

Townsville and District Beekeepers Association (Inc.)

www.beesnorth.com.au

PO Box 1115, Aitkenvale QLD 4814



Newsletter No 3, April 2020

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- COVID -19 Shop Rules!
- Club members tips and tricks
- Bees in the news
- General Meeting Minutes
- New Members, new Club officials
- New Sugar shaking form and jars

- Club Shop price list

Next Meeting:

April meeting postponed

Club Shop Order via email: shop@beesnorth.com.au

Collection: 1st Saturday per month at 8:30 – 10:00 at 3/38 Rendle St A'vale.

Peter Gurr's hive at Alligator Creek goes off – again

Keen readers of the Newsletter will recall that Peter set up his hive out at Tanette Just's Alligator Creek property in mid 2019. In November last year, he managed to pull 14 frames with 30 kgs honey in the first 6 months – and we suspected it was the 2 acres of pumpkin flowers and other vegies nearby. But it looks like his bees are keen on some other flowers too. Six weeks ago, around mid February, Clubbie Elly Mende helped Peter to do an inspection, and no capped honey was seen in the hive. On 2 April, Peter reported that he pulled 11 fully capped frames (9 from the top super and 2 from the brood chamber) and didn't have enough replacement stickys to be able to pull the other 8 fully capped frames from the middle super. The hive was a gentle as a bird and he and Clubbie Brock Tilley (who assisted Peter on this trip) were both able to work the hive in bare hands without getting stung. What's in the water out there?? Sounds like a productive patch.

PS: Peter said he got 22.5 kg off the 11 frames and these were fairly new foundations – so the delivery should be even more when the cells get drawn out more. And don't forget the next 8 capped honey frames waiting to come off – remembering to leave some reserves.



Peter's honey label for his Alligator Ck brew



Peter with one of his full frames

Shop etiquette – in this Covid-19 era, please consider the welfare of all members

Email orders will be serviced – but walk in orders will not be completed. Pre-order by email to shop@beesnorth.com.au; wait till after 9:00am to come to the shop;

Ed's comment: Dear Club members who utilize the fantastic opportunity that our volunteer shopkeepers provide. If we do not wish to see this service reduced or limited we need to show a lot more consideration for those people providing this service. If we burn them out, we might not have this excellent service and convenience. If we do not comply with isolating guidelines, we may not be able to continue.

For your consideration, I outline some current COVID -19 **Golden Rules for the Club Shop:** Please:

1. Order **before** the opening day by email: shop@beesnorth.com.au
2. Arrive at the Shop **after** 9:00 am
3. Phone on your arrival, wait for the go ahead to drive to the shop door – one order at a time.
4. Your order will placed in your vehicle – do not get out of the car.
5. Depart straight away to allow others to do their pick up – do not stop at the Shop to chat about bees
6. Non-emailed orders may not get any attention if the Shop is too busy.
7. Do not panic – wash your hands, don't touch your face.
8. We do not sell toilet paper (Reward for the brave person who wears this dress in public – see photo on right)



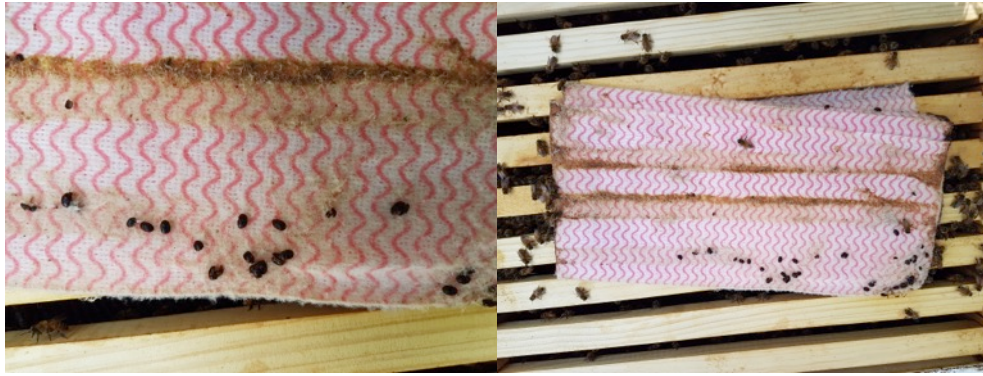
News from the library

Thanks to Jon McKinstry and Tom Ruddell, we now have a stand on which to display the library books at our meetings. This will make it so much easier for you to see what is available and choose one that suits. During this time of isolation my goal is to give it a coat of paint and maybe even a little bee inspired art work. As I am artistically challenged, this may be interesting!

