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Amateur  
Beekeepers  
Association  
NSW

# THE AMATEUR BEEKEEPER

NEWSLETTER FOR MEMBERS

AUGUST • SEPTEMBER 2020

## HIGH RISE HIVES

What to consider

Six tips for successful  
rooftop beekeeping

## SACBROOD

The forgotten brood disease

## FIXED!

The honey machine that  
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**HONEY: REVEALING ITS SECRETS**

**STINGLESS BEES' WONDER HONEY  
+ HONEY TRACEABILITY PROJECT**





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**Amateur  
Beekeepers  
Association  
NSW**

**Bee Swarms**

Need bees removed? Ask a local beekeeper who can help with bee-friendly advice

Check the online directory at [beekeepers.asn.au/swarms](http://beekeepers.asn.au/swarms)

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The *Amateur Beekeeper* is the journal of the Amateur Beekeepers Association of NSW Inc. It is distributed to members six times a year, in December, February, April, June, August and October.

The editor will consider adverts from businesses relevant to beekeepers to run free of charge where they contain a discount or special offer to ABA members. Please email [editor@beekeepers.asn.au](mailto:editor@beekeepers.asn.au)

Do you have a photo you'd like to be considered for the cover of the next issue. Send it in to [editor@beekeepers.asn.au](mailto:editor@beekeepers.asn.au)

# Behind the scenes

**Acting ABA president Sheila Stokes outlines what the association has been working on**



As we enter the third quarter of 2020, things are beginning to return to normal for our bees after fires, floods and heatwaves, whilst we beekeepers are still adjusting to our ever-shifting life without meetings, conferences, markets or field days.

With a healthy dose of optimism, the ABA executive, the Hunter Valley club and the DPI have been pressing ahead with plans for the annual Total Beekeepers' Field Day, which is expected to go ahead in some form or another in October. (See page 7)

If necessary the Total Field Day will become a virtual event, attended by beekeepers from the comfort and safety of their own laptops. And this is exactly how Sue Carney and I represented the ABA at the recent AGM of the Australian Honey Bee Industry Council.

After several years of campaigning, the ABA has finally become a fully fledged member of this peak industry body. AHBIC is responsible for developing policy and consulting with government on the rules that affect us all. We look forward to building a strong and constructive relationship with the commercial sector, and taking part in the decision-making process that impacts our hobby, as well as the entire industry.

As individuals with one or two hives in the backyard, amateur beekeepers might not see themselves as part of an "industry". Yet, as a group many thousands strong, we have an important role to play in the health and wellbeing of bees, beekeepers and farmers across the whole of Australia.

It has long been recognised that recreational beekeepers are well positioned to detect incursions of exotic pests and diseases, and it's great to see so many of our members practising and sharing skills such as sugar shaking and alcohol washing in preparation for the inevitable arrival of Varroa.

There's now no excuse not to polish up your knowledge of pests and diseases as it has just been announced that the industry-standard BOLT (Biosecurity Online Training) course is now FREE for all Australian beekeepers. Although the \$20 fee previously charged to amateur beekeepers was relatively low, we felt that it was a barrier to learning. The ABA welcomes the decision to remove the fee, and hopes that you will seize the opportunity to enhance your knowledge. See page 9 for details.

[Sheila Stokes](#)



**H**undreds of ABA members took part in our recent online quiz to test

knowledge of the [Biosecurity Code of Practice](#). The feedback? Members found it fun and learned a lot.

The quiz question that seemed to stump the most people was about how many brood frames – as a minimum – you need to inspect in each hive when you perform your required checks for pests and diseases. If you're not sure of the answer, you can check [here](#).

Congratulations to participants who won an ABA bee-motif keyring. Keyrings are on their way now to: Lynn Brink, Lisa Kirby, Paula Bradly, Robert Shaw, Belinda Biodich, Phonda Savva, Richard Madigan and Timothy Kotlar.

To take the quiz go to [kahoot.it](https://kahoot.it) and use PIN 09203516





## BEEKEEPING

# Rooftop adventures

Doug Purdie has advice for anyone with lofty ambitions

**J**UST PUT THEM on your roof, they said. If I had a bee for every time I have heard that I would have a whole hive buzzing away . . . on my roof! It seems that in Sydney, where space is limited and significant others are concerned about sharing a backyard with a beehive, the roof is the place for them. Or is it?

When I started in beekeeping I had great difficulty finding a space for my hives. After a long search, I made an arrangement with my local community garden to build a carport and put my bees on its roof. Carports are not designed for heavy loads so some engineering was done to support the weight of the bees and beekeeper.

It wasn't until my first harvest, when I discovered that honey is heavy and manhandling it down a ladder is difficult and dangerous, that one of the problems became apparent. Some years later at The Urban Beehive we look after many hives on rooftops and have experienced pretty much every problem with the concept.

So let's go through a few, to stop somebody suddenly finding their rooftop beehive inside their kitchen after a roof failure.

**1** **Bees are heavy and so are beekeepers.** You need to ensure the structure can take the weight – say 200 kilos of dead weight along with, say, 100 kilos of the average male beekeeper. That's a lot of load and few roofs are engineered to take that weight. My kitchen roof at home is a 1970s very-heavy-duty clip-lock steel roof (pictured top right) that now has a permanent bend from a beehive.



