which proved to be an appropriate name. *Varroa destructor* has spread round the world very rapidly and is in all countries except Australia. But the original *Varroa jacobsoni*, can still infect *A. mellifera*. There are only very subtle differences between these two species of tick.

Apis mellifera have little natural defences against this tick. It has less hair and a longer life cycle and less grooming behaviour than *A. cerana* which all favour the tick. Varroa has an oval shaped carapace and is approx 1.8 x 1.4 mm, about the size of a written full stop. Follow the blue arrow to see the Varroa on the carapace of the worker bee in the photo.

The Varroa tick sucks and feeds on the bee's fat bodies and associated haemolymph blood. Ticks parasitise both the adult bee and the developing pupa. It is large in relation to the size of the bee. In fact one of the largest parasite to host ratios in nature. If a bee was the size of a human, the tick would be the size of a dinner plate crawling over you, sucking your blood and injecting you with viruses. The tick is amazingly adaptable and is even capable of changing the biochemical structure of its carapace to match that of its host so as the bee does not recognise the intruder as foreign.

Lifecycle of the Varroa tick

A worker bee starts off as an egg for three days, hatches into a larva, which grows rapidly until day nine when the cell is capped over with wax. The larva changes to a prepupa and then pupa, and then undergoes metamorphosis changing into an adult worker bee and emerges fully formed at day 21. The drone has a similar cycle, but longer by three days and emerges at day 24 after the egg stage. The queen develops only in 16 days.

The life cycle of Varroa is closely linked to the lifecycle of the bee. An adult female Varroa tick enters the honeycomb cell just before it is capped. The tick immerses itself in the pool of liquid feed at the bottom of the cell, which the larva feeds on. In order to avoid detection by the nurse worker bees, the Varroa covers itself. It does not drown because it has an appendage called a peritreme, which acts as a snorkel allowing it to breathe. When the cell is capped with wax, after waiting 4 hours, the tick moves about, defecates and begins to feed on the developing bee prepupa. It punctures the pupal skin with its powerful mandibles. This feeding site is set up to allow her and her offspring to feed. The puncture wound stays open and does not heal. After 60 to 70 hours the tick lays her first egg, which is always male. Each 30 hours after that she lays a female egg. The male mates with the females within the capped cell. This is an inbred system with brother mating with sisters. This is a common strategy in many mite and tick species. The developing tick goes through two juvenile stages, protonymph and deutonymph before becoming an adult. The nymph stages can be difficult to see as they are white, the same colour as the developing bee pupa. The time required from egg to fertile adult for a male is 5 to 6 days and 6 to 7 days for a female.

The female ticks must be fully formed by the time the adult worker emerges at day 21. Any immature females and the male die when the adult bee leaves the cell. The mother and new mature daughters move out of the cell and enter a new cell to find a new larva.

Varroa ticks favour drone cells as the life cycle of drones is 3 days longer than workers. The drones secrete a pheromone, which is attractive to Varroa who will preferentially move to a drone cell. Varroa ticks have a predilection for drone brood.

Why should a drone development cycle, which is only 3 days longer than a worker, be so beneficial to the life cycle of the tick? Research has shown that on average 1.45 adult viable ticks emerge from a worker cell on day 21. The average number that emerges from a drone cell is 4.15 ticks. All these ticks continue into new cells to start the breeding cycle again.

- After five cycles, the number of ticks from worker cells is $1.45 \times 1.45 \times 1.45 \times 1.45 \times 1.45 = 6.4$ ticks.
- After five cycles, the number from drone cells is $4.15 \times 4.15 \times 4.15 \times 4.15 \times 4.15 = 1230$ ticks

It is clear to see that drones cells favour the greater production and survivability of the tick. But as there are many more workers the development from workers can overwhelm the hive. It is interesting that the developing queen cycle at 16 days is too short to even develop one mature female tick.

