AUSTRALIA'S

HONEYBEE NEWS

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Volume 14 Number 6 November - December 2021



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Honeyland 2022 Pg 21
HiveAid for Flood Impacted Beekeepers Pg 40

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PRESIDENT'S REPORT



It has been a very busy time. There have been reports of very good crops of canola, Hill gum, some green mallee, various ground floras and broad leaf iron bark further north. Thou at the time of writing most have come to a halt with widespread rainfall. Hopefully all hives are on high ground and safe.

On the 25th & 26th of November the Executive held a meeting at Tocal College, we were privileged to be the 1st group to use the brand-new training room at the NSW Bee research and training centre. What a fabulous set up, congratulations to all involved. Being at Tocal we took the opportunity to have lunch with and receive presentations from the following DPI staff, Steve Green, Kelli Lees, Mark Page, Slavi Nenov, Madlen Kratz, Rod Bourke and Biance Giggins. It was a great to get and update and offer our support.

We also received an update Fron Alex Russel and Nick Geoghegan regarding the progress being made with the BPASS platform. It is pleasing to report that progress and improvements are being made with many issues rectified. Please keep communicating any issues that you have with the team.

We were also given a tour of the new extracting facility by Liz Frost, what a great training aid this will be, as well as being a vital part of Plan B, where queen performance and production can be accurately recorded and analysed.

Honeyland was once again discussed, the decision was made to proceed for this event in 2022. The NSWAA Honeyland stand, Honey Show and Beezebo have been moved by the RAS to Hall 5, rather than the Woolworths Dome, whilst this is disappointing, every effort will be made to make this move a success. Some pledges for donations of Honey have been received. Please consider donating, so that the promotion of Australian Honey can continue.

Our next Executive meeting will be held in Tamworth on Monday the 28th February 2022. We will be inviting two senior members and one up and coming member from each branch to attend. This will provide the executive with member feedback and allow members to see how meetings work and hopefully encourage them to stand for election to the NSWAA Executive in the future!

As there will be a congress held in Sydney during June 2022, we will not be holding a conference during 2022. Our AGM will be held at Rydges Parramatta on Tuesday the 7th of June preceding the congress. I encourage everyone to get in early and book accommodation. It promises to be a fabulous event coincide with the 200th anniversary of the arrival of honey bees to Australia.

Season's Greetings and Happy Holidays

Steve Cunial President NSWAA

NSWAA Executive Resposibilities

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Honey Bee Industry Development Officer Report

Madlen Kratz

Honey Bee Industry Development Officer Tocal Agricultural College, NSW Dept. of Primary Industries T: 02 4939 8948 273 E: madlen.kratz@dpi.nsw.gov.au

The swarming behaviour of honey bees

It is that time of the year again were swarm control becomes an important part of spring management extending into the early summer months. Swarming after honey production is the bees' strongest instinct.

Why do honey bees swarm?

Swarming is a natural behaviour of honey bees to reproduce when the "house" becomes to full (Figure 1). The swarming behaviour of honey bees is linked to:

- Colony size
- Change in worker age distribution
- Crowding of the brood nest
- Resource availability
- Overheating of the hive



Figure 1. Honey bee swarm on a bush about 15m from the original colony.

How do honey bees prepare for swarming?

In preparation for swarming workers construct specific cups, which are larger than worker or drone cells (Figure 2). The existing queen then deposits an egg into the typically 15-25 swarm queen cups. Workers feed the queen larvae with a special diet, royal jelly, produced from their head glands (mandibular and hypopharyngeal glands). Royal jelly on average contains 63% water, 14% protein, 18% carbohydrates and 6% fat by wet weight. Interestingly, the protein and water content are affected the least with the nature of the pollen eaten by nurse bees.



Figure 2. A queen cup that was broken open showing the larvae feeding on royal jelly (A). Queen cells (cups build and capped) located around the edges of brood frames circled in red (B and C).



Queens develop within 16 days of egg laying and the first virgin queen will be released from her cell within a few hours and up to ten days after the old queen has left, depending on the maturity of the developing queen. In fact, worker bees can delay the emergence of a mature encapsulated virgin queen following communication via tooting and quacking sounds taking place between the newly emerged virgin queen and any other queens that are about to hatch. This communication is believed to ensure the colony of the presence of a queen following any virgin queen "after swarms" (second or third swarms) that may take place. The rate of after swarming is related to the amount of sealed brood and the season when swarming occurs.

The segregation of the colony is also referred to as colony fission and it is a more structured process than one may think. So, the question is:

How do honey bees decide who gets to leave and who stays?