**2** **How will you get the bees on the roof and down again when the time comes?** We once put bees on a rooftop in Surry Hills. A nucleus went in nice and easy. When we had to remove the bees in summer for urgent roof repairs, they were now a full-blown hive that had to be lowered with ropes and pulleys down through a manhole. I can only imagine the problem if the rope broke. Lesson:

always have an exit strategy.

**3** **It's hot on a roof. Keep them cool.** If you have ever sat on a roof in summer, you would know how hot it is up there. It's *really* hot with reflected heat and radiated heat that lasts after sun-



down. Your bees need to be cool and need to be able to bring in cool air for hive airconditioning. So make sure the roof has shade such as a lift tower or building wall or something – or the bees will not be able to keep cool and may fail.



**4** **It's windy up there.** Roof tops can be windy places especially in cities, where the 'urban heat island' effect

causes strong afternoon wind currents.

We once put bees on Level 4 of a building in The Rocks. It was a great location with an awesome view. Once summer came, intermittent complaints started from a coffee vendor on the ground floor: he was troubled by bees swirling around.

Every time we went to look we couldn't find anything – because it was morning and the wind hadn't started. When I eventually witnessed the problem one afternoon, it was huge. The field bees from five bee hives were being blown off course and down to the coffee cart some four levels below.

We relocated the hives and fixed the problem, but we now always perform a wind survey before installing hives.

**5** **Water.** Your bees need to drink and need a continuous supply of drinking water to do this. So you must provide a water source and will need a tap for a good and constant supply.

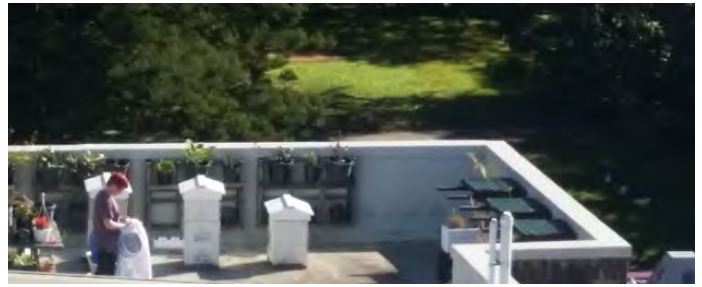
We use a modified dog bowl. It's essential that the mechanism is metal, not plastic – as the plastic ones fail in no time.



**6** Honey is heavy. Have a plan that doesn't involve ladders for getting the honey down off the roof. It's dangerous to be handling heavy loads on ladders. (I do wish bees made marshmallow honey!) We use 52-litre heavy-duty crates for handling honey frames. They make life easier and keep the honey and hive areas clean.

These are just some of the more important points to consider. There are many other minor issues to factor into your rooftop keeping.

The thing to remember is that beekeeping is supposed to be an enjoyable pastime. So make it an easy and safe activity for you and, of course, your bees!



**Q** Honey bees have been taking over my bush wild-life nesting boxes. Is there a way to deter the bees without discouraging the larger wildlife?

**A** This is a common occurrence, even when bees have sufficient cavities available in trees. My suggestion is to place the wildlife boxes so they are accessible, and make one panel of each box removable – with a hinge, screws or just pushed into place. This will make it easier to get to any feral honey bee colonies that take up residence in the boxes.

If bees do need to be removed, it will be important to clean out every scrap of beeswax left behind. This will make the box less attractive to other feral swarms

I am not aware of any deterrent methods  
- BRUCE WHITE

Do you have a beekeeping related question you'd like answered? Email us at [editor@beekeepers.asn.au](mailto:editor@beekeepers.asn.au)

**LAST ISSUE, Arthur Garske wrote about his experience finding huge numbers of small hive beetles in a hive fitted with a frame of artificial comb.**

Geoff Manning sent in these comments:

*"Arthur Garske's experience with the artificial beeswax was to be expected if one takes into account honey bee and small hive beetle biology.*

*It would be interesting if he had put four or five artificial combs into the super rather than just one jammed into the middle. Of course, a number of hives would be better, and the use of nicely cleaned up dry combs as comparison.*

*The bees had no real reason to use the new comb as he was careful to minimise any disturbance. The bees moving honey and nectar from the brood box to where they had been working were hardly interrupted. Business as usual.*

*The small hive beetles were presented with a refuge which they could occupy immediately and stay there quite happily.*

*It is for this reason we no longer make up nucs using empty comb, instead making up any spaces with comb full of something – honey or brood – or foundation. The bees will draw it when required and fill it with something."*



# Testing honey for AFB

Bacteriologists Ania Deutscher and Michael Hornitzky explain the process

**P**AENIBACILLUS LARVAE, the bacterium that causes American foulbrood (AFB), can lead to disease in beehives when nurse bees feed its spores to bee larvae less than 24 hours old.

The best way to check for AFB is to regularly inspect hives for typical signs of the disease. Testing bulked honey (a sample from multiple hives) for *P. larvae* spores is another useful way to identify the likelihood of AFB diseased hive(s) in an apiary, and it can pinpoint the disease at an early stage.