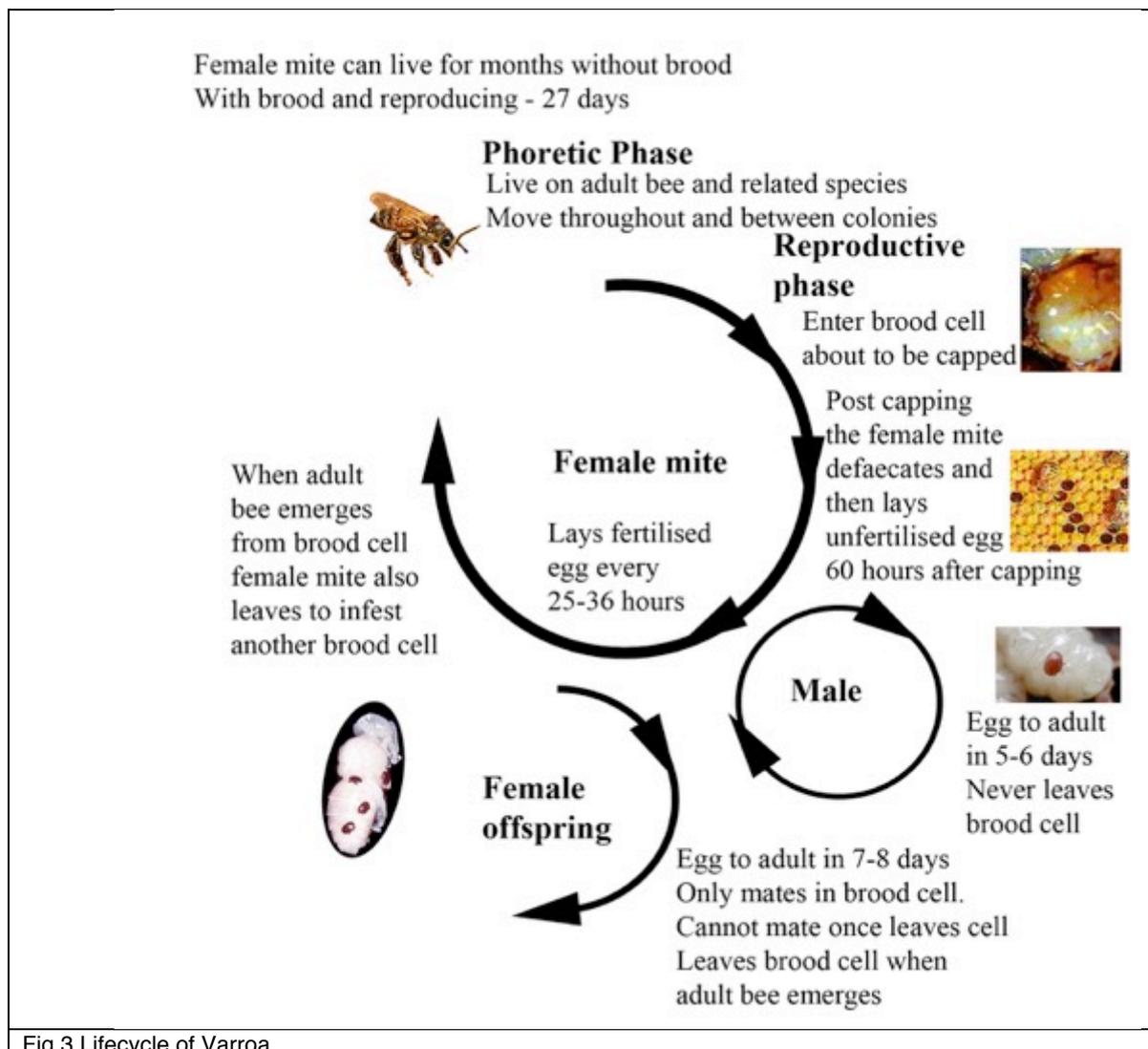




Fig 4. White nymph tick



Fig 5. Emerging adult female tick

The Eastern honeybee, *A. cerana* (or Asian honeybee – AHB) has a shorter life cycle and fewer ticks are produced from the female workers and this is one of the evolutionary factors that allowed it to tolerate *Varroa jacobsoni*. This is also true for races of *A. mellifera* in Africa. During summer, the ticks live about 2-3 months and can therefore, potentially complete several lifecycles. Winter ticks live much longer on adult bees. The ticks will live on the adult bees and are known as phoretic ticks.

Impact on the honeybee

Ticks have adverse effects on the individual bee, and adverse effects on the colony. Individual bees suffer from having loss of body fat and haemolymph, but will have some resilience if infested with only one tick. If compromised by several ticks then they will be weakened, have lowered resistance and have a shorter life span. Varroa ticks spread viruses, which are injected into bees in vast numbers at the bite wound. The most common virus is called Deformed Wing Virus (DWV), which leads the adult to have shrivelled wings and unable to fly. The appearance of the deformed wings (follow blue arrow) in your bees might be an early sign of infestation, and should be carefully monitored. Many other viruses can be associated with the Varroa tick.



Fig 6 Adult worker bee with deformed wings (UK)

Colonies are affected by the exponential rise in tick numbers. If ticks are not checked then there will be many more ticks than bees in the autumn and the colony can be overrun and collapse rapidly in a few weeks, even for what outwardly seemed like a strong unit. A dwindling colony poses a threat to neighbouring colonies because many bees may abscond from a weakening hive and enter these hives and take the Varroa with them. Drones are much more able to drift into adjoining hives as they are more readily accepted than drifting workers.

What would be the signs of colony collapse? There would be a sudden reduction in the adult population. There would be many bees with deformed wings and stunted abdomens. It would be possible to see phoretic ticks on remaining workers and drones. The brood pattern would be poor with patches of dead brood discoloured and remaining bees trying to remove them. Once established, Varroa ticks become ubiquitous and they are impossible to eradicate especially as their life cycle is so closely linked to the bees' life cycle. There are many treatment strategies, which will be covered, in future articles if required. At the moment the main issue is to monitor and immediately report any suspicion of a Varroa tick in your hive.

Monitoring protocols

At this early stage of the monitoring programme we want to encourage more observation.

Icing sugar test

A humane welfare friendly approach to monitoring is the icing sugar dusting test using a 1/8" (3 mm) filter. The filter allows the brown ticks who fall off the honeybee to be visible outside the filter. This can be enhanced by spreading the icing sugar from the filter onto white blotting paper.

Technique

Obtain a magnifying glass.

Filter 1 teaspoon full of dry icing sugar – through a tea strainer. This is to remove lumps

Obtain or make a suitable filter for Varroa checking

Put the Varroa checker above the central frame in the brood box.

Place/brush or shake about 300 nurse bees (one side of a frame) into the container with filter.

Try to avoid the queen!

Add about 1 teaspoon (5g) of icing sugar to the bees in the container

Gently but forcefully roll the container around so the bees are well covered.

- Roll and gently shake for 3 minutes.
- All the test bees to rest for another 3 minutes.
- Rolls and gently shake for another 3 minutes.

If Varroa ticks are present some will fall off the adult bees and will pass through the filter.

Return the icing sugar covered bees to the top of the brood frame.

The bees will quickly clean themselves up.

Examine the icing sugar for any signs of brown specks.



Fig 7 Collecting bees into the Varroa test container.