So next meeting, whenever that may be, come and check it out, have a browse and borrow a book, video or magazine. Stay safe everyone, and PLEASE RETURN THOSE BORROWED BOOKS AND MAGS (Ed's highlight) Beryl!



Chux cloth traps SHB without the use of oil traps, synthetic insecticides and other potions



Iain Gordon keeps his SHB populations under control by placing a rolled up Chux cloth on top of super and brood frames. It works by entangling the spines on the SHB legs and prevents them from wandering off to lay eggs or eat wax and pollen. Seems effective and doesn't trap too many bees, and does not involve toxic chemicals or oil traps that can spill.

Peter Zerbe makes a bomb, cyclone and corona proof shelter – see right

Clubbie Peter Zerbe up at Alice River decided to future proof his bees and got his two hives ready for any cyclone heading his way in their bomb-proof and fallout shelter. "If it all blows away at least they will bee together" – he said.



How 'undertaker' bees recognize dead comrades

By [Eva Frederick](#) Mar. 20, 2020 , 10:25 AM

They're the undertakers of the bee world: a class of workers that scours hives for dead comrades, finding them in the dark in as little as 30 minutes, despite the fact that the deceased haven't begun to give off the typical odors of decay. A new study may reveal how they do it.

Wen Ping, an ecologist at the Chinese Academy of Sciences's Xishuangbanna Tropical Botanical Garden, wondered whether a specific type of scent molecule might help undertaker bees find their fallen hive mates. Ants, bees, and other insects are covered in compounds called cuticular hydrocarbons (CHCs), which compose part of the waxy coating on their cuticles (the shiny parts of their exoskeletons) and help prevent them from drying out. While the insects are alive, these molecules are continually released into the air and are used to recognize fellow hive members.

Wen speculated that less of the pheromones were being released into the air after a bee died and its body temperature decreased. When he used chemical methods of detecting gases to test this hypothesis, he confirmed that cooled dead bees were indeed emitting fewer volatile CHCs than living bees. Wen then designed a series of experiments to see whether undertaker bees were picking up on this change. He turned to five hives belonging to Asian honey bees (*Apis cerana Fabricius*), a small, hardy insect found across Asia, and began to heat up the corpses of perished honey bees. When he placed regular, cool dead bees in a hive, workers always removed them within half an hour. However, when he placed the bee in a heated petri dish and warmed it up by a few degrees Celsius, it often took undertakers several hours to even notice the body. That's presumably because the warm bee body was releasing close to the same amount of CHCs as a living bee, he reports in a preprint published this month on bioRxiv.



To seal the deal, Wen washed the CHCs off dead bees with hexane, which can dissolve waxes and oils, heated them up to about the temperature of a live bee, and placed them back in their respective hives. The undertakers sprang into action and removed nearly 90% of the hot, clean dead bees within half an hour. That suggests it's not temperature, but the absence of CHC emissions that undertakers use to diagnose death.

Wen makes a strong case that a reduction in temperature and a reduction in cuticular hydrocarbons leads to undertakers perceiving a dead bee as something that needs to be removed.

Death recognition is a complex process, though. It does make sense that there is some chemical signature of a dead bee, but we don't now know exactly what is going on. For example, although bees can "smell" with their antennae, they can also "taste" with their feet, which might add another layer to the way they perceive dead comrades.

Posted in: [Plants & Animals](#) doi:10.1126/science.abb8234

Ed's Comment: Moral to this story: don't play dead by lying still and cooling down, lest your fellow beekeepers cart you off.