### What are *P. larvae* spores?

When nutrients are in short supply, *P. larvae*, like some other bacteria, forms spores. These are a dormant form of the bacterium, and are resistant to desiccation, chemical treatments and extremes of temperature. When environmental conditions are favourable, such as in the gut of young honey bee larvae, the spores germinate and multiply. They will eventually kill infected bee larvae.

### Testing for spores

The Honey Culture Test (HCT) is a powerful tool to detect AFB by identifying viable *P. larvae* spores. It is best carried out using 75 ml (approximately 110 g) of honey extracted from one or more hives in an apiary. Smaller honey volumes reduce the sensitivity of the test and affect the accuracy of the laboratory results.

The HCT method involves concentrating the bacterial spores by spinning the honey in a centrifuge, heating the concentrate to stop other bacteria interfering with the test, and innoculating specialised agar plates. The agar plates are incubated for four days at 37°C and then examined.



**Concentrated honey is transferred to a smaller tube before heating**



**A minimum of 75 ml honey is required for the HCT. The first two jars have less than 75 ml; the next four jars have more than 75 ml. When submitting honey in a 50 ml specimen jar (second from the left), two almost-full containers are needed**

*P. larvae* colonies have a distinctive appearance. Further testing is then performed to confirm the identification as *P. larvae*.

The *P. larvae* colonies are counted and the tally translated into a score that indicates the likelihood at least one of the hives the honey came from has AFB. If a HCT shows more than 50 *P. larvae* colonies, it is almost certain at least one of the hives is diseased with AFB.

More details about the HCT and AFB can be found

at [www.agriculture.gov.au/sites/default/files/sitecollectiondocuments/animal/ahl/ANZSDP-Honeybee\\_disease.pdf](http://www.agriculture.gov.au/sites/default/files/sitecollectiondocuments/animal/ahl/ANZSDP-Honeybee_disease.pdf)

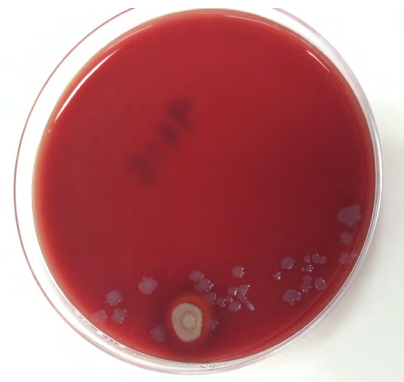
### Measuring the incidence of AFB in NSW

The NSW Bee Industry Biosecurity Consultative Committee recently developed an American Foulbrood Minimisation Strategy (AFBMS). This aims to reduce the impact of AFB on the NSW bee-keeping industry and on plant industries that benefit from pollination.

The bacteriology diagnostic laboratory at Elizabeth Macarthur Agricultural Institute (EMAI) carries out all bee disease diagnostics for NSW. In addition, this laboratory performs the HCT on honey samples for the AFBMS provided by commercial apiarists (via Hive + Wellness and Superbee), and from approximately 75 amateur beekeepers across NSW.

Yearly testing of honey samples from NSW commercial and recreational beekeepers is important to measure whether strategies to reduce the incidence of AFB in NSW are effective.

**Ania Deutscher and Michael Hornitzky are bacteriologists at the Elizabeth Macarthur Agricultural Institute (EMAI), Menangle, NSW**



**Agar plate showing two types of spore-forming bacteria cultured from a honey sample. The grey, predominant colonies are *P. larvae***

## NEWS ALERT

# 2020 Tocal Beekeepers' Field Day

**A**FTER multiple cancellations of beekeeper gatherings in recent months, we've great news! The 2020 Tocal Beekeepers' Field Day WILL go ahead, in one form or another.

If COVID-19 risks abate, the annual event will be held as usual on the campus of Tocal College, near Paterson, in the Hunter Valley, (with livestreaming available for anyone who prefers to 'attend' from home). If the usual face-to-face gathering - complete with trade stalls, honey tastings and sales - is not possible, the day will focus around the live-streamed presentations.

A decision is due to be made on the format in mid August.

This year's Tocal Beekeepers' Field Day is being organised by Tocal College and the NSW DPI, in collaboration with local club Hunter Valley Amateur Beekeepers, the Amateur Beekeepers Association of NSW and NSW Apiarists' Association.

## Honey Competition

**P**roud of your liquid honey harvests? Here's an invitation to enter the 2020 Tocal Honey Competition and compete with beekeepers from near and far afield. Due to COVID-19 constraints, the contest will be entirely "contactless" this year.

Entries are open in three categories: Light, Medium and Dark honey. Two 500 g jars are required per entry and must be received by post at Tocal by close of business on 6 October, 2020. Honey will be judged prior to the Field Day and results will be announced during the event on 17 October.