Fig 8 Returning the icing covered bees to the hive

Open bottom brood box

If you have an open bottom brood box, it is easy to monitor for Varroa by examination of the hive debris. But as yet these are uncommon in Australia.



Fig 9. Varroa ticks in the hive debris a magnifying glass helps see the ticks

What to do if you think you see a Varroa tick

Before finding any problem:

- Write down your GPS location when you set up your hive
- Note the phone number and email address of your local bee inspector and veterinarian
- Notify BeeAware that you have bees.

When there is the suspected problem:

- Photograph the tick.
- Place the tick and associated icing sugar into a jam jar and replace the lid tightly.
- Place the captured tick into the fridge. This will stop the trying to get away.
- Put the hive back together.
- Phone the bee inspector or your veterinarian.
- If you suspect your bees have been affected, telephone the **Exotic Plant Pest Hotline** on **1800 084 881** or **Biosecurity 13 25 33**
- Email the photographs of the suspected problem.
- Do not seal the hive. This allows the flying bees to return to the hive. If the bee inspector has not arrived by evening, once all the forage workers have returned home, block the hive entrance. This uses the fact that bees do not fly at night. However, if the bee inspector has still not arrived by morning, ensure that the hive remains sealed in the morning.
- Do not allow others beekeepers or interested parties to come and inspect the hive.
- Do not remove anything from the whole apiary site including your clothing and equipment.



Fig 10. After dark seal the entrance to the hive

References

We recommend all readers download the pdf:

Biosecurity Manual for beekeeper Plant Health Australia. 2016

<http://beeaware.org.au/wp-content/uploads/2019/05/Biosecurity-Manual-for-Beekeepers.pdf>

Other resources

TED presentation which also shows the Varroa tick:

<https://www.youtube.com/watch?v=6-tqiaPoS2U>

Managing Varroa APHA, DEFRA

Guide to Bees and Honey. Hooper, T.

Honey Bee Pests, Predators and Diseases. 3rd edition Morse and Flottum

Honey Bee Veterinary Medicine. Vidal-Naquet, N. (2015)

Managing Bee Health. Carr, J (2016)

Ed's Comment: Many thanks to John H and John C for preparing this article for the Club. The recent detection of another Varroa and Asian Honey Bee incursion to Townsville should be a big wake up call to all members to **start/continue** monitoring our hives – do the sugar shake!!!!

AFB is back in town – be a responsible beekeeper and deal with it properly

We have been notified of AFB positive hives in Roseneath, between Wulguru and Oak Valley, and Jensen to the North of Townsville.

AFB can affect your hives at any time, so you should always make sure you regularly inspect the capped brood in your brood box. Every 6 – 8 weeks for a brood check is recommended to check for AFB, EFB, Chalkbrood, SHB, and wax moth. If you're not sure of what these pests and disease are, have a look in the "Australian Beekeeping Manual" under pests & diseases. Biosecurity Qld have a good publication with large colour photos of these problems, and the Club can hand these out to new beekeepers. Alternatively, reach out to another Club member to come over for a hand, and get an extra set of eyes on to the issue.

I would advise members with bee hives in the Wulguru / Roseneath / Oak Valley and Jensen/Deeragun areas to do hive checks within the next 2 weeks. Sample testing for AFB is free to all registered beekeepers. AFB positive hives must have all the bees and equipment destroyed or sterilised, timber hives can be burnt and buried to depth of at least 300mm or gamma sterilized in Brisbane at your own cost. Remember AFB is a notifiable disease to DAF.

With the proceeds of the sales from the Club shop, and the fantastic support of a couple of Clubbies, we have built our very own trailer mounted, mobile steriliser that will treat infected boxes and empty frames. Sorry folks but the bees have to be killed and burnt, and the wax and honey removed before sterilisation. This process is available to Club members and we offer our free support to any Club member afflicted by AHB, just ask the Committee members or write to: <mailto:info@beesnorth.com.au>. Please check with the Club about availability.

Regards
Alan Ziegenfusz – Secretary of TDBAI

AHB and Varroa are also back in town...

Bee keeping jobs in Townsville.....not something you see everyday

The National Varroa Mite Eradication Program is quickly approaching the point where we expect to be engaging additional contract staff for future program work. We were hoping to offer this **opportunity to TDBAI Club Members** with their unique skillsets as an early option. This work includes:

- Capable to walk extensive distances daily to,
 - Observing floral and bee activity in various weather conditions
 - Preference to non-bee sting allergies or is known must advise prior to commencement of employment
- Ability to work with field based IPads for field based data recording techniques,
- Capable of working flexible working hours daily
- Capable to work 35 hours per week

Interested members can register their interest with AWX via phone on 07 4417 7300, email on Townsville@awx.com.au or by the following the below information directly from AWX:

The registration process is as follows:

Once you have finished this, please call us on 4417 7300 so we can go through and ensure this has been filled out in full.

Can you please go to www.myawx.com.au and register your details with us, you will need to have bank details, tax file number, emergency contacts ect to complete the registration.

