

BEEKEEPERS.ASN.AU



**Amateur  
Beekeepers  
Association**  
NSW

# THE AMATEUR BEEKEEPER

NEWSLETTER FOR MEMBERS

April/May 2020

## AUTUMN TASKS

Sugar shake time!

AFB explained: how to keep  
hives healthy

Play it now  
**ONLINE QUIZ**

What do you know about bees?

## NATIVE BEE HOTELS

Good or  
bad idea?

## ABA CLUB CONTEST

**2020 RESULTS**  
OVERALL WINNERS +  
DEVELOPING CLUB TROPHY

April/May 2020

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**Amateur  
Beekeepers  
Association**  
NSW



**SUGAR SHAKE KITS**  
*Limited numbers of free kits have been sent to ABA clubs in NSW. If you do not already have a kit, please contact your local club secretary for details*

**13**



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)

Cover image of honeybee in Goulburn's Belmore Park.  
Photo: Sue Carney

Do you have a photo you'd like to be considered for the cover of the next issue. Send it in!

# Behind the scenes

## Acting president Sheila Stokes shares good news about fresh ways the ABA is helping to support members

Beekeepers, like everyone, have had a lot thrown at them in recent months. First it was the devastating drought, then the unprecedented fires and floods. And now we're all adapting to strange new daily routines, as Australian communities rally to rein in COVID-19.

Thankfully, as beekeeping is often a solitary occupation, many of us can continue to tend our bees at home without contravening social distancing regulations.

In New Zealand, the government is using the phrase "physical distancing", which is a great way to emphasize it's still important to maintain our social connections. So it's great to hear that beekeeping clubs are dreaming up clever ways to keep members connected while face-to-face meetings are off limits.

Online meetings of committee members, phone helplines, extra bulletins, contactless shopping (where clubs run a supplies store) or a steady stream of Facebook posts. . . they all demonstrate how, across our network, generosity – and concern for each other's bees – abounds.

So what's the ABA been up to? In one sad week we had to announce the postponement of our AGM and associated social events, cancel arrangements for our

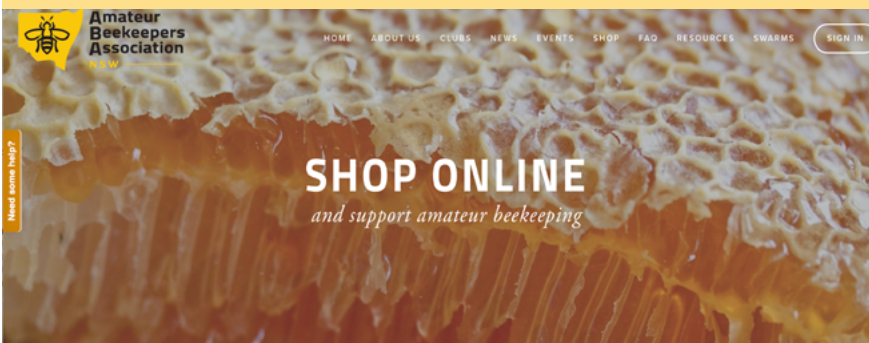
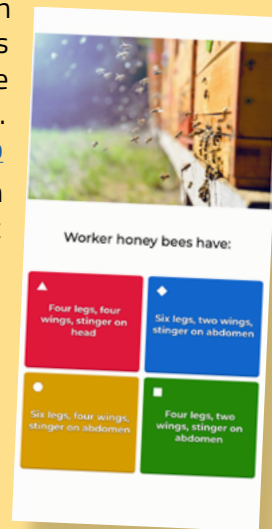
were expecting to stand down at the AGM) are busy supporting individual members and existing clubs, and even helping two new clubs get ready to affiliate. (Fingers crossed, more news of this very soon.)

- Biosecurity officer Bruce White is ready to send new batches of members' honey off to be tested for AFB spores – a vitally important project to help map the incidence of AFB in the state. (p12)

- We're continuing to send out orders placed through our online store. Big sellers at this time of the year are apiary warning signs – corflute notices that more and more beekeepers are using to flag the presence of hives and bees on their property (A few copies of last year's log books are also available at a bargain \$5). [beekeepers.asn.au/shop](http://beekeepers.asn.au/shop)

- We've been working with the DPI and local clubs to get 350 free Sugar Shake kits into the hands of beekeepers across NSW to tie in with April Sugar Shake month promotions. (p13-14)

- In this issue we're launching our first ever association-wide online beekeeping quiz. Now, everyone can attempt the questions from the final round of the Colonel Pulling interclub competition. The quiz is hosted on Kahoot! – which is free and easy to use. (p6) And we're working on more quizzes like this to release soon.



- ABA Bee Shorts, our bee-themed short film competition lives on. Why not have a go! Smart phones can capture fabulous video, and editing software is simple to use. (Anyone at the screening of last year's entries will recall some fabulous five-minute movies, several from first-time producers!)

Bee Shorts runs to May 29 and costs \$10 – \$20 to enter. All money raised is returned as prizes. Anyone can enter. (p15)

Finally our congratulations to all clubs who joined in this year's Colonel Pulling interclub competition (named after the founder of the ABA and legendary Sydney beekeeper Colonel Guy Pulling).

Four different clubs took out top spots in the four rounds, so it's fitting that three of them ended up sharing the two trophies when all scores were tallied. Who takes home the 2020 honours?

Turn to page 4 for the big reveal.

Festival of Bees and conference, and then send out a series of notes to speakers, hosts and members, along with refunds for tickets.

But there's an upbeat side to all this: when we can begin to organise events again, we'll have a list of exceptional speakers keen to share their ideas – and loads of pent-up enthusiasm!

Meanwhile, just like many clubs, we're not idly waiting around for routines to return to normal:

- Members of the ABA committee (some of whom

# 2020 Club Competition Winners

This year's interclub contest was a little different. The competitive spirit was as strong as ever

First, we tweaked the categories and the rules to make it easier for all clubs spread across our wide network to enter. Then COVID-19 restrictions forced us to postpone the AGM and rethink staging of the final (quiz) round. But the good news is that ten clubs competed, and entries were of a high standard – a huge credit to the many skilled, innovative and creative beekeepers across the ABA in 2020. We applaud everyone who took part. And we congratulate our winners!

## Round 1 Liquid Honey

<i>Illawarra</i>	<b>178</b>
<i>Hawkesbury</i>	<b>177</b>
<i>Central Coast</i>	<b>175</b>
<i>Hastings Valley</i>	<b>173</b>
<i>Hunter Valley</i>	<b>171</b>
<i>Parramatta</i>	<b>170</b>
<i>Blue Mountains</i>	<b>169</b>
<i>Far North Coast</i>	<b>160</b>
<i>Manning Valley</i>	<b>160</b>
<i>Orange</i>	<b>157</b>

The quality of the honey entries this year, in the face of the severe drought, was very good, reports honey judge, Arthur Garske.

To keep things simple and easy to post, clubs were asked to select two liquid honey classes to enter, and entries were

marked out of 100 each. Seven clubs entered the 'dark' class; six entered 'light'; five put honey in the



## Bee club promotion

WE ASKED entrants to design a flyer or brochure advertising the benefits of bees, beekeeping or their local club.

To recognise one of our newest clubs for its energetic and witty brochure, the ABA is awarding

**Orange Beekeepers**

with a \$200 printing voucher to help it spread news of the club to bee fans in the region.