Firstly, researcher in the 1970's discovered that neither the young nor the old, but rather the mid-aged bees are more likely to swarm.

But there is another important factor. Queens are polygynous, meaning they mate with several drones on one or more mating flights. The queen's female offspring, "workers", are derived from fertilised eggs, unlike drones that carry the genetics of the queen only, from unfertilised eggs. For this reason, newborn workers can be related as full sisters or half-sisters, depending on the genetic material of the drone. So, what does the genetics have to do with swarming?

Workers to a certain degree are able to distinguish the relatedness of larvae and between full and half-sisters, as adults. Therefore, are closely related sisters more likely to swarm together? To test this hypothesis, artificially inseminated queens of known genetics where set up in experimental colonies by Getz et al. (1982). The colonies were then left to swarm and interestingly swarming occurred in a non-random fashion, where age group and kin recognition, recognising relatedness, played an important part. The study showed that about 73% of individuals that swarmed had unfrayed wings (which was linked to younger age) and about 70% were the closest related to each other.

The authors therefore proposed that multiple matings in some eusocial Hymenopteran queens (honey bees are eusocial insects in the order Hymenoptera) can enhance the rate of colony reproduction through swarming.



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Usually swarming results in one primary swarm and 1-3 after swarms per original queen per year, in healthy unmanaged colonies.

What happens once bees leave the original colony?

When the swarm first leaves the nest, the bees fly about in random directions within 50m of the original nest site. Once they settle down in a cluster with the old queen, the scout bees, approximately 5% of the swarm, search for a new nest site. Once a new nest site is "agreed on", the scout bees guide the entire swarm of as many as 10,000 bees to the new location.

Consequently, swarming results in a direct reduction in productivity of the original colony, due to the original colony having lost a large percentage of its workforce.

In fact, the productivity of the hive is impacted even earlier, prior to the actual swarm leaving!

What happens to the productivity of the hive prior to bees swarming? Swarming changes the whole

Generally, bees swarm because they are getting overcrowded. Not only is the population too large for their existing home, but bees also run out of storage space. Why, would

Swarming changes the whole dynamic of a honey bee colony. The change in behaviour has been described as early as Aristotle, who wrote: "When the flight of a swarm is imminent, a monotonous and quite peculiar sound made by all the bees is heard for several days".

you keep on shopping for groceries if your fridge and storage cupboards were full? Similarly, the level of stimulation for honey bees to gather food resources is reduced. This effect on hive productivity can occur up to several weeks before swarming takes place.

This is where the purpose of swarm management not only applies to stop hives from swarming, but even more so can be used as a strategy to continuously stimulate bees for increased production, through honey robbing and brood manipulations, if increased production is the goal. From a commercial honey producer perspective, once the colony thinks about swarming, honey production is compromised for the remainder of the production season.

Swarming signs

A few signs to watch out for:

- Queens cells (not to be mistaken with emergency cell cups) appear around the edges of brood frames
- Large bee population with large amount of brood present (about 50% sealed brood)
 - No space for new food stores

Swarm prevention

- Add more space e.g. by adding a super
- Restructure the hive e.g. brood manipulation
- Ventilation to decrease overheating
- Split the hive
- Remove swarm cells (too late, as prevention is better than stopping)

With special thanks to DPI Bee Manager Stanislav Nenov for discussions about swarming, and who has stimulated my thinking about swarming behaviour beyond what we generally talk about, colony reproduction.

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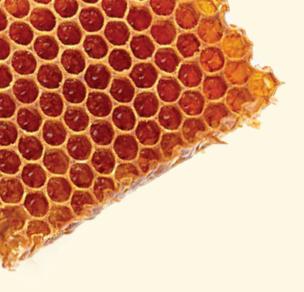
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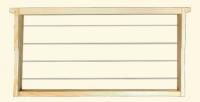


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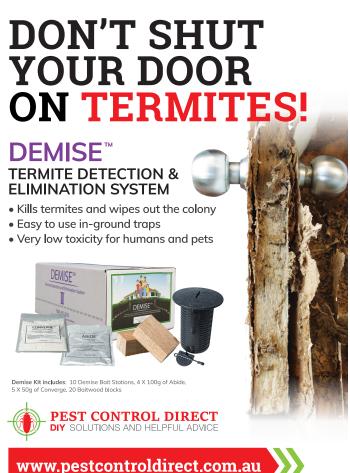
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Technical Specialist, Honey Bees Report