There's a \$5 fee per entry. Application forms will be available soon at [www.tocal.nsw.edu.au/news-and-media/events/2020-tocal-beekeepers-field-day](http://www.tocal.nsw.edu.au/news-and-media/events/2020-tocal-beekeepers-field-day)



# Tocal Beekeepers' Field Day

**A free event at Tocal College and livestream  
from 9am Saturday 17th October 2020**

**Trade show, honey competition, honey tastings and sales**

**Food and Coffee available all day**

Enquiries: email [tocal.bees@dpi.nsw.gov.au](mailto:tocal.bees@dpi.nsw.gov.au)



Department of  
Primary Industries





# REGULATIONS

## Rego rules

### A strange legal detail

**D**ID YOU READ the letter recently sent by the DPI to all NSW registered beekeepers? It pointed out the new requirement to follow the [Code of Practice](#).

This shouldn't have come as any surprise to ABA members, as we have been flagging the change for many months.

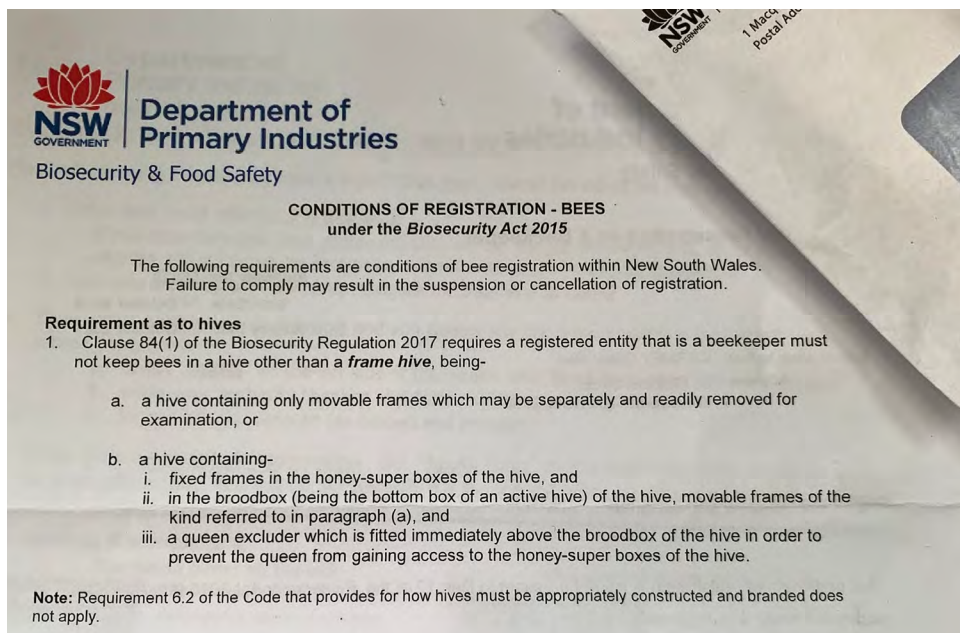
But details in the notice's accompanying documents have stumped many.

The *Conditions of Registration - Bees*, sent along with the notice, details (1 b) a hive system with fixed frames in the honey supers. (See image above)

Think about it for a moment: how would that even work? Why would you want bees to store honey on frames that can't leave the box? The rule doesn't even apply to Flow hives as, although Flow frames don't need to be lifted out to harvest the honey, they can be removed one-by-one if necessary.

No, the answer to this puzzling section of the current Biosecurity Act stretches back more than 50 years, to novel extraction equipment pioneered by Roger Blackwell, a beekeeper in Kempsey on the NSW mid north coast.

In 1967 Roger was keen to learn about anything that would speed up the laborious harvests in his 400-hive apiary. So when he came across a demonstration of an automatic decapper and extractor that could handle



72 supers at a time, he jumped at the idea. Blackwell went into partnership with the Californian inventor Arthur Harrison, and together they imported one of the \$11,000 machines.

It was to be the only such machine ever put to use in the Southern hemisphere. Beekeeping historian Fred Benecke described it in *Honey business: a short history of beekeeping in NSW in the second half of the 20th century*:

"Specially built honey supers, six and five-eight inches deep, had fixed frames that were spaced to match a multi-bladed uncapper. Full supers were trolleyed into position, lifted automatically to a conveyor that carried them past the uncapping blades then down the other side to be moved to the extractor. The extractor looked something like a king-sized rotary clothes line with twelve hinged super trays hanging from it. Each tray was loaded with six supers and as the machine gathered speed the trays swung out into a horizontal plane and the 72 boxes of honey it held were extracted. Honey was held in the bottom of the super trays and emptied automatically when the trays returned to the vertical plane."

Roger Blackwell had to seek approval from the government to introduce the fixed-frame supers. Approval was granted on the condition he used movable frames in his brood boxes and queen excluders below the honey supers. It was written into legislation and remains there to this day.

The wonder machine? It enabled the Kempsey apiary to expand to over 3000 hives in seven years, and served Roger, and then his sons Zane and Quintin and grandson Zac, well for 50 years. Several years ago it was decommissioned and dismantled, overtaken by technologies and revised food and health regulations.

Otherwise, fixed-frame honey supers never caught on. Even though the law still allows!