## Colonel Pulling Trophy

**Joint winners**

**Hunter Valley & Parramatta**

## Bruce White Trophy

**for developing clubs**

**Hastings Valley**

### FINAL SCOREBOARD

**Hunter Valley – 133**

**Parramatta – 133**

**Illawarra – 130**

**\*Hastings Valley – 128**

**\*Far North Coast – 121**

**Central Coast – 120**

**\*Manning Valley – 117**

**\*Orange – 117**

**\*Blue Mountains – 116**

**Hawkesbury – 110**

*\*qualifies as developing club*

'medium' class; and two entered 'very light'.

The top scoring honey overall was a 'medium' honey entered by the Hawkesbury club. It had been produced from mixed blossoms in the Hawkesbury region, and selected by members at a recent club meeting. It scored an impressive 93/100. The beekeeper who submitted it, a hobbyist who enjoys "playing with bees", is a

major winner in recent years at the Hawkesbury Show. He puts his success in honey contests down to close attention to detail through all stages of the honey production process – from carefully maintaining the area around his hives, to keeping extracting equipment and preparation areas spotless. The rest, he says, is down to the bees: "The bees produced it!"

## Champion team leader

TO RECOGNISE the volunteers who rallied club members and gathered entries for the contest, we are awarding a top team-leader prize of \$100 worth of beekeeping gear to

**Emily Macpherson**

Emily made sure Hunter Valley's entries met criteria, and were submitted correctly and within deadlines.

The judges thank Emily and every club team leader for a tremendous contest this year.

## Round 2 Club Report

Clubs reported on their activities to help new members and to boost all members' biosecurity skills. Reports judge Wendy Wilson was impressed by the noticeable improvement in reports since the last time she judged, in 2018. "The club reports were of an excellent standard. I was very impressed with the range of activities that clubs are employing to support their members especially new members and the use where possible of technology.

<b>Hastings Valley</b>	<b>192</b>
<b>Parramatta</b>	<b>191</b>
<b>Hunter Valley</b>	<b>188</b>
<b>Manning Valley</b>	<b>184</b>
<b>Far North Coast</b>	<b>181</b>
<b>Illawarra</b>	<b>178</b>
<b>Orange</b>	<b>173</b>
<b>Blue Mountains</b>	<b>170</b>
<b>Central Coast</b>	<b>161</b>

"It was wonderful to see the range of clubs from large to small all compete and I was particularly impressed that Orange, a brand new club, has made such a great start. The reports were easy to read, and clearly a real effort had been made to explain the activities. "

## Round 3 Club Promotion

We asked clubs to submit a brochure or flyer that they can use to promote bees, beekeeping or the local club.

**BEEKEEPING WITH EUROPEAN HONEY BEES**

- Check that family members and neighbours are not allergic to bee stings.
- Enrol in one of our beekeeping courses, this will give you "hands-on" experience and teach you some of the basics for setting up and managing your hive.
- Awareness of nutrition for bees as well as pests and diseases is important for the health and welfare of bees.
- Not all bees have the same temperament or honey gathering success.
- You will need to purchase a hive, smoker, hive tool and protective gear to start keeping European honey bees.
- You will need to register your hive with DPI.

**Useful Websites**

www.whenbee.org.au  
www.beeaware.org.au  
www.honeybee.org.au  
www.agrifutures.com.au/rural-industries/honey-bee-pollination  
www.dpi.nsw.gov.au/animals-and-livestock/bees

**A fantastic way to learn more about bees and beekeeping is to join the local amateur beekeeping club.**

The Hunter Valley Amateur Beekeepers Association has over 200 members with many experienced beekeepers of all ages.

There are always more things to learn about beekeeping and having good advice when you are first starting out is beneficial.

**CONTACT US**

**EMAIL**  
info@hvaba.org.au

**WEB**  
hunter-valley-amateur-beekeepers.org.au

**PARTICIPATE**  
In organised and supervised apiary visits at the Hunter Region Botanic Gardens  
<https://huntergardens.org.au>



**Hunter Valley Amateur Beekeepers Association**

**HUNTER VALLEY AMATEUR BEEKEEPERS ASSOCIATION INC**

Post Office Box 419  
RAYMOND TERRACE  
NSW 2324

Photos courtesy of Catherine Tempest

*An affiliated club of the Amateur Beekeepers Association NSW*

Having bees pollinate your garden and receiving fresh honey is a wonderful experience. Beekeeping is an interesting hobby that provides hours of enjoyment and has many benefits for the environment.

- Some have one hive and others have 40+ hives
- Some have only European bees, others have native bees and some have both
- From time to time, courses are conducted in native beekeeping.
- You will need to purchase a hive.
- You do not have to register a hive.

**MEETINGS**

We meet once a month on a Sunday  
**Time:** 10am  
**Location:** Hexham Bowling Club  
Please see our club website for dates.  
No meetings in July or December

**Useful Websites**

www.aussiebee.com.au  
www.sugarbag.net  
www.australiannativebee.org.au

## Parramatta Amateur Beekeepers

The Parramatta Amateur Beekeepers aim to improve the skills and knowledge of all its members irrespective of their level of expertise.

Parramatta Amateur Beekeepers meet in the Auditorium at James Ruse Agricultural High School at Carlingford (entrance off Baker Street).

Bees are perfect They do so by turning.

### MEMBERSHIP

Over the years the club has had many members experienced to novice to improve the skills of all members irrespective of their level of expertise.

### INFORMATION

The club has a range of information materials available for loan to members.

### EQUIPMENT

The club has a range of equipment available for loan to members.

### What can I do to help?

- Include local native plants
- Choose plants with nectar
- Choose flowers with a long tube
- Choose plants with nectar all season
- Select plants with diverse flowers



The club charges a small fee in conjunction with the requirements for beekeeping. The fee is held and members are given their practical beekeeping. The club participates in many events at, for example, Flower Power and Burnings. At these events members are encouraged to enter honey in the show competitions and sell honey and/or honey products at the club stall.

FOR INFORMATION CONTACT THE MEMBERSHIP OFFICER ON EMAIL:  
[parramatta.membership@beekeepers.asn.au](mailto:parramatta.membership@beekeepers.asn.au)

### MEETINGS

The club meets on the second Wednesday of each month (excepting January and July) at 7:30 pm.

The meeting format includes a short formal business meeting then an information session followed by tea/coffee and an informal social gathering. Information sessions alternate between presentations from experts from industry or academia and activities using the resources of club members.



Images by Parramatta Amateur Beekeepers Club

Front Cover: Robyn Alderton

Back - Top to Bottom: Robyn Alderton, Peta Wong, Dave Wilson, Ashlee Ralla

TAB editor Sue Carney judged this round and selected two deserving winners. Top competition points went to Hunter Valley for an attractive and well executed design that packs in loads of information on the six

sides of the A4 trifold brochure. An ABA special award goes to Orange Beekeepers: up to \$200 to pay for printing of 500 copies of its one-page flyer (see following page).

Special mentions also to Parramatta for a poster filled with beautiful photographs and clever copy (shown above), and to Illawarra for creating a lively and information-packed promotion to entice new club members.