Swarm of 40,000 Killer Bees Attack First Responders in California

By: Paula Froelich MARCH 18, 2020 CATCH THE BUZZ

California first responders were all abuzz when they showed up to a report of a bee sting — only to be attacked by 40,000 aggressive African killer honeybees.

The first firefighter on the scene in Pasadena was stung 17 times (**Ed:** wimp, wait till they meet one of my queenless hives)— six other firefighters and police were stung afterward. Three first responders were rushed to a nearby hospital while others rushed to shut down the block.

"I've been with the fire department 18 years now and responded to several bee incidents," Pasadena Fire Department Public Information Officer Lisa Derderian told CNN. "But never to this magnitude. ... The bees were very aggressive."

The hive, located on the roof of a Hampton Inn, was eventually removed and the bees left.

The African Killer bees, which were introduced to Southern California in 1994, have caused havoc throughout the years — in 2018 a woman was stung over 200 times by the killer bees after reaching for a mop in her car.

<https://nypost.com/2020/02/22/swarm-of-40000-killer-bees-attack-first-responders-in-california/>



Firefighters respond to a swarm of bees in Pasadena. Pasadena Fire Department

Mushroom magic will keep your bees' wings in tip - top shape

<https://www.beekeeping.com/catch-the-buzz-mushroom-extract-for-honey-bees/>

Heavily modified article by The Editor

Honeybees, worth almost \$20 billion to American agriculture, are dying at alarming rates, threatening honey production and crop pollination. According to the Bee Informed Partnership, from 2018 to 2019, U.S. beekeepers lost 40% of their colonies. The so called "colony collapse disorder" is attributed predominantly to the deformed wing virus (DWV), so-named because of how it disfigures bees' wings. The virus undermines a bee's immune system, robs it of flight and halves its lifespan. DWV is transmitted by the parasitic mite *Varroa destructor*, a tiny, button-shaped, eight-legged creature that latches onto bees and feeds on their fatty tissues.

Mushrooms to the rescue?

Walter Steven Sheppard, lead researcher, said the fungi he's using are classified as *Ganoderma lucidum*, also called lingzhi or reishi. These are rust-coloured, kidney-shaped "shelf" or "bracket" mushrooms that grow like fans on trees. Asian countries have been using extracts of these mushrooms for at least 2,000 years in herbal remedy concoctions, and you can even get a coffee mix the fungal extract. Sheppard said he has also experimented with the genera *Fomes*. Both belong to the fungi order polypores, and their extracts have long been prized in Asian medicine for supposed antiviral properties. Some of the biologically active chemicals in the mushrooms resemble the complex chemical structure of human steroid hormones.

The researchers say the idea of using mushrooms to cure bees was the brainchild of Paul Stamets, a prominent mycologist and founder of Fungi Perfecti, a medicinal mushroom business in Olympia, Washington. In 1984, Stamets noticed bees from his personal hive landing on mushrooms and sipping droplets of liquid from each mushroom's mycelium, the delicate web of filaments. Decades later, around 2016, he had an epiphany: perhaps the bees had not just been seeking sugar, but were self-medicating. Sheppard, one of the world's leading bee experts, said Stamets approached him with his theory a few years ago and a partnership was born. They soon collaborated with scientists from the U.S. Department of Agriculture and WSU. The researchers dosed sugar-water feeders with mycelium extracts from several mushroom species, analysing the effect on bees.

In field and lab studies, treated bees fared better when infected by the virus. In cages, treated bees had an 800-fold decrease in virus level; in the field, the decrease was 44- to 79-fold, still significant. Sheppard said it's not yet clear how the extracts reduce virus levels. He said the mushrooms are either bolstering the bees' immune systems or restraining the virus directly, and it will take more lab work to find out. The field work will last until mid-March and further testing to isolate the particular active compounds will proceed when those results are in.

https://www.capitalpress.com/ag_sectors/orchards_nuts_vines/mushroom-extract-might-rescue-bees-from-deadly-virus/article_6ea225da-51de-11ea-b658-f70bea196741.html

Lingzhi (Chinese), reishi (Japanese), yeongi (Korean), or het lin chue (Thai) mushroom is used in traditional Asian medicine, but there is insufficient evidence that it is effective for treating any disease. In nature, it grows at the base and stumps of deciduous trees, especially that of the maple. Only two or three out of 10,000 such aged trees will have lingzhi growth, and therefore its wild form is rare. Lingzhi may be cultivated on hardwood logs, sawdust or woodchips.