THANKS TO BRUCE WHITE, AND ZANE AND SHARYN BLACKWELL FOR THEIR HELP WITH THIS STORY



PHOTO COURTESY OF MACLEAY ARGUS

**Roger Blackwell loading his rule-changing extractor in the early 1970s.**



## BIOSECURITY

# The lesser known brood disease

## Dave Wilson explains the basics of Sacbrood

**N**EW BEEKEEPERS soon learn about the perils of American Foulbrood (AFB), its cousin European Foulbrood (EFB) and the strange mummies of Chalkbrood. Having knowledge of these problems is essential for all beekeepers, but the diseases represent only three of the four significant brood diseases Australian beekeepers may encounter. The missing one: Sacbrood.

Sacbrood is a viral disease that primarily affects worker larvae. It causes an uneven brood pattern, with sunken, discoloured or perforated cappings scattered across the brood area. These symptoms are quite like those of AFB.

Scientists believe larvae are infected via brood food that has been infected with Sacbrood virus. The virus multiplies rapidly in each larva's gut. This causes the larva to die shortly after its cell is capped. At first the larva takes up a position with its head pointing up near the top of the cell. Normal larvae lay in a coiled banana shape at the base of the cell. The image (left) shows



both normal larvae and an infected one.

Over time, the skin of the infected larva gradually fills with fluid and resembles a sac measuring 2 to 3 millimetres

across, sitting in the base of the cell. This can be seen if either you or worker bees remove the wax capping. Dead larvae are easy to remove.

As a infected larva decays, it dries to a brown or black scale that remains loose in the cell.

Sacbrood virus may remain viable in dead larvae, the sac of fluid, the scale, honey or pollen for up to four weeks. It can be present in adult bees if brood is sparse or absent.

While in the past Sacbrood was a more serious issue for beekeepers, it remains a disease that should be recognised. It is endemic in Australia but is more noticeable in spring when brood rearing is most active. Spring is a stressful time for bees, with the queen increasing her egg laying rate but often with insufficient supplies of nectar and pollen.

Often Sacbrood is missed when checking the brood in spring, and as conditions improve, the disease diminishes.

Sacbrood is often confused with AFB: the patchy brood pattern visible with both diseases is quite



similar as a dried brown-to-black scale at the bottom of cells is the final result of larval decomposition. Note that with AFB the scale cannot be removed, while with Sacbrood the scale is loose.

Persistent Sacbrood can be treated by improving the diet of the colony with sugar and protein feeding, or by requeening to produce worker bees with improved genetics and greater resistance to the disease.

ROB SNYDER, WWW.BEEINFORMED.ORG

## TRAINING

# Free online course



**R**ECREATIONAL BEEKEEPERS can now take the Australian Biosecurity Online Training course (BOLT) at no cost. (Previously it was free only to commercial beekeepers, defined as those with 50 or more hives.)

The course takes around 90 minutes to complete and provides information about keeping your honey bees healthy, looking for pests and diseases, and some measures you can use to protect your apiary.

Go to [honeybee.canopihr.com.au](https://honeybee.canopihr.com.au) to enrol.

The course supports the [Australian Honey Bee Industry Biosecurity Code of Practice](#). The development of the course was funded by AgriFutures Australia, and delivered by the Australian Honey Bee Industry Council, state and territory governments, and Plant Health Australia.

FOOD AND ENVIRONMENT RESEARCH AGENCY (FERA), CROWN COPYRIGHT

## INVETERATE INVENTOR

# Carrying frames

**A** FULL DEPTH frame of capped honey often weighs in at over 2.5 kilos. This makes a full eight-frame honey super way too heavy for many beekeepers to lift.

A carry box will cut the load in half.

In an earlier article the inveterate inventor developed homemade carry boxes (pictured below) constructed from form ply.



These boxes hold four full-depth frames – a far more reasonable load for part-time beekeepers. Having a sealed base means that, once the box has been

filled with harvested frames, leaking honey is contained and not spread over the trailer, ute or, worse still, the seats of the car.

These carry boxes work well, but construction re-



quires accurately cutting pieces of form ply and good wood working skills.

Woodwork not your forte?

Why not use a plastic storage crate fitted with dowels at the

ends to carry the frames? Such a box is easy to make using two lengths of plastic covered dowel and a couple of plastic dowel end-caps.

Again, no honey leaks; it is easy to clean; and you select a crate that suits the number of frames you



want to carry. Few woodworking skills are needed.

The Inveterate Inventor thanks LP and PC for the idea.

## EDUCATION

# Watch and learn

Pick up invaluable tips without leaving home

**B**RUCE WHITE, the ABA's biosecurity officer and member of Illawarra Beekeepers features in a series of videos filmed by club member Emmanuel Farrugia, to explain the basics of beekeeping. Topics covered in the YouTube series so far: [wintering bees](#), [moving hives](#), [rendering wax using basic kitchen equipment](#), and [methods of feeding bees](#). Find them at [illawarrabeekeepers.org.au](http://illawarrabeekeepers.org.au)



## SYDNEY BEE SHOP

Based in Matraville, The Urban Beehive specialises in Australian made woodware and equipment. We personally use and have tested all our products.

Get yourself ready for swarming season with our \$50 swarm management course. Check our website for details.