**Well done to everyone who entered this round!**

<b>Hunter Valley</b>	<b>190</b>
<b>Parramatta</b>	<b>188</b>
<b>Orange</b>	<b>186</b>
<b>Illawarra</b>	<b>184</b>
<b>Hastings Valley</b>	<b>176</b>
<b>Manning Valley</b>	<b>174</b>
<b>Blue Mountains</b>	<b>170</b>
<b>Central Coast</b>	<b>170</b>
<b>Far North Coast</b>	<b>170</b>

## Round 4 Quiz

Sunday, 9.30. April 5. Go! We put twenty questions to participants from ten clubs. And with social distancing restrictions preventing teams from gathering in one place, participants sat at home – some in their PJs – and either logged on to quiz site Kahoot.it or used a mobile phone app to submit their answers.

Knowing that up to five entrants could log on for each club and that their scores would be averaged to produce the club score, some clubs played strategically, electing just one entrant, while other clubs used up their full allocation of places and welcomed a range of participants from all levels of beekeeping experience.

A perfect score proved elusive. However special mentions go to individual participants Barry Eslick at Central Coast, Emma Macpherson at Hunter Valley,

<b>Parramatta</b>	<b>170</b>
<b>Hunter Valley</b>	<b>165</b>
<b>Far North Coast</b>	<b>160</b>
<b>Illawarra</b>	<b>160</b>
<b>Central Coast</b>	<b>152</b>
<b>Blue Mountains</b>	<b>140</b>
<b>Hastings Valley</b>	<b>140</b>
<b>Orange</b>	<b>133</b>
<b>Manning Valley</b>	<b>127</b>
<b>Hawkesbury</b>	<b>110</b>

Neal Robinson at Illawarra, and Bruce Ward at Blue Mountains. These top four beekeepers scored at least 17 out of 20.

Well done to everyone who completed the quiz round. And to Dave Wilson for writing all the questions.



**Bee Brave**  
**Become a beekeeper**

Do you wish your life tasted a bit sweeter? Are you ready to hear the meditative hum of thousands of insects working? Can you see yourself wearing a veil? Are you ready to feel the pleasure and pain of beekeeping? Join Orange Beekeepers Inc .

People have been harvesting honey for thousands of years and although the Orange Beekeepers Inc only started in 2019 we have the enthusiasm of swarm of bees looking for a new home. We have already been on a few visits to keen beekeepers, tasted some delicious home grown honey and discussed our hopes and dreams of beekeeping.

Even though bees slow down over Winter, Orange Beekeepers Inc have no such plans with plans such as honey tasting competitions, making bees wax wraps, lip balms and talks from bee experts.

Join us on this journey of enlightenment, go to Amateur Beekeepers Association NSW website, click on Find a Club Near You, scroll down to Orange (a bee on a pink blossom), click on Join Now. Membership is a mere \$30 until June 2021!

Photography by Amanda Lockwood

Orange Beekeepers is awarded our special 2020 promotion prize: up to \$200 for printing 500 copies of their brochure

## ACTIVITY

# Are you a bee champ?

Grab your phone or keyboard. Do the ABA Interclub quiz now – at home

**W**ANT TO have a go at the quiz we created for the Colonel Pulling interclub competition?

Here's your chance. See if *you* can get a perfect score!

To get started, either download the free Kahoot! app for your mobile phone (from wherever you get your mobile apps) or go to the website [Kahoot.it](https://kahoot.it) Then simply type in the PIN below, enter a nickname and play.

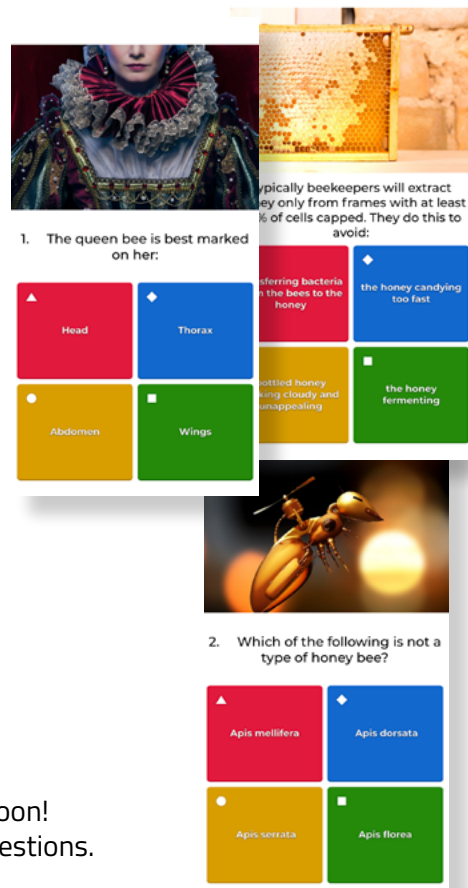
After submitting each answer, you'll see if you were right or wrong. The game will stay active until May 5. Up to 2000 members can play.



# PIN 0380947

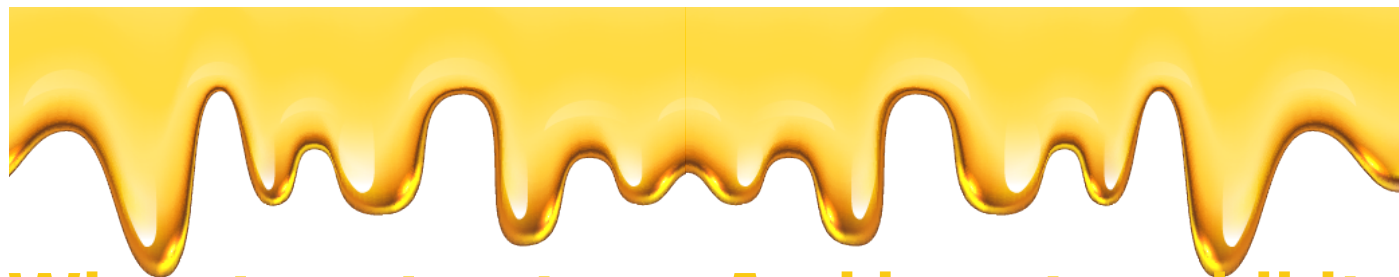
Good luck!

We'll be announcing more online quizzes soon! Meanwhile, we welcome your feedback or suggestions.



Typically beekeepers will extract honey only from frames with at least 80% of cells capped. They do this to avoid:

- The queen bee is best marked on her:
  - Head
  - Thorax
  - Abdomen
  - Wings
- Which of the following is not a type of honey bee?
  - Apis mellifera
  - Apis dorsata
  - Apis serrata
  - Apis florea



## When to extract . . . And how to exhibit

### Arthur Garske explains the best time to take honey

**T**HE TIME to extract is when there is a honey flow. The reason for this is that if the bees have a plentiful supply of nectar they are less likely to start robbing. Once the honey flow stops, the likelihood of robbing is full on.

Robbing will stir up all the hives and anything that moves in their vicinity will be actively pursued and stung. This includes your neighbours and animals.

Once robbing starts, shut all the hives. Don't leave anything containing honey or wax exposed. Your weaker hives should have their entrances reduced, making it easier for the bees to defend their home.

Bees that get forbidden supplies don't forget and are always looking for easy pickings.

### Here's his advice, as a honey judge, to get extra points

**B**EEKEEPERS HAVE no control over what bees gather. Everyone who enters honey in a competition has no control over taste or density. The beekeeper *does* have total control over which class to enter the honey in. Colour is one component of the Point Score (25 points). If the beekeeper puts their honey in the wrong class, the points lost are impossible to pick up on the remaining criteria.

Beekeepers have control over CLEARNESS and BRIGHTNESS and, in some cases, AROMA.