Today, lingzhi is effectively cultivated commercially on hardwood logs or sawdust/woodchips. Townsvilleans may recognise it as the bracket fungi that infects and eventually kills Poinciana trees in our streets.

https://en.wikipedia.org/wiki/Lingzhi_mushroom

And while we are talking about wings...A BIT ABOUT WINGS by Dan Wyns (no not Wyngs!)

AUGUST 13, 2018 <https://beeinformed.org/2018/08/13/a-bit-about-wings/>

I spend a lot of time taking photographs of bees, particularly as they flit from flower to flower gathering pollen or nectar. All of this time spent stalking them through gardens has given me appreciation and wonder of their flight capabilities. Bees are capable of flying at speeds up to 15 mph and carrying nectar loads that approach their own body weight. In addition to these feats of strength, they are also capable of delicate maneuvering and hovering while they approach flowers. These amazing aerial abilities are of course made possible by their wings, which at a glance seem undersized for the task.

At this point, a confession seems reasonable: I was several years into working with bees on a daily basis before I learned that they actually have four wings, not two. In fairness to myself, I hadn't had even the most basic course in entomology and only barely knew that bees weren't technically bugs. Honey bees, like other winged Hymenoptera, have four wings, while insects of the order Diptera, including true flies and mosquitoes, have a single pair (remember, di = 2). For what it's worth, only insects of the order Hemiptera can correctly be called true bugs.

Careful observation reveals a pair of forewings that are larger than the hindwings - see right. Bees possess a pair of forewings that are similar in length to the abdomen and a smaller pair of hindwings. The 2 vs. 4 ignorance is somewhat understandable when considering that when bees are not in flight the larger forewings cover the hindwings in the relaxed position along the abdomen, and the wings function as a single pair during flight activity. This coupled movement is facilitated by a series of hooks, known as hamuli, on the leading edge of the hindwings that fit into grooves on trailing edge of the forewings allowing the forewings and hindwings on each side of the body to function as a single surface. The wings are powered by the longitudinal and vertical flight muscles in the thorax. Alternating contractions of the vertical and longitudinal muscles raise and lower the wings.

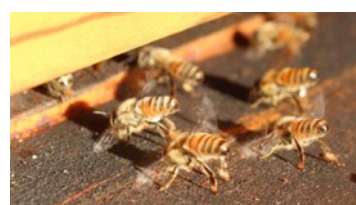
Coordinated fanning at the entrance can be used for both ventilation and to distribute pheromones - see right. In addition to propelling themselves through the air, the wings are also used to move air while remaining stationary. The ability to move air throughout the colony is critical to maintaining appropriate internal temperature and humidity as well as evaporating moisture from nectar and distributing pheromones within the colony.

In addition to providing structural support wings carry nerves, hemolymph and breathing tubes.

The wings themselves are composed of three layers: a transparent membrane on top and bottom supported by a network of veins that carry hemolymph (bee "blood"), nerves, and breathing tubes throughout the wings as well as provide structural support. Honey bee wings exhibit a relatively simple pattern of venation compared to other more primitive insects. Venation patterns can be used to distinguish between subspecies (or races) of honey bees. This requires precise measurements of different sections of the wing and is being increasingly done through automated image processing algorithms.

Tattered wing margins indicate a forager is nearing the end of her lifespan - see right.