For your ABA discount please use code ABA20. Save time – order online for instore pick-up or we can deliver for \$10 in Sydney.

[shop.theurbanbeehive.com.au](http://shop.theurbanbeehive.com.au)



U21, 19 McCauley St, Matraville 2036

Phone 02 9232 5600 Open Thurs to Sat 10 – 3 or by appointment at other times.





## Recordkeeping essentials

NSW Department of Primary Industries **Bee Biosecurity**  
**Officer Rod Bourke** explains what you need to do:

A lot of very successful beekeepers keep great records. But I've been surprised by the large number that keep very few records or don't keep any at all.

For years it has been a legal requirement in NSW for beekeepers to keep adequate records. So with NSW now also adopting the Australian Honey Bee Industry Biosecurity Code of Practice (the Code) as a condition of registration, it's even more important that beekeepers address any deficiencies in their recordkeeping. This is going to be a big challenge for some, so the best time to start is RIGHT NOW.

Many beekeepers use beekeeping apps to record their hive data. These can vary from the quite simple to the information rich. Whilst these forms of technology have many benefits for those that use them, it's not a system for everybody. If you are only just starting recordkeeping, one of the best ways to keep information is to fill in a basic sheet every time you visit your hives and undertake work.

**Most importantly you need to cover off all your requirements under both the NSW Biosecurity Act and the Code, so the most important information that you really do need to list is:**

- Date and location
- Number of hives on site and overall strength
- Biosecurity concerns discovered (hives being robbed, sick/dead bees, signs of diseases)
- Brood inspections or mite surveillance undertaken
- Number of weak hives or hives with notifiable diseases and the biosecurity actions you took to manage and report them (to DPI)
- Hive movements to another location. (Remember that all nuc, hive, package and queen trades also need to be recorded, including receivers' beekeeper rego details.)

**Other information that can help your beekeeping includes:**

- Type of bee work you undertook on the day
- Honey boxes added/taken off, or put above clearer boards to be taken off next time
- Any hives split, queenless, swarmed, managed as weak etc.
- Estimated date for next visit (especially important during spring)
- Nectar and/or pollen sources currently being worked or possibly starting soon
- Supplemental feedings/follow up requirements
- Small hive beetle management
- Other (which covers everything else!)

By keeping these records you will be better able to manage your hives, brood checks and ultimately run better bees, as your chances of "forgetting about some" are greatly reduced.

Preventing problems with your bees by undertaking regular management is a far better approach than fixing problems once they get worse, as the longer you leave things the more likely that hives become weakened and robbed. By keeping good records and following up in a timely manner you can avoid the commonly made mistake where bees are left for too long between visits.

All beekeepers need to rise to this new recordkeeping challenge, as it is a legal requirement and must be followed, or the consequences faced.

NSW Bee Biosecurity Officer Rod Bourke can be contacted on 0438 677 195 or [rod.bourke@dpi.nsw.gov.au](mailto:rod.bourke@dpi.nsw.gov.au)



**Filled your 2020/21 ABA hive log book already?**

Extra logbooks are available at our online store at [beekeepers.asn.au/shop](https://beekeepers.asn.au/shop)  
Members can download free extra record-keeping sheets at [beekeepers.asn.au/sign-in](https://beekeepers.asn.au/sign-in)

## HONEY

# Native bee honey's wonder ingredient

## Scientists discover a rare and healthy sugar in stingless bee honey

**N**ATIVE STINGLESS bee honey contains a sugar with special health properties that is not commonly found in any other food. This sugar may account for the prized reputation the honey has within indigenous communities in countries where stingless bees live.

A research team led by University of Queensland organic chemist Associate Professor Mary Fletcher tested honey from two Australian native stingless bee species, two from Malaysia and one from Brazil. The team found that up to 85 per cent of the honey's sugar is trehalulose, not maltose as previously thought. Trehalulose is not found as a major component in any other foods, and is remarkable for its low glycaemic index (GI).

"Traditionally it has been thought that stingless bee honey was good for diabetes and now we know why," Dr Fletcher explains. "Having a lower GI means it takes longer for the sugar to be absorbed into the blood stream, so there is not a spike in glucose that you get from other sugars. Interestingly trehalulose is also acariogenic, which means it doesn't cause tooth decay." It is also a highly active antioxidant.

The findings could strengthen the stingless bee honey market and create new opportunities.

"Stingless bee honey sells now for around \$200 per kilogram, which is up there with the price of Manuka and Royal Jelly," Mary Fletcher explains.

"The high commercial value also makes it a risk for substitution, where people could sell other honey as stingless bee honey, or dilute the product. But due to this research, we can test for this novel sugar, which will help industry to set a food standard for stingless bee honey."

The work of Dr Fletcher and the research team has led to a new project funded by AgriFutures Australia and supported by the Australian Native Bee Association.

Working with Dr Natasha Hungerford from UQ's Queensland Alliance for Agriculture and Food Innovation



***Honey produced by stingless bees is known by various names such as Meliponine honey, pot-honey, sugarbag honey (in Australia), and Kelulut honey (in Malaysia)***

and Dr Tobias Smith from the School of Biological Sciences, scientists will investigate storage and collection, to optimise the trehalulose content of Australian stingless bee honey.