Elizabeth Frost

Technical Specialist, Honey Bees Tocal Agricultural College, NSW Dept. of Primary Industries T: 02 4939 8821 M: 0437 731 273 E: elizabeth.frost@dpi.nsw.gov.au

Tocal College Foundation Day Events

Foundation Day marks the opening of Tocal Agricultural College and the establishment of the CB Alexander Foundation. On 5 November 2021 we reflected on the wonderful bequest of CB Alexander and the vision and drive of the late EA Hunt from which Tocal Agricultural College was born. Foundation Day also celebrates Tocal College and Foundation achievements for the year. This year we also highlighted the first new farm enterprise at Tocal in quite some time, the bee enterprise and its associated infrastructure, the Bee Research and Training Centre.



Figure 1. Tocal Bee Research and Training Centre supports the National Honey Bee Genetic Improvement Program, Certificate III in Beekeeping training, nutrition research, biosecurity education and compliance.

Foundation Day attendees included Tocal's first apiarist Warren Millington who started as a beef lecturer, but got stung for life when he took up the task of removing an established hive from a tree. The honey bees reacted to his well-meaning efforts in a predictably aggressive manner. His first foray into honey bee behaviour did not discourage Warren however, and he increased his involvement in bees from there, eventually leaving Tocal and moving the entire family to go fulltime commercial beekeeping, based between Largs NSW and Thargomindah QLD.

We were honoured to have him in attendance, made all the more special that his daughter Wendy Franklin was awarded the Cameron Archer medal for services to agriculture and in particular her leadership role managing Tocal Field Days. Wendy has brought the Tocal Field Days into a new era as one of Australia's premier agricultural field days and promotes inclusion, student engagement, safety and can do-ability in everything she does. Every beekeeper or field day visitor to Tocal benefits from the groundwork laid by father/daughter duo



Warren Millington and Wendy Franklin. I wish to extend a sincere thank you to both Warren and Wendy.



Figure 2. Tocal's first apiarist Warren Millington (at right) of Largs/ Thargomindah and Technical Specialist Bees Liz Frost outside The Tocal Honey Shed.

The next generation of Tocal beekeepers coming through the ag college's Certificate III in Beekeeping will benefit from our most valuable education tool, a food safe, smallscale commercial extracting facility, called The Honey Shed for short. We've wasted no time since Foundation Day and have extracted 3 tonnes of Tocal honey so far from Plan Bee National Honey Bee Genetic Improvement Program hives under the management of Bee Manager Slavi Nenov and myself, and with the vital assistance of DPI staff, Tocal contractors and Certificate III in Beekeeping students. Plan Bee, the Certificate III in Beekeeping Program and bee nutrition researcher Madlen Kratz will use the new Bee Research and Training Facility for day to day research program operations and training the existing and next generation of small to large scale Australian beekeepers.



Figure 3. The Extraction Room houses the NZ Boutelje compact extraction system including a loosener for frame processing, 24 frame extractor, honey and wax centrifuges allowing honey to be pumped straight into a bulk container.

If you're interested in studying with us at Tocal College in either a one-off accredited beekeeping course or the full Certificate III in Beekeeping qualification we'd love to hear from you. Please get in touch at: T: 1800 025 520 E: beekeeping@dpi.nsw.gov.au

Additionally, if you're local to NSW or the Newcastle/ Hunter Valley and are interested in contract work with our Plan Bee team, have your proof of ABN and Public Liability Insurance handy and get in touch with Bee Manager Slavi Nenov (E: stanislav.nenov@dpi.nsw.gov.au) and myself (E: elizabeth.frost@dpi.nsw.gov.au) Happy beekeeping everyone!



Figure 4. (Left to right) Bee Manager Slavi Nenov, Honey Bee Industry Development Officer Madlen Kratz and Certificate III in Beekeeping student Frewoini Baume harvest honey.

Branch Meeting Dates

Sydney Metro

First Tuesday of every month at 7.30pm at Chifley College Bidwell Campus, Daniels Road, Bidwell.

Central Tablelands

January - third Tuesday April - third Tuesday July - third Tuesday October - third Tuesday

Riverina

Our meeting dates are usually in the first week of February, May, August, and November each year. Lately our meetings have been held alternatively between Wagga Wagga and Griffith.

Usually on the first Monday, when held in Wagga Wagga and on the first Thursday, when held in Griffith.

The venues change to suit availability.

North Coast

Meetings are generally held on the fourth Friday of every second month from February onwards (excluding December).

Workplace Mental Health

I recently attended a DPI orchestrated webinar on Mental Health in the Workplace.