Despite their durability, honey bee wings are only capable of a finite number of flight miles, with estimates of this upper bound being approximately 500 miles. Close observation of older bees in the colony will often reveal wings that are tattered around edges. As adult bees progress through their lifespan, they take on different tasks and roles in a process known as temporal polyethism with foraging typically being the last activity. When you see an older bee, which can be identified by diminished body hair in addition to tattered wing margins, you're observing a bee that is near the end of its life. Individual bees only occupy the role of forager for 2-3 weeks, covering hundreds of collective miles in that time. When you see an old bee with tattered wings it is documentation that she has exhausted her physical capabilities in service to the colony and will soon be replaced by a younger bee that transitions from a house bee to a forager.



TDBAI Club activities

Beginner Beekeeper Course for Club members is on hold – date TBC

General Meeting Minutes: 23 March, 2020

Location: Hermit Park State School at 10:am

Chair: Vice President Paul Payne welcomed all members and visitors. President Mick Olsen in self isolation.

Note taker: Secretary Waldon Edwards.

Previous Minutes: tabled and accepted by Beryl Smart and seconded by Miles Furnas

Meeting was fairly informal due to the conversation regarding Covid – 19, and our need to carry out maintenance on hives.

Treasurer's Report: Good state of finances with \$32 K in the bank, and only a few outstanding bills.

Business Arising:

- Newbees Workshop at Sonya's place proposed for 16 May 2020 has been put on hold until we get clarification regarding public gatherings.

- Dave Turnbull advised that the Honey Room had been delivered.

- the new Library stand was on display – very smicko thanks to Jon McKinstry and Tom Ruddell.

- Waldon raised the issue of keeping your hives registered under the new Biosecurity Queensland regime and to comply with the letter or email that you should have received.

There was some confusion about what is your HIN and what is your Biosecurity Entity Number. The letter comes on the anniversary of your hive registration. If you need help, please visit qld.gov.au/BiosecurityRegistration

- Rebecca Laws presented a talk at the Biosecurity Roadshow session at Mick and Naomi Olsen's and is asking for members to sign up for the National Bee Biosecurity Programme. Contact Rebecca if you are happy to receive info about the programme <mailto:Rebecca.laws@daf.qld.gov.au>

Secretary Report: Correspondence in/out ?

Library: RETURN YOUR BORROWED BOOKS PLEASE !!!! ABC of Beekeeping now in the Library

Club Shop: still operating (see guidelines in this Newsletter for accessing equipment). Still need Volunteers to help assemble and pack orders prior to pick up. See email from Frana regarding pick up procedures. ABC of Beekeeping book is now included in the "Beginner Starter Pack".

Newsletter: Editor away, as usual, but managed to put out the Newsletter. Requests that all members contribute one paragraph and one photo for the Newsletter –that should be around 350 items for the Newsletter.

General Business: Jon and Frana are still running the JCU Vet Students workshops with John Carr. John gave a demo on hand cleaning with sanitiser – and apparently everyone failed miserably as revealed by UV light after hand washing. Use a nail brush was the recommendation.

Next meeting: Possibly on 19/4/2020 – but may be postponed.

Meeting Closed : 1037 hrs.

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.

BAKER, Greg HUDDY, Shawn MARTIN, Matthew MULLER, Noela RAEBURN, Alex RICHARDSON, Jen & Les SMEDLEY, Trevor
SORBELLO, Michael VILLIS, Paul VORMISTER, Grant WUERSCHING, Matthew & Xavier ZIEMNICKI, Adam

Sell/Swap/Buy/Help needed

I will list items for 2 Newsletters only, unless you let me know otherwise. Please drop The Editor editor@beesnorth.com.au a note to indicate whether the items are required to be listed for a longer period.

Peter Britton has this **top bar hive for sale.**

Price is \$475.00 Ph: 0418 728 699. Photos at right.



Subscribe to the Bee Aware e-newsletter and stay up to date

The BeeAware newsletter is an e-newsletter for beekeepers and growers of pollinator-reliant crops, or anyone else simply interested in beekeeping or the pollination of crops. Each newsletter contains the latest in news, research and development, as well as upcoming events relating to honey bee biosecurity and the pollination of horticultural and agricultural crops.