A lot of entries in the Colonel Pulling contest fell down on clearness and brightness. This is something that can be addressed.

Depending on the density of the honey, it is hard to clear tiny air bubbles. Jars need to be stood in warm water to make the honey thinner so the air bubbles rise. Fill the jars nearly to the top so, as the warming honey expands, it pushes against the lid. In a couple of days, carefully undo the lid with the jar upright. The impurities and froth from the bubbles will be mainly stuck on the underside of the lid.

Using hot water, wash and dry the lid and replace on jar. Go round the inside rim of the jar with a teaspoon to move any remaining impurities and bubbles to the middle. Lift out and throw away.

Warming honey also brightens it. If honey is still dull, do the warm water treatment again. Keep changing the water by letting some out and adding more hot water until the honey is warm. The water temperature should be comfortable to immerse your hand in, no hotter.

There is a downside to excessive warming: it can drive out the aromatics. A couple of points might be lost on aroma but they will be picked up on clearness and brightness. Make sure to fill the jar right to the top when warming honey to clear it. That way you leave no air gap for the aromas to escape into.

When you are satisfied with the level of clearness and brightness, it is time to spoon out excess honey down to the level of the bottom of the screw cap. The sample – exhibit – is then ready to be entered in the competition.

## ROYAL AGRICULTURAL SOCIETY OF NSW HONEY SHOW LIQUID CLASSES

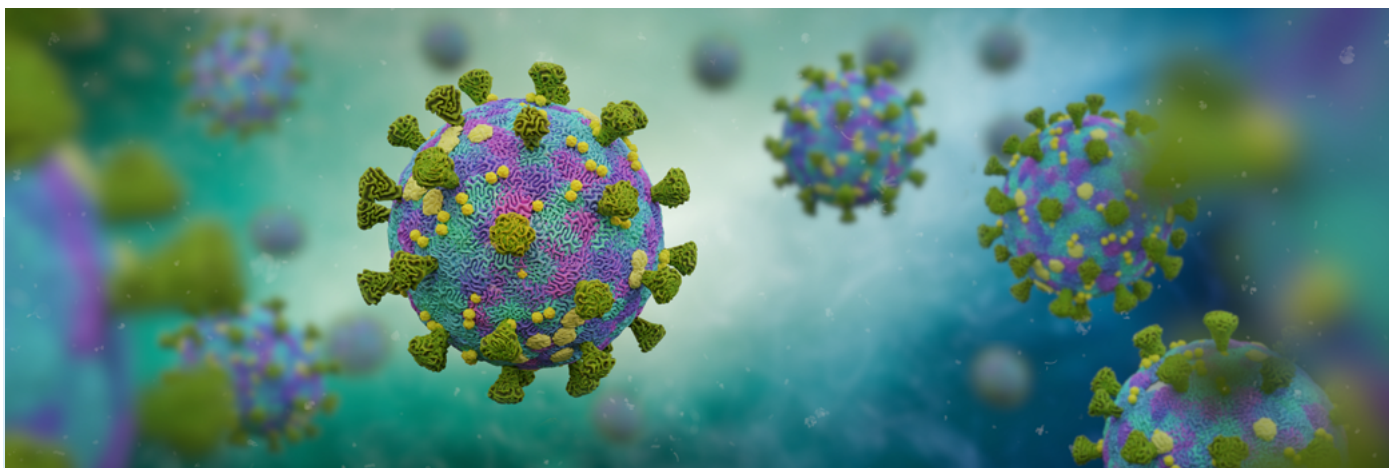
Maximum score is 100

Flavour	25
Density	25
Colour	25
Aroma	10
Clearness	10
Brightness	5



*"When I am setting up the jars for different competitions I will look at a entry and say to myself That's a nice entry! because it stands out to my eye. As the judging continues and the points are added up, nine times out of ten the exhibit that caught my eye is the winner.*

*I say good honey judges itself."*



## Beekeeping during the COVID-19 pandemic

### CAN I STILL TEND TO MY BEES?

If you keep your hives at home, the simple answer (as of the beginning of April) is “Yes”. The [public health order introduced on March 31 in NSW](#) requires everyone to remain at home unless they have a valid reason to leave. Your place of residence, under this order, includes the yard and garden. The March 31 order restricts who can be in your home but doesn’t mandate what activities you can or can’t do there.

As a registered beekeeper in NSW you have a legal requirement to look after your bees. The NSW Department of Primary Industries points out that under your General Biosecurity Duty you are bound to prevent, eliminate or minimise biosecurity threats under your control and you must not allow hives to become exposed, abandoned or neglected. (On July 1 the honeybee Biosecurity Code of Practice introduces additional legal requirements such as carrying out twice yearly brood inspections.)

### SO WHAT ABOUT HIVES THAT I KEEP ELSEWHERE?

The March 31 NSW public health order requires you to have a “reasonable excuse to leave home”. It could be that beekeeping falls under the reasonable excuse “to undertake legal obligations”. At the time of writing, the NSW DPI is seeking advice from NSW Public Health on this point. We will post any further information we receive on this at [beekeepers.asn.au/covid-19](http://beekeepers.asn.au/covid-19)

### ANY OTHER ADVICE?

These are extraordinary circumstances and blanket rules can go only so far. We are all being urged to choose caution and to adopt whatever additional measures we can to save lives, protect others and relieve strain on medical services.

Ask yourself if your beekeeping tasks need to be done now and if opening hives at this time is the right thing to do. Perhaps compare it to the situation of lighting a smoker on a Total Fire Ban day. (Technically it may be allowed with certain restrictions. But is it wise?) Taking care of ourselves and others, and minimising the risks of an incident needing emergency or medical attention – that’s a priority.

Government guidance and restrictions are evolving. ABA members must rely on the latest directives and advice for their area. For NSW, check [preview.nsw.gov.au/covid-19/public-health-orders](http://preview.nsw.gov.au/covid-19/public-health-orders) The federal government’s Coronavirus Australia mobile app brings together medical information, news and resources. Visit the main site at [australia.gov.au](http://australia.gov.au) for Australia-wide and state-by-state updates. The NSW DPI has advice on COVID-19 related issues at [dpi.nsw.gov.au/covid-19](http://dpi.nsw.gov.au/covid-19)

## Getting money back

**W**E ARE AWARE that many members had booked accommodation for both the AGM (originally scheduled for April) and our conference weekend (at the end of

May). We urge you to chase up refunds direct with the providers. We are finding that normal rules do not necessarily apply, and some venues have now changed their policies to refund even advance purchase “non-refundable” bookings.



# American Foulbrood disease FAQs

Bruce White answers 21 common queries about AFB

## How do I look for brood-disease symptoms?

First you need to know what healthy brood looks like. Uncapped eggs and larvae are white, with the larval stages c-shaped and resting against the comb mid rib (back of the cell). The cap of each sealed cell should be convex (bulging slightly) with no holes.

Pick a warm sunny day. Shake all the bees from the brood comb to see all cells clearly. Hold the frame horizontally so you can see into the bottom 'v' of open cells. Closely examine all brood stages.

Be familiar with all brood diseases (American foulbrood, Chalkbrood, European foulbrood, Sacbrood) and nondisease problems (over-heated brood, chilled brood, laying workers, a drone layer).

More than one brood disease can be present in the same colony, so be very observant.

Refer to your **Biosecurity Manual for Beekeepers** (sent to all ABA members in their 2020 membership pack). This contains useful information on many pests and diseases relevant to local honeybees.