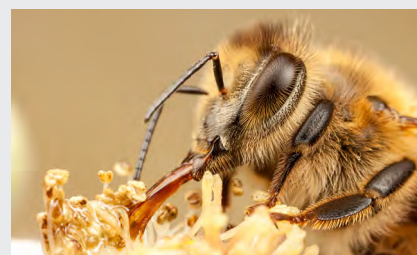
## Building a honey library

### Work is underway to strengthen and protect the Australian honey market

**R**ESearchers are busy collecting thousands of Australian honeys to form a national reference library. Starting with honeys from Western Australia, and with plans to expand the collection to cover the entire country, scientists aim to analyse each sample to determine its unique chemical 'fingerprint'. Other honeys can then be matched against stored profiles to determine their authenticity.

Honey is a complex substance, as any beekeeper knows. And the character of any batch depends on a combination of factors, including the location of hives, local floral sources, and seasonal conditions. Collecting reference honeys will be a lengthy task (for example, Karri trees have a major flowering only every 20 years). But without a standard to measure against, genuine producers are left vulnerable in an international market increasingly tainted by fraudulent and adulterated products.

This fact was painfully highlighted two years ago when samples of Australian honey bought off the shelf from major retailers were sent overseas for analysis. European labs lacking samples of Australian honeys in







## BOOK REVIEW

# Teaching about bees

**J**IM WRIGHT is a longtime member of the Hunter Valley club and is a life member of the ABA.



He has authored *About Bees*, a collection of beekeeping articles previously published in various journals. He also wrote the definitive text on the history of the ABA, *The Amateur Beekeepers Association of NSW – History, Activities and Achievements 1954 – 2017*.

Recently Jim has written two excellent texts on beekeeping for primary and high school students.



*All About Bees* is a small, introductory book with a language level suited to late primary students. *Bees and Beekeeping* is intended for teens: the content is wider ranging, with attention to the biology of bees and details on beekeeping.

Any beekeeper who has helped out at a local show will have seen the fascination bees hold for children and early teens. Yet the questions visitors to beekeeping stalls ask often indicate very limited knowledge of bee biology and the vital role bees play in food production. Where better to start than with the education of children?

Both books are factually correct and are written from an Australian perspective. At over 100 pages, *Bees and Beekeeping* has broad coverage of essential bee biology and details of Australian beekeeping. It includes chapters on the evolution of bees and the way European bees arrived in Australia.



*All About Bees* is some 42 pages and would be great book to read to younger children. Topics such as swarming, beeswax, honeycomb and Australian native bees are covered.

While some modern children's books look remarkably like a website on paper, these two books are written in the traditional manner, with text and a range of appropriate supporting images.

Both books are published by Northern Bee Books. *All About Bees* is around \$19. *Bees and Beekeeping* is around \$37.50.

Review texts were supplied by the author

**Reviewer: Dave Wilson**

their reference databases, returned negative results. The tests were subsequently discredited, but the reputation of local honey producers had by then been damaged by a wave of negative publicity.

A local honey database should head off such problems in the future. It will also help the honey industry develop a robust system for tracing honeys 'from hive to table'.

[The Honey Traceability Project](#) is being run by the Cooperative Centre for Honey Bee Products. This is a federally funded organisation which aims to resolve industry problems that limit both the value and expansion of the Australian honey bee products industry. It sponsors research ranging across bee health, honey products, hive sites and chain of custody issues. Details can be found at [crchoneybeeproducts](#).

## CLUB NEWS

### BIOSECURITY TRAINING

YOUR CLUB has been invited to participate in a special ABA biosecurity meeting on September 19. Each club's biosecurity officer (or nominated representative) can dial into the online session.

This is a great opportunity to pick up important information, and discuss current issues with others.

Has your club sent in its RSVP?

### TEACHING FRAMES

THE ABA has purchased a set of teaching frame inserts for each club. These consist of 20 laminated photos that are ready to insert in hive frames (just like sheets of foundation). The stunning images are by the world renowned bee photographer Eric Tournet, a popular presenter at the 2019 ABA conference.



# Swarms register

We're only weeks away from that busy time of the year when bees get restless

**A**RE YOU READY for Swarm Season 2020? One of the benefits of ABA membership is that, if you are a competent swarm collector, you can put your name on our swarm register.

This is a valuable resource for members of the public looking for advice if they suddenly find themselves with a colony of honey bees clustering in their front yard, resting on the back fence, gathering under the kids' swingset . . .

Members on the register need to follow responsible methods to collect swarms so as to minimise nuisances to others, they must be prepared to do it as a community service (in other words, not offering their skills as a business) and they should be prepared to take calls from members of the public who may be worried, inexperienced with bees, or in need of a bee-friendly expert opinion.

To register as a collector you need to sign into the membership system via [beekeepers.asn.au/sign-in](http://beekeepers.asn.au/sign-in)

You will then have the option of listing the post-codes you can cover, and of adding a few details about yourself. The phone number you list will be visible to anyone looking for a swarm collector in your area.

To help spread the word about this service the



ABA has made the swarm register is easy to find by anyone searching for help via Google or other online search engines.