<https://beeaware.org.au/subscribe-to-newsletter/>

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

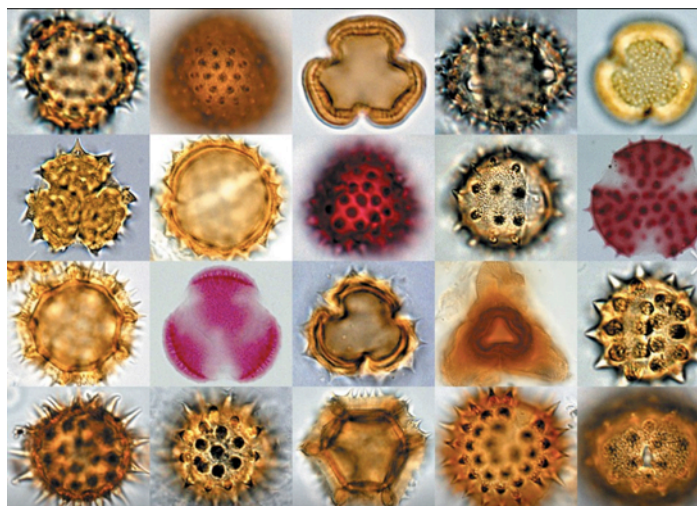
Account:- 141466078

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

Is that what I think it is over there - coronavirus?

Don't panic and get out the toilet paper. These are not images of corona viruses, they are optical microscope photos of pollen from the Australian Centre for Pollen Analysis????? Breathe deep and relax - well, maybe not if you are an asthmatic.

Want to see more pollen photos, or learn about your bees most important food item, then go here— <http://apsa.anu.edu.au> Without good nutritious protein rich pollen, your bees suffer from malnutrition and are prone to disease. Read "Fat bees, Skinny Bees" – available in the Club Library



Email contacts for the Office Holders 2019/20

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 2019/2020

President: Mick Olsen president@beesnorth.com.au or mick_naomi@bigpond.com
Vice President: Paul Payne trapper4812@gmail.com
Secretary: Waldon Edwards secretary@beesnorth.com.au
Treasurer: Frana McKinstry franajon@gmail.com or info@beesnorth.com.au
Treasurer's Assistant: Michelle Hasted pexperts@bigpond.com
Members: Frana McKinstry franajon@gmail.com or info@beesnorth.com.au
Newsletter: Lindsay Trott editor@beesnorth.com.au or trott Lindsay@gmail.com
Librarian: Beryl Smart smartberyl@gmail.com
Equipment Stewards: Frana McKinstry and Alan Ziegenfusz shop@beesnorth.com.au
Webmaster: Ray Berkelmans rberkelm@gmail.com
Publicity Officer: Sonya Verburgt sonyaverb@optusnet.com.au

Committee:

Ronelle Nord
Keith Hunter
Shane Grist
Tom and Joan Ruddell
Michelle Hasted
Alan Ziegenfusz

Some entertaining bee related activities for kids and adults while in lockdown

<https://buggyandbuddy.com/15-bee-crafts-kids/>
<https://www.beeculture.com/catch-the-buzz-the-uncertainty-of-catch-the-buzz/>
<https://www.youtube.com/watch?edufilter=NULL&v=agLgG5rJa0I>

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 Verburgt - Gulliver - 04 0853 0991 Steve and Carla Kersnovske - Kelso - 0417 344 419 Ben Taylor, Douglas/ Riverside Gardens - 4728 4992/ 0428 186 000
Sharene Dougall, Bluewater - 0415426903 Tito Parigi - Magnetic Island - 0418 796 951 Ronelle Nord, Alice River - 0417752622
Duane Saltmer, Alice River - 0400 339 508 Adrian Kirby, Kirwan - 0403 443 141 Mervyn Yule, Charters Towers - 0427 124 126
Amanda Woodcock, Bluewater - 0405784083 Michael O'Connell, Rasmussen - 0402088080 Graham Dalby, Kelso - 0420951929
Stephen Laguna, Kirwan - 0439 089 946

Swarm List Please contact Biosecurity Queensland : 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.