The ABA website at [beekeepers.asn.au/afb](http://beekeepers.asn.au/afb) has information, a slideshow with links to videos and forms. And [beeaware.org.au](http://beeaware.org.au) contains extensive information.

## I have identified AFB in a hive.

### How do I kill the bees?

You have two options: using petrol or soapy water. Petrol is my preferred method as it is quicker.

Act at night when bees have stopped flying. Smoke and block the entrance. Smoke under the lid, then remove any inner mat.

If using petrol, pour a cupful over the combs in the top box and replace the lid. The petrol fumes will penetrate the whole hive and kill the bees within five minutes.

Soapy water is another method recommended by NSW DPI. Soapy water kills bees by blocking their breathing tubes.

Once again, this method is best done at night. Mix up a large bucket of soapy water. Use the smoker and

### Surely I can avoid killing the bees?

No. The only way to eradicate AFB from an apiary is to kill the colony. Adult bees from infected colonies carry the AFB spores on their bodies and can drift into other healthy hives infecting them.

## If I find evidence of AFB in a colony what should I do?

You must report the disease within 24 hours. In NSW phone the Biosecurity Helpline on 1800 680 244 or submit a form via [dpi.nsw.gov.au/biosecurity/report-a-pest-or-disease](http://dpi.nsw.gov.au/biosecurity/report-a-pest-or-disease)

Examine all your hives. All hives showing evidence of AFB, must be killed.

If you need advice, in NSW contact [bee.biosecurity@dpi.nsw.gov.au](mailto:bee.biosecurity@dpi.nsw.gov.au)

close the entrance. Lift the lid and pour soapy water over the tops of the frames. Remove combs and dip into a large bucket of soapy water. The aim is to cover all the bees with the liquid. Death is much slower than with the petrol method.

If you are not planning to irradiate the hive woodware, your only option is to burn everything, including bees, boxes, frames and comb. (Honey may be extracted first but must never be fed back to bees.) Vent (let petrol fumes dissipate) prior to burning.

Check if you need a fire permit. Dig a pit and light a fire at the bottom. Add the material. Fill in the hole with soil when all the material is burnt.

Irradiation is 100% effective at killing American Foulbrood spores. All honey must be extracted first but equipment boxes, lids, bottoms, excluders, hive tools and combs can be irradiated and reused.

Bees killed by the petrol or soapy water should be buried in soil and covered over. Honey extracted from an AFB-infected hive is safe

for humans to eat but never let other bees feed on it. Since AFB spores do not penetrate metal you can wash down extracting equipment to clean it.

Material for irradiation must be strapped and placed into plastic bags or into suitable cardboard boxes provided by Steritech.

Go to [steritech.com.au](http://steritech.com.au) for detailed information on irradiation and treatment facilities in NSW, Victoria and Queensland.

## TIP

**Use a queen excluder to reduce the number of brood combs you will need to examine for AFB symptoms**

## What are the symptoms of AFB?

The bacteria *Paenibacillus larvae* produces these symptoms:

Sunken, concave, discoloured capped cells with perforations, irregular brood pattern, dead remains of larvae under the cappings (moist or dry).

Decaying infected larvae if touched with a match will rope (string) out for 25mm or more and, looking down from the frame top bar, are on the bottom 'v' of the cell. The tongues of developed pupae are sometimes visible in uncapped cells.

Once a hive has been dead for a while, the only evidence is the dry, dead, brood forming a dark scale on the bottom v of the cells.

The scales are full of spores that are viable for at least 50 years. Bacteria are also on the adult bees and on the components of the hive.

You need only one symptom to have the disease. Send a sample to the NSW DPI Veterinary Laboratory for confirmation. See blue panel below.

## Should I isolate a swarm to be sure it won't spread AFB to my bees?

Isolate any swarms from unknown colonies for at least three months. Carry out monthly brood inspections and be sure to clean all tools and clothing after each hive.

The same precautions apply to package bees.

## How do I prevent infection spreading?

Wash your hands or gloves between each hive inspection. Clean your hive tool in a flame.

Don't transfer components between colonies.

Prevent all robbing. Don't expose honey as this encourages bees to rob.

Where a hive has died and you can't identify the reason, irradiate all material or burn it.

Examine your hives every two months.

## How does AFB get into an apiary?

- By bees robbing infected honey. It is not your fault that bees have a natural instinct to rob.
- By beekeepers introducing material from diseased colonies.
- By using second-hand material that has not been irradiated.
- By catching swarms and not isolating them.
- By feeding honey to hives. Always feed sugar syrup.
- By feeding pollen that has not been irradiated. All hive products can carry spores of AFB.
- By using equipment that has come into contact with diseased colonies, without cleaning it first.
- By purchasing hives, packages, nucs, without inspecting them first. Always isolate packages and treat them the same as swarms.
- By purchasing hives fed antibiotics or mass feeding antibiotics. Antibiotics tackle AFB symptoms but the spores remain viable.

You are a beekeeper if you find AFB quickly; you're a keeper of bees if you don't!

## Do bees try to escape AFB-infected combs?

Yes. Where hives don't have excluders, often the queen will abandon the heavily-infected combs in the brood box and lay in less-infected combs in the supers. If you simply lift the lid, it's easy to think the colony is strong.

## What is a ...?

### Barrier System

A system that divides apiaries or an apiary into contained units to ensure no transfer of material outside the unit. If an outbreak occurs, you know where material has been used.

### So do colonies with AFB abscond?

Yes, some do. The other week I was told about a member who intended to destroy an AFB-infected hive and then found the bees had absconded.

## What are authorities, such as the NSW Department of Primary Industries, doing?

In NSW two Bee Biosecurity Officers (Rod Bourke, who mainly works with commercial beekeepers, and Mark Page, who covers amateur beekeepers) provide advice on best management practices. The biosecurity division of the DPI (led by Chris Anderson) is benchmarking levels of AFB by testing samples of honey collected from supermarkets, honey packers, and via ABA clubs. (See page 12 for details of this project.) Officers working with the compliance division of DPI enforce current biosecurity laws. In July the Biosecurity Code of Practice comes into force requiring new compliance measures from beekeepers. (Download a copy at [beekeepers.asn.au/resources-for-beekeepers](http://beekeepers.asn.au/resources-for-beekeepers))

The DPI offers free diagnostic testing: registered beekeepers can send in samples of suspect larvae or comb for diagnosis. (For details of how to submit samples go to [dpi.nsw.gov.au](http://dpi.nsw.gov.au) and search for bee diseases.)

Any beekeeper can also request their honey be tested for AFB spores. (A fee is charged for this service.)

## How do I sterilise tools, suits etc?

Carry a bucket of soapy water to wash hands and gloves between each hive inspection. Place the hive tool in the smoker, and then puff smoker to heat the tool. Or use a gas burner to flame the hive tool.

Protective clothing should be washed. Some beekeepers have been irradiating clothing and then finding the plastic zippers break. Gloves can be washed or irradiated.

## Is it risky to swap frames between hives?

Yes. If you are not experienced, don't do it.

If you do need to swap frames, shake the brood combs free of bees so you can examine them for symptoms. You won't be able to detect if the stored honey contains any AFB spores.

## All we hear about is AFB. What's the story with European Foul Brood?

Both diseases are important. Know the symptoms and destroy all hives with AFB and treat hives with EFB.