Workplace Mental Health is now legislated in Work Health and Safety. A Code of Practice (COP) is detailed in the framework which is the minimum standard for the workplace.

Statistically:

- poor workplace mental health is a \$2.8billion pa cost to NSW,
- 62% of adults will have a mental health issue in their lifetime.
- 25% of workforce have mental health issues caused by the workplace, and
- 61% of NSW adults have felt helplessness, which is above the national average.

Code of Practice

The COP explains mental health in the workplace and most importantly provides examples. The Code also outlines:

- Common psychosocial hazards,
- Legal duties,
- Risk management, and
- How to respond to reports.

Examples of stressors in the workplace that may cause mental health issues are:

- Low job control,
- High or low job demands
- Uncertainty,
- Poor support,
- Low role clarity,
- Poor workplace relationships,
- Poor change management,
- Low reward and recognition,
- Unfair work practices,
- Bullying, and
- Workplace conflict & violence.

Mentalhealthatwork.nsw.gov.au is a great website for more information. This site provides information on:

- Legal obligations,
- Free training and coaching,
- Resources, and
- More details on mental health in the workplace.

https://www.nsw.gov.au/mental-health-at-work/workplace-pulse-check this website has a free Workplace Pulse Check – takes approx 5 minutes to answer questions and then rates your business for mental health.

Businesses that have a healthy mental health workplace typically have staff take fewer sick days and also have lower staff turnover. This results in a more productive business which equates to bigger **profits**.

Stephen Targett Nov 2021

Catch the Buzz

APIS FLOREA MAY POSE THREAT TO AUSTRALIA APIARY INDUSTRY

World's smallest honey bee poses huge threat to Australian Apiary Industry



Beekeepers have been urged to look out for dwarf honey bee nests, especially around Port Kembla and Wollongong where the world's smallest honey bee could pose a huge threat to the apiary industry and environment.

NSW Department of Primary Industries Chief Plant Protection Officer Dr Satendra Kumar said a nest of dwarf honey bees was recently found on a ship docked in Melbourne, but which had also previously docked at Port Kembla. "Upon investigation the nest was found to be without a queen, meaning there was a small possibility that a queen and swarm may have left the ship during its journey," Dr Kumar said.

"We're urging all beekeepers in the Illawarra to be on alert for suspect nests, which can be hard to spot as they typically form on branches surrounded by foliage.

"Dwarf honey bees, Apis florea and Apis andreniformis only grow to about 10mm long but they are highly invasive, aggressive and host several species of parasitic mites."

While the species does not carry the number one threat to Australian honey producers, the Varroa mite, they do carry the Tropilaelaps and Euvarroa mites which are major threats to European honey bees.

"It's critical that we do everything possible to protect our environment and bee industry from invasive bee species like dwarf honey bee," Dr Kumar said.

"If you see a suspect nest or bees, please report it to NSW DPI so that we can investigate and take appropriate action."

Dwarf honey bees have a thick red/orange or black thorax and alternating dark brown and white abdominal banding, with a clear wing colour with dark brown veins.

They are social bees which live in colonies of approximately 3,000 insects and swarm readily, making them a major threat to the Australian environment.

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- **Assembled Wired Frame**



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BEE BIOSECURITY OFFICER REPORT

NATIONAL BEE BIOSECURITY
PROGRAM

Rod Bourke - NSW Bee Biosecurity Officer NSW Department of Primary Industries - Biosecurity NSW Tocal Ag College, Tocal Rd Paterson NSW 2320 Ph: 02 4939 8946 Mob: 0438 677 195 Email: rod.bourke@dpi.nsw.gov.au



Why it is so important to do your Honey Culture Test (Part 1).

The Honey Culture Test (HCT) grows viable American foulbrood (AFB) spores contained within a honey sample and can give a prediction of how likely it is that the sampled hive(s) will have clinical AFB symptoms.

Under the Code of Practice all beekeepers running 50 or more colonies need to submit at least one pooled honey sample (containing honey from at least 20% of their hive numbers) each season for a HCT. For smaller operators who are worried about their potential AFB risk a HCT per apiary (or per hive if they have major concerns) may also supply them with valuable information.

Beekeepers who have not yet provided a pooled honey sample will be contacted by NSW DPI Compliance to follow up on this. A Penalty Infringement Notice for noncompliance with the Code is \$1000.

A colony is anything that normally has a queen in it, so whether you have nucleus colonies, mini-nucs, cell raisers, or regular production hives they all count towards that magic number of 50 hives on your bee registration. Most commercial beekeepers in NSW run many hundreds of hives.