*****Once you have created your user name and password, the program will then say that you will receive a verification email. If for any reason you do not receive this you will NEED TO CALL AWX on 4417 7300 for one of our Consultants to activate your details for you.**

I have also attached the following forms:

- AWX Sunsuper Form – Please fill in with your member number or super fund you want super sent to and send back to me
- Online registration help sheet
- Candidate clocking instruction manual – Will give details once you have registered

So we can ensure your profile is complete. Please send back a copy of:

- Drivers Licence
- White Card
- Any additional Licences / Tickets you obtain
- Birth certificate and / or Passport
- Updated Resume

**Please ensure these are clear, colour photos / copies. Front and back if applicable*

The following Personal Protective Equipment (PPE) is required:

- High visibility, long sleeve shirt
- Long pants
- Steel cap boots
- Hard hat
- Snap brim or Wide brim hat
- Safety glasses
- Gloves
- Glove Clips

**PPE, (excluding pants and boots) are available for purchase at the AWX Office*

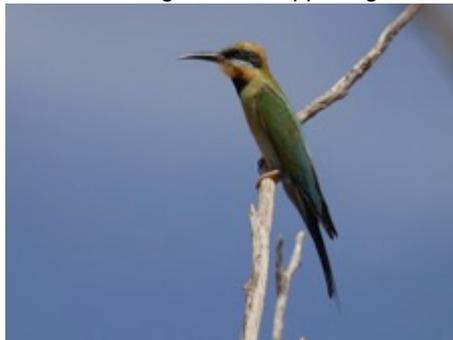
Please note and read carefully: Pay days are processed on a Wednesday (you are paid Thursday morning, unless you provide your Timesheet late then you will be paid Friday afternoons) a pay slip will be emailed to you on a Wednesday (please check junk folder in case it goes there) Our pay weeks run Monday to Sunday! You must add your hours into the Time target system daily or at the end of every week in order for us to pay you! Any questions please call our office!

If you have any issues please give the AWX office a call

The Bee-eaters are back!

From John and Frana McKinstry

After a quiet year last year, the bee-eaters are back. Last night we saw about 20 – 30 coming in to roost in our neighbours' big tree. It looks like the annual migration is happening and we can expect the birds for the next month or so.



We found that hosing them with a strong jet of water will make them fly off when they see us. It only helps for a little while or when we are in the front yard. The bee-eater is a very pretty bird and is easily recognised as it looks like a kingfisher but with a pintail feather. They also have a very distinctive call.

Why should we recognise these birds and dissuade them from hanging about our beehives? Because they can each eat several hundred bees per day. Now we have enough on our plates with the hive beetle. It would be nice to be given a bit of slack from the natural world.

Ed's comment: But please remember folks, that the recent incursion of AHB and Varroa was detected by monitoring the regurgitated stomach pellets from Rainbow Bee-eaters. These birds are very effective and graceful at plucking bees on the wing, and they have been used during the previous 2 ½ years to detect the presence of the invading bees carrying Varroa. Don't scare them off too much.

Elephants & bees

Sent in by Iain Gordon

We have all heard the tales about elephants being scared of mice. We know something else is keeping those elephants awake at night, and they are smaller members of the animal kingdom, they go buzz and their helping poor farmers in Africa. Of course, I am talking about bees. I have worked with local communities in Africa who live next to National Parks; they live in fear of marauding elephants that come out of the Parks at night, to crop raid, break into grain (mainly maize) stores, destroy homes and even kill people. No wonder many Africans, living in rural areas, do not like elephants. In the past people have set night watchmen to alert their village when elephants are near and people have scared the elephants by banging on drums, waving flags, using fire and even resorted to using pepper spray. These encounters with elephants did not always end well for the villagers.

Now, the humble honey bee is coming to the rescue. Many villagers in Africa, e.g. in Kenya (<http://elephantsandbees.com/>) and Zimbabwe ([The Elephants of Gorongosa: An Integrated Approach to Conservation and Conflict Mitigation in the Shadow of the War](#)) have been encouraged to become beekeepers. Elephants appear to be scared of bees, the story is that they get into and sting their sensitive ears, trunks and mouth! They particularly don't like swarming bees (<http://elephantsandbees.com/elephant-behaviour-elephants-bees-media-library/>). By putting up beehive fences the villagers no longer have to risk their lives scaring away elephants, the bees do it for them. In addition, there is the added benefit that the honey is a valuable nutritional supplement to the villagers' grain based diet, and they can sell it to tourists and folks in the city. A "Win-Win" for the villagers but not necessarily for the elephants.

Ed's comment: Having been stung on the inside of my nose recently, I can only speculate what it might feel like getting stung when you have a "nose" as big as elephants'.

Fake Manuka honey – again

Edited Article from:

https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12244747&fbclid=IwAR2eXqi5FK27b9yGoOqNOy4W8mPXviTXhhdLCKc3q_VR1bkpEEgAjnBChY

An Auckland honey producer has been fined more than \$370,000 for adding synthetic chemicals to 14 tonnes of doctored mānuka products in what is the first case of its kind in New Zealand. Evergreen Life Ltd was forced to [recall 18 mānuka honey products in 2016](#), following suggestions it had used artificial methylglyoxal (MGO) and dihydroxyacetone (DHA) during the honey's processing stage.

The company and its manager, Tak Yoon Lee, who is also known as Hyung Soo Lee, were then prosecuted by the Ministry for Primary Industries (MPI), which initially laid 71 charges over allegedly adding synthetic versions of the chemicals.

New Zealand produces between 15,000 and 20,000 tonnes of honey each year, depending on climatic conditions, which is shipped to almost 40 countries. The value of New Zealand's mānuka industry alone was also estimated to potentially grow from about \$75 million in 2010 to \$1.2 billion per annum. The chemical DHA is contained naturally in the flowers of the native mānuka plant, which converts in the honey to MGO, giving the honey its highly prized anti-bacterial properties. The chemical's levels are used by producers to grade the honey, along with the unique mānuka factor, or UMF. Consequently the more DHA, the more MGO, meaning weaker mānuka honey can be sold at a higher price.