The ABA has also recently reprinted our business card sized swarm cards (see above). These display the web address and list basic points about swarms (on the reverse). Supplies of these cards are being sent to clubs in the next few weeks. Members can distribute them around the local community to help publicise the register and request more if required.

As beekeepers, we all have a responsibility to ensure our bees don't annoy others. (Who will get the first call about a new season swarm nearby?)

## CLUB NETWORK

For details of our network of 29 affiliated clubs across NSW and beyond, check out [beekeepers.asn.au/find-a-club](http://beekeepers.asn.au/find-a-club)

In normal times, many clubs welcome ABA members from a different region as visitors, so it's worth checking the calendar of events listed on many club web pages.

Know of beekeepers in an area not served by an existing club?

We are always happy to hear from beekeepers wanting to start a new group. Information is available at [beekeepers.asn.au/affiliation](http://beekeepers.asn.au/affiliation)



## MEMBERSHIP Q&A

**ABA FEE: CURRENTLY \$20**

**CLUB FEE: SET BY YOUR LOCAL CLUB**

**OPTIONAL INSURANCE: \$20**

**"WHEN'S MY NEXT RENEWAL DUE?"**

*Memberships and insurance purchased now carry through to 30 June, 2021*

**"WHY DO I NEED TO PAY AN ABA FEE AND A SEPARATE CLUB FEE?"**

*Each affiliated club is independent and sets its own fees to cover local operating costs. The ABA fee funds activities that benefit all clubs in the network, such as group insurance, IT systems, member packs and support materials.*

*The two fees are listed separately so that members can join multiple clubs and pay one set of ABA fees*

**"HOW DO I CHANGE CLUBS?"**

*If you are already a member of an ABA club, email [membership@beekeepers.asn.au](mailto:membership@beekeepers.asn.au) with details of the other ABA club you wish to join. We will send you details of the fees due to the new club.*

*Unexpired club membership fees are not refunded*



## ABA CONTACTS

# 2019 EXECUTIVE TEAM



**SHEILA STOKES**

[web@beekeepers.asn.au](mailto:web@beekeepers.asn.au)

ABA acting president Sheila is a web development professional who builds, maintains and supports all ABA IT infrastructure. She is also president of Hawkesbury Beekeepers. "Lobbying is the way to ensure recreational beekeepers' voices are heard."

**LYALL ZWECK**

[treasurer@beekeepers.asn.au](mailto:treasurer@beekeepers.asn.au)

Lyall is president of Bega Valley Beekeepers and has also been that club's treasurer. During the day, he is the finance manager for a gallery in Alice Springs, and on the weekend cares for a dozen colonies. He sees his role as "making the money make sense."



**VINCE SCHNYDER**

[secretary@beekeepers.asn.au](mailto:secretary@beekeepers.asn.au)

President of Northern Beaches Beekeepers and banker in a risk and compliance role, Vince likes the KISS principle: Keep It Simple Stupid.

His goal: "to simplify and streamline our processes so we have more time for beekeeping."

**BRUCE WHITE OAM**

[biosecurity@beekeepers.asn.au](mailto:biosecurity@beekeepers.asn.au)

Bruce retired from NSW DPI as Technical Specialist Apiculture after 41 years' service, 20 years of it managing the Honey Bee Quarantine Station. He's an active member of Illawarra Beekeepers. "We all keep learning. I'm happy to pass my knowledge on."



**SUE CARNEY**

[editor@beekeepers.asn.au](mailto:editor@beekeepers.asn.au)

Sue is a publishing professional with a lifelong fascination for bees. She is the founding president of Blue Mountains Beekeepers and keeps bees in Langstroth, Flow and Warré hives.

"Bees know it: cooperation and good communication are key."

**ANA MARTIN**

[ana.martin@beekeepers.asn.au](mailto:ana.martin@beekeepers.asn.au)

Ana is vice president of Manning Valley club and a member of Hastings Valley. Ana started beekeeping as a hobby in 2015 and has since turned it into a full-time business. "Supporting beekeepers benefits us all, but also it benefits bees."



**DAVE WILSON**

[education@beekeepers.asn.au](mailto:education@beekeepers.asn.au)

Dave is a former secretary of the ABA and has been on the committee of the Parramatta club since 2007. He has 15 bee hives in northwest Sydney.

Dave's motto: "Working hard has its own rewards."



**ARTHUR GARSKE**

[publicofficer@beekeepers.asn.au](mailto:publicofficer@beekeepers.asn.au)

Arthur has 48 years' experience with bees and is a founding member of the Parramatta club. A successful honey exhibitor around the state, Arthur now judges at shows and events.

"Detail and plain common sense go a long way in beekeeping."

## RUNNING THE ABA

The executive team is made up of volunteers who are elected at the AGM. They each take on a range of duties to represent members, provide services to individual members and clubs, and keep the organisation running smoothly.

Are you interested in standing for election at the next AGM?

This year's AGM has been postponed due to the COVID-19 pandemic. It will be rescheduled and details announced once large face-to-face meetings can be held safely.

All ABA members will be invited and are eligible to vote. This is your association!