For the up and coming beekeeper heading towards and past 50 hives, they may not yet be aware of their responsibilities, so they need to educate themselves on these requirements. When you reach 50 or more hives (colonies) you must update your registration promptly and start following the additional requirements that managing this number entails. There are a lot of beekeepers registered in NSW for lower numbers who actually operate more than 50 and need to update their bee rego and record keeping to reflect this.

Many new beekeepers expand very quickly and soon find that they do not have enough time, equipment and extracting capacity to keep up with managing the bees adequately, so when disease appears it can often become quite advanced without the beekeeper noticing.

As well as regular and thorough brood checks on every hive, a HCT can assist beekeepers to determine what AFB risks these hives currently have bubbling away in the background. One single AFB spore does not cause a hive to contract AFB, but as the number of spores within a colony rises through the hundreds of thousands and into the millions there will be a sharp increase in how likely it

is that a hive will start breaking down with AFB. A HCT lets you determine where your hives sit within this risk range and what additional management needs doing to keep them healthy, productive and profitable.



Well run bees are always a whole lot more profitable than loads of junk!

How to do a HCT

The HCT requires at least 75 mls (115 grams) of clean honey for the lab to conduct an accurate test, do not send smaller volumes than this. A plastic container is preferred over glass as it will be less likely to break during postage. It is also best to tape the lid closed and pack them securely to avoid any spillage of honey on the way. Each sample should be clearly marked with your bee rego or name and load or sample identification number, so you can trace it back to its source.

The most important thing is that it should be well mixed to accurately represent all hives that it came from. A number of examples on how you may obtain a well-mixed sample are as follows;

- clear all honey from previous loads out of the extraction line and settling tanks before filling with your next load of honey (to avoid any potential "contamination" from another honey source).
- Take a regular honey sample during each run through the extractor (from extractor outlet, sump or inlet into the honey tank) and place this into a larger container until the entire load is extracted. Mix that collected sample thoroughly and remove the HCT sample as well as a batch sample from that. Rest can be poured back into the settling tank.
- Alternatively when filling buckets, drums or IBC's from a single or combined honey source settling tank you can take regular samples during the pour and combine these as described above. If the honey is from 2 loads then mark that down so you can follow up both loads if it is a 1+ higher result.



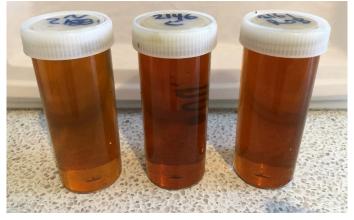
The National Bee Biosecurity Program is funded by the honey bee industry through a component of the agricultural honey levy, with state governments contributing in-kind resources. Plant Health Australia manage the program on behalf of Australian Honey Bee Industry Council.

- A settling tank with a good mixer may mean that the honey is already very well mixed and any sample will be a good representation of the entire batch. Due to its heavy density honey does not always mix easily or quickly, so don't assume that a few stirs with a stick or paint mixer actually achieved much to mix it up. Honey being pumped into a settling tank quickly stops mixing once it starts filling up, so it will not be well mixed either. Taking a single small sample from unmixed honey does not well represent your honey and may lead to an inaccurate test result.

- Another method is to use a plastic scraper to remove honey off the internal surface of the extractor wall or lid when each extraction cycle is finished and put this into a larger container. Some extractors will be harder to do that process on than others, and if you forget on one cycle then your sample will not be 100% accurate.

- There is an urban myth from some beekeepers that their 3+ HCT reading came from "a dirty IBC returned from the packer with some other guys honey left in it"... firstly 2-3 kg of "other" honey combined with 1400-1450 kg of your honey will not achieve a 3+ reading (the detected spores are yours), and secondly always clean out containers thoroughly before putting your own product in it.

You can find the EMAI lab submission form and info on HCT here https://www.dpi.nsw.gov.au/animals-and-livestock/bees/links



3 well mixed samples for 3 apiary sites. Just tape up the lids and they are ready to send off.

Doing it properly.

To get the most value out of a HCT you should firstly aim to collect sample honey from hives which you have not already identified as having AFB, so for the most accurate results you should undertake a full brood check prior to pulling that batch of honey. Any visibly infected hives should be removed (and destroyed) and their honey boxes put aside for extracting last (before then cleaning your plant). Do not include that honey in the HCT sample you submit for testing.