Captain Cook's manuka plant samples are still good after 250 years

https://www.beeeculture.com/catch-the-buzz-manuka-plant-samples-from-1769-still-high-quality-and-easy-to-id/?utm_source=Catch+The+Buzz&utm_campaign=34b1a798ae-Catch+The+Buzz+4+29+2015&utm_medium=email&utm_term=0_0272f190ab-34b1a798ae-332070937

Robust oil gland linings in historical mānuka plant samples collected during one of Captain James Cook's voyages to New Zealand 250 years ago serve as chemical time capsules, linking them to modern mānuka varieties. They could lead to new varieties with commercial potential for high-value mānuka honey.

Botanists Joseph Banks and Daniel Solander, aboard HMS Endeavour, collected several mānuka samples around New Zealand in 1769, but they did not record the individual collecting sites. They took the samples back to Britain for botanical classification, where they were assigned the Latin name *Leptospermum scoparium*. The samples were then stored in the British Museum, but most were returned home in the 1890s and are in the herbarium collections of Auckland War Memorial Museum and Te Papa.

Researchers have now have shown that *Leptospermum scoparium* has distinct leaf chemistries (chemotypes) in different areas of the country. There are volatile antimicrobial triketones in Tairāwhiti East Cape; or pine-smelling compounds from Te Tai Tokerau Northland. The researchers say this chemistry is controlled by mānuka genes rather than by growing conditions – East Cape seed grown in Palmerston North or Christchurch are the same triketone chemotype as their parents.

"Although most plant volatiles are lost quite quickly, think of those old herbs in your pantry, this is not so for mānuka," say the researchers.

President Mick “fires up” local school at bee talk

President Mick Olsen has been out and about talking bees again. Last month he attended the Cathedral School of St Anne & St James to give a talk on the importance of Bees. There were 4 classes broken into two groups for the talk. Miss Alyssa's class had been learning all about bees and had decorated their walls with artwork depicting the work the bees do (see photos on the right). Mick gave a talk on the role of the beekeeper and how to look after a hive, a show and tell on the equipment used in beekeeping, and of course the highlight for the group was the lighting of the smoker - outdoors of course. The children were very enthusiastic about bees and were firing questions at Mick thick and fast, as well as questions from the grown ups i.e Teachers.

Mick then moved into Miss Naomi's classroom to talk again to the children about beekeeping. Miss Naomi's class have not discussed bees, however, they have been discussing insects that prey on insects and asked about any pests that bees have. This prompted the discussion of Varroa mite, AFB, Wax moth and Small Hive Beetle to name a few.

Again the highlight was the lighting of the smoker, and the unintentional smoking out of the children due to the change in wind direction – this was quickly rectified, and no smoke alarms were tripped, and no fires were required.

Ed's comment: Wonder if Mick will get a return request? I think so, judging by the appreciative letter he and the Club received from the School.



Other presentations by TDBAI Club Members

The Club is very engaged in public information sessions and here are just a few of the recent talks and presentations: Pet Expo, Country Music Festival, Heritage Day, JCU Vet Students, Eco Fiesta, Bunnings Ladies Nights, TCC Sustainability Day.

Music legend **Toni Childs** hosted a bee friendly breakfast recently on a glorious winter's day on The Strand (see below). Toni is a passionate defender of our busy little pollinators and encouraged us all to get a little bit more active defending the bees from the onslaught of synthetic pesticides, herbicides, fungicides and other chemicals used in agriculture. Toni reckons we are the real “rock stars” – dunno about that, nice sentiment though. Toni had a very appreciative audience – and some keen fans.



Sell/Swap/Buy - bees/hives/equipment

This section will be provided in the Newsletter to Club members who are in the market of selling/swapping or buying bees and equipment. Just send me your brief description of the items up for grabs, with a photo if possible, a phone no. or e-mail contact, and times when you can be contacted and the equipment viewed and inspected.

We have several requests for native bee hives for purchase, but I don't have your contact details, and we have several makers of hive equipment who are keen to sell their handiwork.

Free advertising – no sponsored ads will pop up, and all done at your own time.

Cheers

The Ed.

51,000 new bee colonies created in Flow Hives

Article from [https://www.beekeeping.com/catch-the-buzz-since-father-son-duo-designed-revolutionary-honey-on-tap-beehive-there-are-51000-new-bee-colonies/?utm_source=Catch+The+Buzz&utm_campaign=e80f3b8f4a-Catch The Buzz 4 29 2015&utm_medium=email&utm_term=0_0272f190abht](https://www.beekeeping.com/catch-the-buzz-since-father-son-duo-designed-revolutionary-honey-on-tap-beehive-there-are-51000-new-bee-colonies/?utm_source=Catch+The+Buzz&utm_campaign=e80f3b8f4a-Catch+The+Buzz+4+29+2015&utm_medium=email&utm_term=0_0272f190abht)



Back in 2015, a father-son duo changed the beekeeping game simply by redesigning the traditional beehive – and now, honeybees are benefitting from their profits. Stuart and Cedar Anderson are the co-creators of the Flow Hive: a brilliantly designed beehive that saves beekeepers hours of work simply by channeling all of its honey into a tap that can be turned on and off at will.

The Flow Hive allows honey to flow out of the hive straight into a jar without crushing or disrupting the bees inside. It can also fit in a small backyard or on a rooftop or balcony. Cedar, who is a third-generation beekeeper from the rural community of Nimbin, Australia, says that he was inspired to try and design a simpler beehive after his brother was stung during one of their honey extraction missions. The young inventor knew that there must be an easier way to collect honey without having to wear protective suits, crack open the hive, and disturb the tiny pollinators.