The bacteria responsible for EFB, *Melissococcus plutonius*, affects larvae of all ages. The larvae die in unusual positions in the cells, and may turn yellowish in colour. Dead larvae can be removed with a match. Some may rope but with a strong sour smell. The bacteria can survive for three years.

If you suspect EFB, send a smear to the NSW state vet lab for diagnosis. This is a free service. If the result is positive, contact [elizabeth.frost@dpi.nsw.gov.au](mailto:elizabeth.frost@dpi.nsw.gov.au) for advice on accessing EFB antibiotic treatments from a vet.

## Is it my fault if my bees get AFB?

No, it's not your fault. Bees forage usually one to two kilometres but can go up to five kilometres. It's in their nature to rob any exposed honey, dead hives, broken jars . . . and then return to the colony. If they have picked up AFB spores, the colony is at risk.

## A honey sample from my hive reveals AFB spores. What can I expect?

- Very young larvae fed hive honey succumb to infection, die and the disease spreads.
- Adult bees eat the honey with the spores and do not feed it to larvae. There'll be no impact on the colony – AFB does not kill adult bees.
- If infected honey is stored in the colony it could be extracted and leave no impact on the colony.

## What is the cost of a honey test for AFB?

The usual cost in NSW is \$40.70 for one sample.

Registered NSW beekeepers can get suspicious larvae or brood comb analysed for free. The DPI charges \$28.37 for this test if the beekeeper is not registered in NSW.

## One of my hives is dead. Help!

By far the best action is to have it irradiated, unless you can confidently work out why it died (for example, it was queenless, or it starved).

If a hive has been dead for a while, wax moth can destroy the combs and ants clean out other evidence that it had AFB. The hive material must be irradiated or burned.

Small hive beetles often attack diseased hives and are not the primary cause of the hive dying.

## How long does it take for a hive with AFB to die out?

It varies a lot. It will die quicker if the bees are on a pollen flow and breeding. If the infection occurs in winter when the bees are not breeding and the adult bees are living longer, the colony will take more time to die. It is important to find the disease before the hive dies and other bees start to rob it.

## I have a positive spore count in a honey sample. What should I do?

Inspect all colonies. Any with symptoms, kill.

If possible, extract honey from hives with no visual evidence of AFB and scratch any honey stored in the brood nest.

This will expose the bees to all the honey in the colony and increase the possibility of the bees eating the honey or feeding it to the brood.

Reinspect colonies after two months for symptoms. At the next extraction, send in another sample. Continue this regimen until the honey analysis shows no AFB spores present.



# Testing our honey for AFB

## Bruce White reports on the project to detect levels of American Foulbrood Disease across NSW

**S**AMPLES OF honey have been collected by ABA clubs across NSW and sent to me for analysis. I have had 30 of these samples tested by the Department of Primary Industries for evidence of AFB spores.

Nine samples submitted via five clubs have returned a positive result, with low levels of AFB spores detected.

Of these, eight samples had fewer than 4 spores; one had 21 spores.

What does this mean?

All the beekeepers with positive results have now completed hive inspections, with only one finding visual evidence of AFB in a hive. (The bees were killed and the hive is due to be irradiated.) This outbreak has been reported to NSW DPI, as required by the Biosecurity Act.

All nine beekeepers will, where possible, reinspect their colonies in two months' time.

The beekeeper who found clinical evidence of AFB in his apiary had just one spore in a 100ml honey sample.

AFB disease is specific to honey bee brood – it does not harm adult bees. It develops in colonies when adult bees feed honey that is infected with AFB spores to brood. Larvae up to three days old are most susceptible. Once the spores germinate inside larval tissue, the disease spreads.

If infected honey is not fed to larvae, clinical evidence of the disease doesn't occur.

To date, 12 ABA clubs in NSW have participated in this important project. Ask your club's biosecurity officer if your club has already submitted samples. If it hasn't, ask how you can be involved.

### Club biosecurity officer training

*The ABA is planning to organise a training day for biosecurity officers of affiliated clubs. We had hoped to hold this in mid 2020 but, as with all face-to-face meetings, plans have been put on hold due to the COVID-19 crisis. The new date and details will be circulated to clubs once it is safe to reschedule.*



### What happens when honey is tested for AFB bacteria?

*Any bacterial colonies are grown on an artificial solid culture medium and can be counted.*

*What will the DPI laboratory report tell you?*

*It will tell you the number of spores present in a 100 ml sample and rate the possibility of you finding visual evidence of AFB in the colonies the honey came from. A positive result will be reported at one of three levels:*

**+1**      *1 to 20 AFB spores*

*60% chance the hive colonies will show evidence of AFB when you inspect all brood combs*

**+2**      *21 to 50 AFB spores*

*80% chance the hive colonies will show evidence of AFB when you inspect all brood combs*

**+3**      *More than 51 AFB spores*

*100% chance the hive colonies will show evidence of AFB when you inspect all brood combs*

**HONEY TESTS DO NOT REPLACE REGULAR BROOD INSPECTIONS.**



# April is Sugar Shake Month

## Bee Alert!

**CHECK YOUR BEES USING THE SUGAR SHAKE TEST  
HELP DETECT AN EXOTIC PEST INCURSION EARLY**

**SHAKE, INSPECT**

**CALL IF YOU SUSPECT**

External bee parasites such as varroa, tropilaelaps mite and braula fly have not been detected in NSW



Braula fly (top), varroa mite (right), tropilaelaps mite (bottom)



Braula fly on the thorax of a queen bee



Varroa mite feeds on a bee pupa

**IF YOU NOTICE ANYTHING UNUSUAL CALL THE EXOTIC PLANT PEST HOTLINE 1800 084 881  
FOR MORE INFORMATION VISIT [WWW.DPI.NSW.GOV.AU/BIOSECURITY-BEES](http://WWW.DPI.NSW.GOV.AU/BIOSECURITY-BEES)**



### DPI Bee Biosecurity Officer Mark Page writes:

Once again NSW DPI is promoting Sugar Shake Month for varroa awareness. In partnership with the Amateur Beekeepers Association, a limited supply of sugar shake kits are being provided to clubs.

The Sugar Shake Month initiative will not only help our industry remain free from exotic mites, it will help you familiarise yourself with requirements of the Australian Honey Bee Industry Code of Practice due to become mandatory from 1 July 2020. Under the Code, it is a requirement to conduct a minimum of two sugar shake (or alternative) tests per season. This can quite easily be achieved with your mandatory brood inspections at the beginning of the season (spring-early summer) and then during autumn (April), before wintering your bees.

When undertaking your autumn brood inspections and shaking or brushing bees from a brood frame, it is quite easy to collect bees to roll through a sugar shake. Only one hive per apiary or stand of bees is required to be tested for exotic mites under the Code.

Not sure how to do a sugar shake test? Watch [this video](#). When shaking out your sugar, I have found the use of a bucket with clean water to be the best method as the sugar dissolves away, making it quite easy to observe anything suspect.

By testing your hive or hives you are not only following best practice as a beekeeper, you are also contributing to a greater data set that helps prove Australia is free of varroa.

Why is widespread surveillance important? The health of the beekeeping industry is important in itself, but it also has flow-on effects to pollination-reliant industries and the wider community that benefit from healthy hives, their products and the services they provide.

Varroa are a vector to diseases such as deformed wing virus and slow paralysis virus.

Australia is one of the only countries that is varroa-free and, as such, we are not having to use miticides within our colonies. This puts us in the position of having the cleanest honey and wax products in the world, and this is not only good for our own backyard bees but for commercial operations to gain better export opportunities with such providing a return that supports industry and community.