When extracting the honey from the "healthy" bees you can do a pooled test to determine how much more background AFB you may still have. If some of the 'healthy" hives in the apiary were not able to supply a box of honey to extract then mark them for further follow up, as they are not part of the results from the HCT.

You should know exactly which hives the honey came from. A sample of honey from an unknown source, honey you purchased from somebody else or honey you have adulterated (to try to conceal the true AFB spore loading) is a total waste of your time and money and has no information value for your own hive management. It also has to be asked why you don't want to submit a true sample of your own honey?

The normal results from a HCT are as follows;

Negative (meaning nothing was detected). The background AFB spore count is either zero or at a level below that which the test can detect. There is a low chance of finding AFB in the hives that supplied honey.

 $1+(1-20 \text{ AFB spores in the culture plate}) \sim 60\%$ chance of finding a hive with AFB in the hives that supplied honey.

2+ (21-49 AFB spores in the culture plate) \sim 80% chance of finding a hive with AFB in the hives that supplied honey.

3+ (50+ AFB spores in the culture plate) \sim 100% chance of finding a hive with AFB in the hives that supplied honey.

Part 2 of this article will cover what management processes a beekeeper should use once they get their HCT results back.

HCT gives you valuable information.

The most professional of beekeepers aim to take a well-mixed sample of honey for EACH and EVERY apiary or load of bees that they manage, as this gives them an excellent overview of the AFB health status of each apiary. In NSW the HCT costs \$42 per sample (a small cost per load of bees) but has many thousands of dollars of value to your operation.

If you test 2, 10, 20, 50 or even more loads of bees each with a HCT then that test still only costs \$42 per load, which for most commercial operators means an insignificant cost of between 29 and 35 cents PER HIVE (or 0.3% of the value of the very first box that hive produces each season!) If a beekeeper cannot afford that minimal expenditure to obtain such valuable information then they obviously aren't interested in running a good (or profitable) operation! It is concerning that some operators cannot justify such a small amount per hive to sample their honey and gain so much insight into the health of each load.



The National Bee Biosecurity Program is funded by the honey bee industry through a component of the agricultural honey levy, with state governments contributing in-kind resources. Plant Health Australia manage the program on behalf of Australian Honey Bee Industry Council.

Meat-eating vulture bees have evolved special gut bacteria to feast on flesh

By Katie Hunt, CNN Updated 1754 GMT (0154 HKT) November 24, 2021



Researchers found that the guts of vulture bees are rich in bacteria similar to what's found in vultures, hyenas and other animals that feed on carrion.

The vast majority of bees feed on pollen and nectar, but certain species have evolved to feast on meat, substituting dead animal carcasses for flower meadows.

To better understand this extreme shift in diet, scientists at the University of California-Riverside, Columbia University and Cornell University studied the gut bacteria or microbiome of the so-called vulture bees in Costa Rica. The researchers found that the bees' guts are rich in acid-loving bacteria similar to those found in vultures, hyenas and other animals that feed on carrion.

Their <u>study</u> was released on Tuesday in the journal mBio, published by the American Society for Microbiology Only three species of bee in the world -- all vulture bees -- have evolved to get their protein exclusively from dead meat, and they live only in tropical rainforests. However, there are other bee species that will consume fresh animal carcasses when available but also forage for pollen and nectar, according to the study.

Bees and gut bacteria

The guts of honeybees, bumblebees and stingless bees are colonized by the same five core microbes, and they have retained these bacteria for roughly 80 million years, the study noted. The researchers wanted to find out how the guts of vulture bees differed.

The scientists set up 16 stations baited with 50 grams (1.8 ounces) of raw chicken dangling from branches about 1.5 meters (4.9 feet) above the ground. To deter ants, they coated the string with petroleum jelly. They collected 159 bees in total, including, for comparison, bees that feed on pollen and meat and vegetarian bees that feed exclusively

on pollen and nectar.

After studying the microbiomes of the bees by extracting DNA from their abdomens, the researchers found that vulture bees had lost some of the core microbes most bees have and developed a more acidic gut.

"The vulture bee microbiome is enriched in acid-loving bacteria, which are novel bacteria that their relatives don't have," said Quinn McFrederick, an assistant professor and bee specialist at UC Riverside and an author of the study.

"These bacteria are similar to ones found in actual vultures, as well as hyenas and other carrion-feeders, presumably to help protect them from pathogens that show up on carrion."

He added that bees that feed on both pollen and carrion had different types of bacteria when compared to either the strict pollen feeders or strict carrion feeders. This suggests either they harbor a greater diversity of microbes in response to their diverse diet or that they are exposed to a greater diversity of microbes when visiting both flowers and carrion.