“Ten years ago, Cedar had this idea: ‘come on, we must be able to get honey from a beehive without opening it, extracting and stressing the bees’,” his father Stuart recalled to ABC News. After several years of tinkering, the Andersons finally perfected their Flow Hive prototype. Upon raising money for the hive’s manufacturing on Indiegogo, their campaign became the most successful crowdfunding page in the platform’s history by raising over \$12 million in 8 weeks. Four years after their initial success, the Flow Hive has had a dramatic impact on honeybee populations around the world. The Andersons say that they have successfully shipped over 51,000 hives to 150 different countries. Since they launched the hive in 2015, the number of beekeepers in the U.S. alone has increased by over 10%. Their success is particularly notable since honeybee populations have been steadily dwindling as a result of habitat loss and pesticides. That’s why now – in celebration of National Pollinator Week – the Andersons are donating their hive proceeds to international honeybee advocacy groups.

“We’re proud to have donated 100% of profits from the sale of our Flow Pollinator House to nine local grassroots pollinator projects in Australia and the United States that are at work protecting wild habitats all around the world,” said Cedar in a statement. “Pollinators need large areas of habitat to flourish—the more we can do to protect and conserve native habitats, the more opportunities these tiny environmental champions will have to do their important work.”

If you want to learn more about how the hive works or order one for yourself, you can visit the Flow Hive website. Also, watch for our www.beekeepingtodaypodcast.com for an interview with the Andersons about their inventions and other projects they have going. Visit with them at EAS this summer, too!

Ed’s comment: Newbees can talk to other Flow Hivers in the Club for some helpful hints on how to get the most out of your Flow Hive or traditional hive. If you plan to only have 1 hive, these are worth a thought, but they are more expensive than other types of hives. You still have to open up and examine the brood box, and the time from nuc to honey harvest may take 12 months, so don’t think you only need to turn on the honey tap after assembling the box for immediate results.

Swarm Contact List:

Please advise editor@beesnorth.com.au if you wish to be removed from this list. Contact me with your name, phone number and suburb if you want to be added to the list.

Sonya Verbrugt - Gulliver - 04 0853 0991
Steve and Carla Kersnovske - Kelso 0417 344 419
Ben Taylor, Douglas/ Riverside Gardens - 4728 4992/ 0428 186 000
Dave Turnbull Annandale - 0458 645 677
Doug McBride, Mysterton - 4775 7465
Sharene Dougall, Bluewater - 0415426903
Tito Parigi - Magnetic Island - 0418 796 951
John Pavetto - 0488414017, and Ian Goulevitch - Hinchinbrook Area.
Michael O’Connell, Rasmussen,- 0402 088 080
Graeme Dalby, Kelso - 0402 951 929

Swarm List Please contact Biosecurity : 13 25 23 for any swarm or strange bee activity in the Townsville region. For all swarm collections, please collect 300 bees or roughly 10% of brood comb and submit to Biosecurity Queensland for pest and disease monitoring.

Hermit Park SS -TDBAI General Meeting 16/6/2019 – Minutes

Meeting opened at 2:00 pm

Chair: President Mick Olsen (MO)

Minutes: Editor Lindsay Trott (LT)

President introduced Rob Stephens and Stephen Alexander from the National Varroa Mite Eradication Program (<https://www.daf.qld.gov.au>). They described the most recent Asian Honey Bee (AHB) and Varroa discovery in Townsville.

Here is a summary of the information presented by Rob Stephens:

- June 2016 was the 1st AHB and Varroa discovery, in August 2016, 8 colonies were detected in Townsville suburbs near Mysterton/Hermit Park, all were genetically identical indicating only 1 original colony
- No AHB/Varroa detected in Townsville since 11/11/2016, until the new one detected in May 2019
- New detection was made on land, and not detected on the vessel, so the hive had migrated 3-4 months prior to detection
- New AHB incursion is genetically different and not related to the previous one
- Current restricted movement of bees and hives that was due to end on 31 August 2019 is still operational, but any extension or new program is still under discussion
- All bee/hive movements to be notified and approved by BQ beforehand
- Poster display was described showing difference between AHB and European Honey Bee (EHB) – where AHB are 2/3 the size of EHB, have more distinct stripes on thorax, are less hairy, and have a pointier “bum”
- Determining difference is difficult, especially during swarm collection so please report ALL swarms to DAF
- Please register hives to enable surveillance and inspections
- *Varroa jacobsoni* is currently only found on AHB and not on EHB, although it can migrate, and the problems that *Varroa destructor* causes on EHB will be replicated here if that happens.

Summary of the information presented by Stephen Alexander:

- AHB hive containing Varroa had been in the Port area for an estimated 3-4 months and was detected using the monitoring of Rainbow bee-eater pellets. Only 6 wings were detected in the 30,000 samples inspected. A total of 80,000 pellets have been inspected in the overall Varroa program
- Drones were detected by using a synthetic mandibular queen pheromone from Canada applied to sticky strips and suspended from a Helium balloon near to where 12 drones were on palm flowers.
- The old technique of bee-lining where you follow the direction of a trapped and released bee was successful in locating the hive about 80m from the drone captures.
- 3 open queen cells were evident in the hive.
- Hive was detected within 4 weeks of initial wing detection in Rainbow bee-eater pellets
- AHB can swarm frequently and up to 10 km but more often 1-3 km from the original hive.
- AHB is now endemic and considered not able to be removed from the Cairns/Daintree/Tully region 10 years after it's introduction to Cairns Port.
- AHB appears possibly to not thrive in the drier conditions beyond Cooktown and Cardwell.
- The AHB population in Australia may be inbred now, as only 1 queen was in the original hive.
- AHB is a cavity nesting bee with around 6-8,000 bees per hive, whereas EHB has typically around 40,000 bees/brood box hive. Nuc box sized hives are preferred by AHB and mailboxes receive a lot of attention.
- AHB feral hives are generally weak due to SHB and chalkbrood.
- Many of the previous AHB hives have been found in the Hermit Park/Annandale area.
- Rainbow bee-eater pellet collection to continue in Townsville, and sugar shake inspections encouraged.
- Great success to have detected the hive after initial detection using techniques not widely accepted and used by others, but now proof of effectiveness has been demonstrated.