Let's get some data gathered! We have an [online form](#) to log your sugar shake test and

enter some information and a photo as confirmation. Alternatively, email [bee.biosecurity@dpi.nsw.gov.au](mailto:bee.biosecurity@dpi.nsw.gov.au) or message 0409 299 415 for data logging by a bee biosecurity officer.

If you do find something suspect, it is important to keep a sample. Simply place your sample in a small container with methylated spirits and report it to the exotic pest hotline on 1800 084 881

A few points on varroa:

- Stay on adult bees 4-11 days and maybe longer if no brood present in the colony. Leave the bee to enter a brood cell to begin laying
- May live 5 days without the presence of honey bees but female mites need to be reintroduced to a colony to reproduce
- Prefer drone brood to breed on and in
- Populations increase faster in climates that support year-round brood rearing
- Varroa can be spread by drifting bees (drone bees drift from hive to hive and even between apiaries), foraging bees and, of course, robbing of infested colonies (remembering we don't currently have varroa )
- Visual sighting is very low as a detection method. (Across the ditch in NZ it was estimated that varroa had been present for up to five years before discovery.)
- Earliest detection assists in the containment or quarantine of varroa

#### **A note regarding Covid 19 and visiting hives not on your property**

As sugar shaking in itself is not a legal requirement in its own right until after 1 July, I would encourage you to think about whether you can combine an upcoming hive visit with other necessary hive attendance activities. If you have no urgent need for checking your hives at this time then I would encourage you to consider delaying your sugar shake until spring. Please note that April is simply our promotional month, but a sugar shake test can be completed at any time that suits you. Our webpage and results submission form are accessible all year round.

**For more information on Sugar Shake Month visit the NSW DPI [Sugar Shake webpage](#).**

**Mark Page, Department Primary Industries Bee Biosecurity Surveillance**

**0409 299 415 [mark.page@dpi.nsw.gov.au](mailto:mark.page@dpi.nsw.gov.au)**

## Sugar shake update

If you miss out on a free kit, the following businesses have indicated that they will be selling sugar shake kits over April:

[The Urban Beehive](#), [Bindaree Bee Supplies](#), [Bees R Us](#), [Tamworth Beekeeping Supplies](#)

The DPI has a limited number of free kits available for posting under exceptional circumstances where a beekeeper has tried but cannot access a kit any other way. You will need to make your case in writing to [bee.biosecurity@dpi.nsw.gov.au](mailto:bee.biosecurity@dpi.nsw.gov.au) (Please note, a remote location may be considered a sufficient reason, but general COVID-19 restrictions are not.)

## Clean your kit!

Your sugar shake kit can be re-used for multiple inspections, though be sure to clean it between different hives and apiaries.

This is important to minimise the risk of spreading infectious bee diseases such as American Foulbrood

(AFB) between hives and bees.

The ABA does not recommend clubs or groups of beekeepers share kits, for the same reason. Information on varroa and sugar shaking, plus instructions for making your own mesh jar are on [beekeepers.asn.au/biosecurity](http://beekeepers.asn.au/biosecurity)



## BEE FILM COMPETITION ON NOW!

**D**O YOU have some unexpected time on your hands? Always wanted to have a go at making your own short film? Passionate about bees and have an idea for a five-minute movie that centres on some aspect of our six-legged friends? Decide if it's going to be comic, tragic, dramatic or simply amazing. Put on your director's hat. (But sorry, Cecil B(ee) DeMille, a cast of thousands, isn't going to cut it with the current social distancing restrictions!) Use your mobile, a camera, a tablet . . . whatever will let you record, edit (if you want to) and upload a film. Details at [beekeepers.asn.au/ababeeshorts](http://beekeepers.asn.au/ababeeshorts)

Entries close May 29. Winners will be awarded cash prizes. We will organise a screening of the best, with details to be confirmed later.

## POSTPONED **BEST DECORATED BEE BOX** POSTPONED **CHAMPION HONEY LABEL** POSTPONED **BEST BEE SWARM STORY**

We are postponing these contests – which were due to be judged at our Festival of Bees – until a later date.

But don't let that deter you from some creative activities over the coming months. We'd still love to hear about any bee-themed projects you are working on over the autumn and winter. Are you an artist, crafter, sculpter, gardener, builder, writer? Show us your creations!

Projects featured in future issues of The Amateur Beekeeper will win an ABA lapel pin and keyring featuring our distinctive bee logo. Send your photos and details to [editor@beekeepers.asn.au](mailto:editor@beekeepers.asn.au)

## INVETERATE INVENTOR Steam Box 2.0

Ready for some beekeeping DIY?

**A** RECENT ISSUE of this journal described a steam box developed by The Inveterate Inventor. This contraption worked well in cleaning up frames damaged by small hive beetles. It also did a good job in melting burr comb from excluders.

A friend mentioned an alternative steam box better suited to beekeepers without resources to build the "suitcase" structure used in the original.

This version (right) uses existing bee boxes. The top box has the frames that need to be cleaned and the lower box provides a space for the old comb when it slumps free from the frames. A lower steel tray collects the water from the condensing steam and honey from the melting comb.

Given many beekeepers will freeze frames that are damaged by SHB to kill the grubs, beetles and eggs, the steam box takes about 20 minutes to melt



the wax from frames taken direct from the freezer. The frames need only to be gently shaken to free the comb. Then they can be scraped down with a knife to remove the last of the wax.

The steam generator is an old wallpaper stripper, and the only items that need to be fabricated are the lid (with a hole to suit the steam pipe) and a simple metal tray to hold the water and honey.

A great invention. Thanks to GC for the improved design!



## NATIVE BEES

# Are bee hotels a boon or a bad idea?

Native bee scientist Kit Prendergast looks at these popular backyard insect homes

**P**UT SIMPLY, bee hotels are any construction with openings, that are hung or placed in the environment to encourage cavity-nesting native bees.

Historically used by researchers to study native bees and their nesting biology – and known by the relatively unsavory name of “trap nests” in the scientific literature – bee hotels, are making a splash. From Costco to Bunnings to Amazon, bee hotels are popping up everywhere. But before you rush to the store and plunk your money down, let’s attempt to answer the crucial question: do they work?

The answer isn’t black and white. The design of the bee hotel strongly influences if bees will find it desirable, and if any offspring will emerge successfully.

The vast majority of commercial bee hotels are poorly designed, and it’s clear the makers have not consulted bee scientists during the design process. Stuffed with pine-cones, wood-shavings, large open spaces, or cavities wide enough to fit your thumb, and with open ended or extremely shallow holes, bees have not even a passing interest in setting up shop.

Worse, many of these hotels are made with treated or imported wood. Or sport bright paint. They may appeal to our human aesthetics, but they’re snubbed by native bees.

The good news is that you can make a bee hotel buzzworthy to native bees with a few inexpensive and sustainable materials.

Effective bee hotels come in two basic designs:

- 1) Wooden blocks with holes drilled in them to accommodate bee nests
- 2) Hollow canes in which native bees can set up a bee nursery.

### Wooden block hotels

All you need is a block of wood, preferably of a tree species that is native to your area, and a drill with variably sized drill bits.

### Hollow cane hotels

Take advantage of what nature provides, bundling together hollow stems of bamboo or reeds. These can be packed tightly in a large container with one sealed end. A large bamboo culm (the jointed “stem” of the bamboo where each culm segment begins and ends with a solid joint called a node), or empty coffee tin works brilliantly.