One of the bacteria present in vulture bees is Lactobacillus, which is in a lot of humans' fermented food, including sourdough, according to a news statement. They were also found to harbor Carnobacterium, which is associated with flesh digestion. Though they feed on flesh, the researchers said that the vulture bees' honey is still sweet and edible.

"They store the meat in special chambers (in their hives) that are sealed off for two weeks before they access it, and these chambers are separate from where the honey is stored," said Jessica Maccaro, a doctoral student at UC Riverside who also took part in the study, in the statement.

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SPITWATER distributors in Adelaide, Brisbane, Melbourne, Perth and Sydney and dealers Australia-wide are proudly promoting a new look logo, colour scheme and brand promise on their buildings, vehicles and, indeed, the **SPITWATER** pressure cleaners themselves.

"It's been some decades since we've updated the brand. We are doing it now because we want to create a new and exciting future for the next generation," says Prue Martinotti, General Manager of the Spitwater Australia factory in Albury, NSW.

The new branding is being launched with marketing campaigns celebrating the 'Same rugged reliability. Brand new look and just how "Tough + Ready" a **SPITWATER** is to do the dirty work.

SPITWATER is an enduring manufacturing success story in Australia, where most competitor products are produced offshore and made with global markets in mind.

SPITWATER's Australian-ness is central to its values. Being an owner of a **SPITWATER** is being a customer for life. Innovation suggestions are taken from customers, ensuring that the company builds resolutely to get the job done for Australian industry.

The **SPITWATER** factory is undergoing a rebrand too and name going forward will be **OTTICO Equipment**, a blend of the founders' family name 'Martinotti' and the word 'company', representing the innovative culture originally created by the Martinottis and continually shaped by the collaborators and contributors that have made **SPITWATER** what it is today.

The new **OTTICO Equipment** name creates a distinct identity for the factory so it can broaden its product scope and develop its other brands, the likes of **JETFIRE** space heaters, **VACSTORM** vacuum cleaners and so on, whilst still innovating and improving the jewel in the crown, **SPITWATER**.

Of pride is the number of small Australian family businesses built on the back of a **SPITWATER**. Seeing the likes of roof cleaners, rural contractors and even bee keepers start successful family enterprises using something originally created in Albury is particularly rewarding for everyone involved.

Even with the brand changes and innovations, the core of **SPITWATER** remains unchanged. Same owners and the same teams, producing the same ruggedly reliable quality Australian manufactured products and solutions.

[END]



* * .*

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1001	¢50.00



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AUSTRALIAN HONEY BEE INDUSTRY COUNCIL INC (AHBIC) UPDATE

Full newsletter available from http://honeybee.org.au

NEWS FROM THE CHAIR, Trevor Weatherhead AM

1. At this point in time AHBIC is still in consultation with the Department of Agriculture, Water and the Environment (DAWE) regarding what are acceptable as honey tests. You will recall there was a series of motions put to the AHBIC AGM and the AHBIC Council has been provided with the replies.

Basically what DAWE said was that they cannot confirm whether NMR can be used to detected honey treated with resin technology, LC-HRMS and NMR can be used to detect adulteration but is not yet recognised internationally as a regulatory tool. Work is currently being undertaken here in Australia and internationally to have these two tests being able to be used for regulatory purposes.

I took part in the International Conference on Food Analysis and from the presentations it seems likely that we will not rely on just one test but it may be several tests that have to be undertaken.

2. A beekeeper sent me a photo of a bee on a flower which looked like it may have had a mite on it. This was taken at Highvale in Brisbane. Looking at it it seemed to me that it was a similar to the case we had in Newcastle where the scutellum of the bee made it look like it was a mite.

I am not in a position to make a judgement on this and I advised the beekeeper to contact the Exotic Plant Pest Hotline. The beekeeper sent an email to the hotline. The Queensland Department of Agriculture and Fisheries (QDAF) contacted the beekeeper, as the report originated in Queensland. QDAF provided the photo to experts who considered that it could be the scutellum of the bee, but they decided to adopt a cautious approach and sample known bee hives in the area. Local beekeepers were contacted and samples taken. To date no exotic mites have been detected. My thanks to the beekeeper for reporting this incident. Whilst it seems at this stage likely to be a good outcome for our industry, it emphasises that we must be vigilant at all times and if there is any suspicion to report it to the Exotic Plant Pest Hotline. Better to have a series of negative results than have a positive infection go undetected. I would also like to thank QDAF for their swift actions.