General Meeting continued:

Previous Minutes: Accepted, Moved Alan Ziegenfusz, 2nd Lindsay Trott

Treasurer: Very healthy bank balance with \$16K in cash, \$11K in to the account and \$8K out, \$7K in monthly cash sales mainly from frames, foundation, jars and Apithor traps. This year \$90K in, \$81K out and statements were made available for inspection:moved Frana M, 2nd Mick O.

Secretary: TCC thanked Club for Eco Festa – probably best stall with huge interest – thanks to those who volunteered. Many more requests for Club attendance to talks and events: Bunnings nights, Pet Expo, Country Music Fest, CWA, Lions Club, Heritage Day, JCU Vet students, schools and kindys.

Mark O'Leary has made the transition to our new Shop location work really well – many thanks. Unit 3/38 Rendle St, Aitkenvale.

Library: No new books this month, plenty on display to borrow and please sign out books. Check your shelves for borrowed book as some are out on long term. See Beryl Smart for books, magazines and DVD loans.

General News: Toni Childs is hosting a breakfast at Watermark for Friday 8 am 21 June for the Club as she is a passionate supporter of beekeepers who she considers are the “rock stars” of today.

Mick O has arranged an inspection of Pallarenda quarantine area and ex MPWS/DEH buildings to see if we can have a permanent use of room/storage/meeting area, several people indicated they would attend.

Hives for sale swap and buy to be included in Newsletter

Next meeting : Annandale Community Hall

Meeting closed: 2:50 pm followed by hive inspections and tea, coffee

Meanwhile, down at “The Club Shop”, expert hands assemble a nuc box....

“I dunno, it said Tab A goes into Tab B.....”



Welcome to our New Members

Existing Club Members are encouraged to assist/mentor our Newbees. They have joined the club to learn about bees, so even if you only have limited experience, give them a hand if you can. Invite a Newbee to your hive opening and discuss what's inside the box, let newbies experience hive openings to become more confident, and you will learn more yourself by trying to explain what's going on in there.

Paul Doolan, Peter Gurr, Donna and Alan Lovell, Susan Reid, Neil Webley, Keith Hunter, Iain Faichney, Michael Cussen, Annette Davis, Steve Murdoch

Annual Membership Fees are due in July/August each year - currently \$25/p.a. Membership fees can be made electronically to

Name:- Townsville and District Beekeepers

Association BSB:- 633000

Account:- 141466078

Refer :- Please make sure you add your Surname so that your membership can be signed off.

New email contacts for the Office Holders 2018/19

You can use these email contacts for the Office Holders, and hopefully they will have figured out how to access them and will respond

ASAP. president@beesnorth.com.au, treasurer@beesnorth.com.au, editor@beesnorth.com.au, shop@beesnorth.com.au,

publicityofficer@beesnorth.com.au And for all web and membership enquiries : info@beesnorth.com.au.

TDBA Inc Office Holders for 2018/2019

President:	Frana McKinstry Mick Olsen	president@beesnorth.com.au or mick_naomi@bigpond.com
Vice President:	Paul Payne	trapper4812@gmail.com
Secretary:	Alan Ziegenfusz	secretary@beesnorth.com.au
Treasurer:		franajon@gmail.com , or: treasurer@beesnorth.com.au
Membership	Frana McKinstry	franajon@gmail.com or info@beesnorth.com.au
Newsletter Editor:	Lindsay Trott	trottlindsay@gmail.com or: editor@beesnorth.com.au
Librarian:	Beryl Smart	smartberyl@gmail.com
Equipment Stewards:...	Alan Ziegenfusz and Frana McKinstry	shop@beesnorth.com.au
Webmaster: _____	Ray Berkelmans	rberkelm@gmail.com
Publicity Officer:	Sonya Verbrugt	sonyaverb@optusnet.com.au Or publicityofficer@beesnorth.com.au
Committee Members:	Ian Gordon	iain.gordon59@gmail.com
	Ian Goulevitch	goulevitchi@gmail.com
	Michell Hasted	pexperts@bigpond.com
	Waldon Edwards	waldon.edwards@iinet.net.au
	Tom and Joan Ruddell	
	Carla Kersnovske	cke00786@bigpond.net.au

Life Members of the TDBA Inc

In recognition of their long term service and support of our Association.

Dennis ANGER

Graeme & Adele ARMSTRONG

Ken & Marcia CALEO

Dave HOEY

Mike & Jill JAMES

Doug & Sonya MCBRIDE

Let's all get up and do the "Sugar Shake" - maintain the detection tests for Varroa

Biosecurity would like beekeepers to fill out this form below when they do self assessments, such as sugar shaker, drone uncapping or alcohol wash. The form can be filled out manually and sent into us reply paid or it can be email edit to anyone who wants it and they can fill it out on line and email it back. Carla K will also be visiting everyone who would like to practise with the different self assessment types.