Varroa Mite Eradication Program



Update on the Varroa Mite Eradication Program and COVID-19 for Townsville beekeepers

From Rob Stephens:

I write to update you on the program in view of the evolving situation with COVID-19.

As we all take in the changes and adjust our daily life, the National Varroa Mite Eradication Program has also made some critical adjustments to its operations to ensure the safety of staff, the general public and the beekeepers who are such a vital part of our program. Hygiene protocols are now in place in line with advice from Queensland Health. Our administration and support staff are working from home where practical, while our field staff have taken steps to minimise the risk of disease spread. To ensure the health and safety of all, we have:

- increased hygiene processes such as frequent washing of hands, using alcohol-based sanitisers and all program vehicles being sanitised after each use
- updated our Standard Operating Procedures to ensure our work can still be carried out while adhering to social distancing and hygiene practices
- made arrangements for field staff to work alone, particularly during sentinel hive checks
- made adjustments to the way we respond to public reports to ensure the 1.5m distance between people can be maintained
- asked staff to stay home if they are unwell

Advice from the Queensland Beekeepers' Association is that there are "no current reasons why beekeeping operations would be restricted or impacted unless a worker was to be diagnosed or suspected to have the Coronavirus" (see attached).

This means keepers in the Townsville area should continue with their processes as usual to ensure the health of their hives. This includes conducting quarterly sugar shakes or alcohol washes to check for varroa mites and reporting the result, positive or negative, to the program on varroa@daf.qld.gov.au. A hive test form has been attached for this purpose. We know this is being said often but it really is unprecedented times for everyone. Please take care and protect yourself and your family against COVID-19. If you have any questions, please contact the Program Manager Rob Stephens on 0476 846 793 or robert.stephens@daf.qld.gov.au Kind regards,

Rob Stephens, Program Manager for NVMEP

New form for "Sugar Shake" results – BQ requesting us to step up on detection tests for Varroa

Biosecurity Queensland would like beekeepers to fill out this new 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 in reply paid, or it can be emailed. Carla K will also be visiting everyone who would like to practise with the different self assessment types.

Varroa Mite Eradication Program



Managed hive test or feral nest/swarm removal form

Please use this form to submit the results of self-assessments and to submit samples from collected feral swarms or nests. Complete the first section and then any other applicable sections. Please use multiple forms if necessary and separate forms for each location tested.

Return forms to, or contact for sample collection – Department of Agriculture and Fisheries: 07 3330 4560

PO Box 1085 Townsville Q 4810 or email varroa@daf.qld.gov.au.

Address of collection location	
Collector	
Collector's phone or email	
HIN	

Alcohol wash/ sugar shake (300 bees per hive recommended. Submit sample if anything suspect seen)

Date tested	Alcohol wash or sugar shake? (AW or SS)	Hive ID and approximate number of bees tested	Anything suspect? (Y or N)	Sample submitted? (Y or N)

Drone uncapping (20 drone pupae per hive recommended. Submit sample if anything suspect seen)

Date tested	Hive ID and approximate number of drone pupae examined	Anything suspect? (Y or N)	Sample submitted? (Y or N)

Feral nest or swarm removed and samples kept for DAF to identify and check for varroa (300 bees and several hundred capped brood cells - especially drone brood - recommended)

Date collected	Bees submitted?	Comb submitted?

DAF use only - Analysis by NVMEP

Case	Sample	Date tested	Tested by
ID result	<i>Apis cerana</i> (AHB)	<i>Apis mellifera</i> (EHB)	Other
Varroa seen			
Recording	Date	By	

Scan to server, email to varroa (cc to manager and SPO), add to VMI2019 (attach scan to result), file hard copy

The Department of Agriculture and Fisheries is collecting the information on this form as a record of surveillance activities conducted under the National Varroa Mite Eradication Program. Summaries of surveillance activities may be provided to the Consultative Committee on Emergency Plant Pests, formed by the Australian Government Department of Agriculture for the purpose of reporting against the Response Plan for the Eradication of *Varroa jacobsoni* from Queensland – 2019 Incident. Any personal information collected will not be disclosed to any other parties unless authorised or required by law.