3. AHBIC has received a reply from the Australian Competition and Consumer Commission (ACCC) re the purity of imported beeswax. Whilst they are taking no action on some of the beeswax we found to be adulterated or contain residues, they are looking into one company.

We await the results of their enquiries. CEO Helen and I have been invited by ACCC to talk about any further actions that may be undertaken and we have taken them up this invitation.

In the meantime can I implore Australia beekeepers to be very careful when purchasing beeswax foundation. If it is online and cheap then I would not be buying it. The wellworn adage that "you get what you pay for" should apply here.

- **4.** Helen and I took part in the National Biosecurity RoundTable. Several interesting presentations but what stood out for me was the mention of making sure that checking takes place at the port of embarkation prior to goods being loaded. AHBIC has been pushing for this for many years now. It is better that they pick up any bees before they load them on the ship rather than hoping that they will be picked up when the ship arrives in Australia.
- 5. Our congratulation to Sarah Corcoran, the CEO of Plant Health Australia, for being awarded the Kim Ritman Award for Science and Innovation. This award was made at the recent 2021 Australian Biosecurity Awards.

NOTE FROM CEO, Helen Goodall

Congress

The Sponsorship and Trade Exhibition Prospectus has been launched for the 4th Australian Bee Congress: Celebrating Honey Bees - At the heart of a healthy Australia. Please visit the Congress website at https://australianbeecongress.com.au/

Adrenaline auto-injectors (EpiPens)

Following a magistrate's recommendation that beekeepers carry Adrenaline auto-injectors due to a death from stings in Tasmania, there has been much discussion with the AHBIC Executive, including input from the membership regarding access and the use of Adrenaline auto-injectors. The below websites provide further information, however please see the following summary:

- Adrenaline auto-injectors are a Schedule 3 Pharmacy Only Medicine, which means they can be purchased from a pharmacy without a prescription. It is understood the cost can range from \$70 - \$120 each. Please note Adrenaline auto-injectors are available on the Pharmaceutical Benefits Scheme (PBS) for patients diagnosed as being at high risk of anaphylaxis, however this requires a prescription.
- Adrenaline autoinjectors can last up to 1 to 2 years, however they must be stored at room temperature. Please note they should not be stored in the glovebox of a truck.

Expiry dates should be noted and do not use it if the adrenaline looks cloudy.

- Adrenaline auto-injectors are used to treat severe allergic reactions (anaphylaxis) in an emergency. They are designed to administer a single, fixed dose of adrenaline and can be given by anyone, including people who are not medically trained.
- The Australasian Society of Clinical Immunology and Allergy (ASCIA) offers free Anaphylaxis e-training for the community https://anaphylaxis.ascia.org.au/course/index.php

Further information can be found at the following websites:

- HealthDirect Epipen Auto-Injector https://www.healthdirect.gov.au/medicines/brand/ amt,59781000168101/epipen-auto-injector
 - Consumer Medicine Information pdf (tga.gov.au)

Pollination Biosecurity

Our Friend of AHBIC, Almond Board of Australia have worked with Agriculture Victoria and have published a 'Pollination Biosecurity' video outlining the requirements for sending hives to Victoria under the National Bee Biosecurity Program. Please see the link for the video: https://vimeo.com/594984588/ebba59116b

Bee Biosecurity Officer for Queensland

Dr. David Schlipalius is the Bee Biosecurity Officer for Queensland while Dr Rebecca Laws is on leave. David can be contacted at bee.biosecurity@daf.qld.gov.au

2021 National Biosecurity Forum

Recordings of the 2021 National Biosecurity Forum will be available soon at awe.gov.au/NBF.

AHBIC social media pages

If you have any of the below social media platforms please follow AHBIC and share with your friends.

Instagram: @australianhoneybees

LinkedIn: Australian Honey Bee Industry Council Facebook: Australian Honey Bee Industry Council

Twitter: @AustBee

Do you have a favourite Honey recipe? Would you like to share itin Australia's Honeybee News? Email the Editor honeybeenews@icloud.com

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When registering for assistance, please ensure you indicate you are a beekeeper.

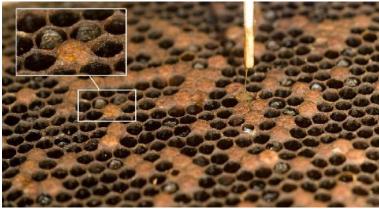
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Thanks to Katelyn Wall who snapped this sweet photo in her back yard!



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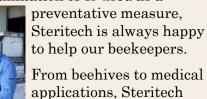
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