Managed hive sample collection form

Details of person completing the form

Inspector/Person(s) attending	BQ Officer	Contractor	Other	Date
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attach sample no.(s) or barcode
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attach LIMS number
<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

Location details

Address

Nearest road Locality

GPS Location Latitude Longitude

(WGS 84, decimal degrees) °S °E Contact on site

Hive details

Number of hives Comments

HIN

Surveillance details

	Alcohol wash	Sugar shake	Drone uncapping
Approximate number of bees tested			
Less than 300	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
~ 300	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More than 300	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Results/Detection			
Positive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample submitted to DAF			
Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Office use only

Sample receipt and dispatch

Date sample received by BQ Comments

Sample dispatched to DAF BSL for analysis

No If no, provide reason

Yes If yes, provide date of dispatch and connote number

Sample entered into BORIS by Date

Laboratory results

Date results received Results and action taken

Result entered into BORIS by Date

Privacy statement

The Department of Agriculture and Fisheries is collecting the information on this form as a record of surveillance activities conducted on managed bee hives under the National Varroa Mite Eradication Program. Summaries of managed hive surveillance may be provided to the Consultative Committee on Emergency Plant Pests, formed by the Australian Government Department of Agriculture and Water Resources for the purpose of reporting against the National Response Plan for the Eradication of *Varroa jacobsoni* from Queensland. Your personal information will not be disclosed to any other parties unless authorised or required by law.

Please return this form to Biosecurity Queensland at PO Box 1085 Townsville 4810 or by email to varroa@daf.qld.gov.au

Club Shop Items - 2019 Price List

These prices are only available to current financial members

Item	Price	Item	Price
Veil - Native Bee (camo)	\$5.00	Queen Catcher	\$3.00
Veil - Native Bee (mesh)	\$3.00	Frame Gripper	\$10.00
Veil - cotton	\$20.0	Frame Hanger	\$20.00
Veil - ventilated	\$25.0	Bee Feeders	\$2.00
Jacket - Cotton	\$60.0	Spring clips	\$2.00
Jacket - Ventilated	\$90.0	Frame Nails per packet	\$6.00
Full Suit - Cotton	\$85.0	Mesh (for base construction)	\$15.00
Full Suit - ventilated	\$115.	Gate valve - Yellow	\$10.00
Gloves - pair	\$22.0	Gate valve - Nuplas	\$12.00
Replacement veil for vented suit	\$20.0	Gate Valve – Parker	\$30.00
Cowboy hat-veil	\$12.0	Cappings knife, serrated	\$15.00
Super - 8 frame	\$25.0	Cappings knife, electric	\$30.00
Super - 10 Frame	\$28.0	Comb scratcher	\$8.00
Super - Ideal	\$25.00	Bucket bracket	\$10.00
Super - WSP	\$25.00	Strainer	\$25.00
Super - Nuplas PlasMc	\$40.00	Queen Excluder scraper	\$10.00
Nuplas Base	\$45.00	Hive handle (metal)	\$12.00
Nuplas Lid	\$38.00	Wax Embedding tool	\$45.00
Nuplas set – 1x super & lid &	\$120	Extractor - PlasMc	\$140.00
Nuplas oil tray & frame	\$28.00	Extractor - S/S	PO
Nuplas Cleats - pair	\$10.00	Honey jars 250gm	\$0.70
Lids (8 or 10 Frame)	\$27.00	Honey jars 500gm - square	\$0.80
Base - Ply (8 or 10 frame)	\$22.00	Honey jars 550gm - squeeze	\$0.80
Base - Mesh	\$30.00	Honey jars 1kg round	\$1.00
Liaing Cleats (Handles, pr)	\$5.00	Honey Pails - 1 kg	\$1.20
Emlok - hive clamp set	\$14.00	Honey Pails - 1.5kg	\$1.30
Corflute Nuc box	\$20.00	Warning Sign	\$10.00
Corflute - Queen excluder	\$4.00	Bee Poster	\$20.00
Hive tool (S/S)	\$15.00	Traps	
Smoker	\$35.00	Apithor trap	\$8.00
Smoker – Beeco	\$85.00	Silver Bullet trap	\$8.00
Bee Brush - Natural bristle	\$10.00	Apis sMcky trap	\$4.50
Queen Excluder - Wire (8 or 10	\$22.00	Books	
Queen Excluder - PlasMc	\$10.00	Managing AFB	\$0.00
Frames - Full depth	\$2.00	Australian Beekeeping Manual	\$35.00
Frames - Ideal	\$1.50	Australian NaMve Bee Book	\$25.00
Frames - WSP	\$1.50		
FoundaMon - PlasMc	\$2.10	AFB test kits	\$0.00
FoundaMon - Wax	\$2.40	Club Polo Shirts short sleeve	\$40.00
Beeswax block per kg	\$18.00	Club Polo Shirts long sleeve	\$45.00
Eyelets pkt 500/40gm - packet	\$10.00	Club Hat	\$15.00
Awl (for fidng eyelets)	\$5.00	Honey labels (\$5.00 for 50) or	\$25.00
S/S Wire x 500gm	\$20.00	Gate valve O rings - Parker	\$6.00
S/S Wire x 80gm	\$6.00	POSCA queen marking pen	\$5.00
Wire crimping tool	\$12.00		

TDBA Bee Starter Kit - \$110

The Perfect Gift for a budding Beekeeper

Available in Townsville from the Club Shop:

Club Members Price Only! \$110

Hive tool, brush, cotton jacket/veil, gloves, and smoker

Contact: Club Shop Stewards: Frana M or Alan Z

shop@beesnorth.com.au



TDBA is proudly supported by:

Fairway Group Townsville

Graeme Kent
Senior Accountant,
Business Consultant

Member of
Anandale QLD-1814

M:0400 607 868 graeme@fwgs.com.au

Coaching - Taxation - Accounting - Bookkeeping

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Raw honey, and pollination services. Will help new members get started with bees

**Dan Donovan: Ph 0428 218
816**

Townsville & District
BEEKEEPERS
ASSOCIATION

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