Club Shop Items - 2020 Price List

These prices are only available to current financial members

Item	Price	Item	Price
Jacket - Cotton	60.00	Eyelets pkt 500	10.00
Jacket - Ventilated	90.00	Awl (for picking eyelets)	5.00
Full Suit - Cotton	90.00	S/S Wire x 500gm	20.00
Full Suit - ventilated	115.00	Crimping Tool	14.00
Replacement veil for vented suit	25.00	Bucket Bracket	10.00
Cowboy hat with veil	12.00	Queen Catcher Clip	3.00
Veil - cotton	20.00	Queen Catcher & Marker	8.00
Veil - ventilated	25.00	Frame Gripper	10.00
Gloves - pair	25.00	Frame Hanger	20.00
Veil - Native Bee	3.00	Bee Feeders	1.00
		Spring clips, ea	2.00
Super - 10 Frame	28.00	Frame Nails pkt	6.00
Super - 8 frame	25.00		
Super - Ideal	25.00	Gate valve - Nuplas	12.00
Super - WSP	25.00	Gate valve - Parker	30.00
Lids (8 or 10 Frame)	27.00	Gate Valve S/S	35.00
Lids (8 or 10 Frame) pre-assembled	35.00	Gate valve O rings - Parker	7.00
Base - Ply (8 or 10 frame)	22.00	Cappings knife, serrated	15.00
Base - Mesh	35.00	Cappings knife, electric	45.00
Mesh sheet (for base construction)	15.00	Comb scratcher	8.00
Lifting Cleats (Handles, pair)	5.00	Strainer	26.00
		Scales	12.00
Nuplas Super 10 Fr	40.00	Extractor - Plastic	140.00
Nuplas Super 8 Fr	40.00		
Nuplas Super - Ideal	35.00	Honey jars 250gm	0.70
Nuplas Lid, 8 or 10 Fr	38.00	Honey jars 500gm square	0.80
Nuplas Base, 8 or 10 Fr	45.00	Honey Jars Squeeze 550g	0.80
Nuplas 10 Fr set: 1 x super, lid & base	120.00	Honey Jars 1 kg	1.00
Nuplas cleats	10.00	Honey Pails - 1 kg	1.20
Nuplas oil tray & frame	28.00	Honey Pails - 1.5kg	1.30
Hive Doctor plastic base	55.00	Honey bottle 2.8kg (2 litre)	0.80
4 Frame Nuc Box	65.00	TRAPS	
5 Frame Nuc Box	70.00	Apithor trap	8.00
Corflute Nuc boxes	28.00	Silver Bullet trap	8.00
Hive tool (S/S)	15.00	BOOKS	
Smoker	35.00	Managing AFB	0.00
Smoker - Beeco	85.00	ABC of Beekeeping in Tropics	25.00
Bee Brush - Natural bristle	10.00	Australian Beekeeping Manual	35.00
Emlok - hive clamp	14.00	Australian Native Bee Book	25.00
Hive Handle (galvanised)	12.00		
Queen Excluder - Wire (8 or 10 frame)	22.00	Honey Labels (\$5 for 50) or roll	25.00
Queen Excluder - Plastic	12.00	Nutrition panel labels (per roll)	20.00
Queen Excluder scraper	10.00	Posca Queen marking pen	5.00
		Warning Sign	10.00
Frames - Full depth	2.00	Bee Poster	20.00
Frames - Full depth, prewired	4.00	AFB test kit	0.00
Frames - Ideal	1.50		
Frames - WSP	1.50	Club Polo Shirts	40.00
Foundation - Plastic	2.10	Club Polo Shirts L/S	45.00
Foundation - Wax, per sheet	2.40	Club hats with logo	15.00
WSP foundation (plastic)	2.00		
Wax Embedding tool	45.00		
Block beeswax, per Kg	22.00		

TDBA Bee Starter Kit - \$160

The Perfect Gift for a budding Beekeeper

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

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