### Critical factors in design

Two factors will determine if your nests are readily inhabited: the depth of the holes or canes, and their diameter. Generally, the longer the better.

Native bees typically build nests with sequential cells, provisioning each cell with nectar and pollen and then laying an egg, before adding a wall partition. Extra length equates to more individual cells the mother can build. If the hole/cane is too short, the female bee can construct only a few cells.

Since female bees lay female offspring in the innermost cells, and males in the outermost, shorter nests increase the chance that there will be an uneven sex ratio, creating a disproportionate sex bias in the offspring.

There are lots of critters that like to plunder the rich stores of cavity-nesting bees or parasitize the nest. Shorter nests make that easier. Generally, most scientists recommend holes at least 100mm deep.

Diameter also plays a critical role. Anything over





12mm and most bees will consider it a one-star hotel and check in elsewhere. Bees like to nest in holes that are slightly wider than their own body, which means 3mm to 11mm, depending on the species. In my own research, I've found 4mm and 7mm holes or canes attract the most occupants. Since most likely you don't know what species live in your neck of the woods, it's best to include a range of hole diameters.

### Who uses bee hotels?

So, you've now got a five-star bee hotel, with rooms snug and deep. Time to see who checks in!

I love spying on the bees that come to create a nursery in the nesting habitat I've provided. Waiting quietly, about two metres away, I'll see Mrs *Megachile aurifrons*, with her ruby red eyes, come zipping in (pictured below). At first, she'll hover around, then alight and enter one of the holes to give it an inspection.



Often, she'll check out a few holes. If she's found one to her liking, over the next few days she'll go to and from her chosen "room" in the hotel as she forages for nectar and pollen. She sequentially provisions her nest with food

for her babies and lays a precious egg in each chamber. Once completed, instead of returning with nectar and pollen, she brings back chewed up plant material to seal up her nest.

Then there's her relative, Mrs *Megachile ignita* (pictured right), who sports a shock of fiery fuzzy hairs on her head, and an equally fiery derriere! *Megachile ignita* is unique in that she likes to provide insulation for her offspring, packing the nest with fuzz from banksia cones. She seals her nest up with resin she collects from sap that weeps out of eucalypts.

Another relative of these ladies, and popular among alfalfa growers, is Mrs. *Megachile (Eutricharaea) rotunda*, commonly known as the Alfalfa Leafcutter Bee. She, and other megachilids in the subgenus *Eutricharaea*, have special mandibles – jaws – that let them cut perfect discs from leaves and petals. These bees are interior decorators, lining the nursery with their trimmed greenery. If it looks like someone cut out confetti pieces from your roses, she'll be the culprit.

Bee hotel nests occupied by megachilids are capped by leaf discs, mud, or mixtures of resin, sand and

masticated plant material. *Afranthidium* collects hair-like plant fibres and packs them into bundles, such that the material resembles cotton wool.

Other bees that check in to bee hotels are species in the subfamily *Hylaeinae*, family *Colletidae*. These bees lack the fuzzy bodies most people typically associate with bees.

Instead they often have shiny, naked, black bodies and yellow or white facial markings. They're often mistaken for wasps. Many sport a yellow "badge" on their thorax, as well as a yellow collar or yellow legs.

Instead of transporting pollen on their bodies, hyaline bees swallow it. They line their nests with cellophane-like secretions produced from their mandibular glands, and seal their nests with this same substance. These secretions are thick, strong, waterproof, and resistant to fire, high temperatures and various chemicals. Bioengineers want to synthesize this material as a biodegradable alternative to plastics.

Which particular genera and species use bee hotels depends primarily upon the region. In addition, it seems that some species like to be "all natural" and eschew the man-made structures proffered.

### Location. Location. Location

You have the perfect bee hotel, but how do you get bees to check in?

Install your bee hotels one to two metres off the ground, hanging them under eaves or on tree branches. Pick a sunny spot that receives morning light. Avoid hanging them where they will cook in direct midday sun. And while you want to check on your bee hotel, try not to place it right in a steady stream of human foot traffic. Bees need a little privacy.

### Waiting for the guests

Despite the common name of these structures, native bees don't really use them as "hotels". *Baby bee boxes* might be a better descriptor, though certainly not as trendy for sales. Adult native bees don't live in them. Rather, the females use them as safe abodes for building a nest.

Unlike their gregarious cousins—the honey bees, bumble bees, and the stingless bees—most native



bees live alone. Also, in contrast to the social bees, solitary bees do not care for their offspring. They limit their parental duties to provisioning each nest cell, then lay an egg on the food stores, and seal up the nest.

So how long do you have to wait before a new bee emerges? Again, it depends – on the species, the temperature, and seasonal timing.

Within a season, *Hylaeus* tend to develop faster than *Megachile*, with the former taking about one month to emerge, and the latter two to three months. Warmer temperatures tend to speed up development. However, in both groups, if eggs are laid towards the end of the activity season, the offspring will hunker down to wait out the winter, entering a state called diapause where they suspend their metabolism until the next season when favourable temperatures recommence.

As a bet-hedging strategy, some species may even diapause for more than one season.

Left to their own devices, the first offspring hatches from the egg as a larva, eats the store of food its mum stockpiled in the cell, and undergoes rapid development. It spins a cocoon and pupates, metamorphosing to emerge as an adult bee.

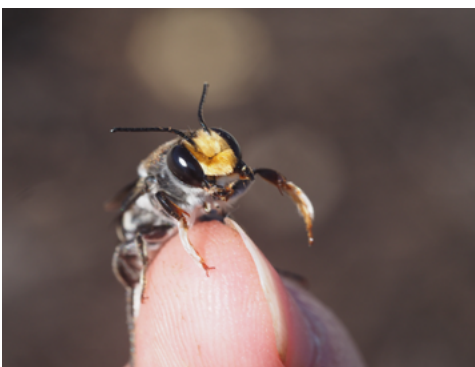
Offspring from the eggs laid last must emerge first. Otherwise their siblings become trapped behind them in the nest. So the boys emerge first, to build up energy reserves and stake out good flowers. They're ready and waiting when the objects of their desire, the females, emerge.

### Who else checks in?

Even for the best-made bee hotels, creatures other than bees like to move in. A large variety of cavity-nesting wasps also nest in bee hotels. The key difference, in all cases, between bees and wasps is that the wasp mother feeds her babies a carnivorous rather than vegetarian diet, stocking the nest with whatever animals she can procure – cockroaches, spiders, and caterpillars – rather than nectar and pollen.

Spiders, cockroaches and various other insects also like to make use of bee hotel cavities. There are some sneaky guests – the parasitoids, a few of which are bees themselves. "Cuckoo bees" eschew all the hard work of a typical bee mother, and lay their eggs in the

nest of a host species. When the cuckoo bee egg hatches, the larva chows down on the food intended for the original offspring of the host. Voracious, the



## Citizen Science Project

PhD researcher Kit Prendergast has set up a spreadsheet for everyone to document their experiences with bee hotels. Such data will be invaluable to identifying optimal designs and the range of species that use them.

Go to the Facebook group "[Bees in the burbs in a biodiversity hotspot](https://www.facebook.com/groups/Beesintheburbs/)" at [facebook.com/groups/Beesintheburbs/](https://www.facebook.com/groups/Beesintheburbs/)

- Click on the 'Announcements' tab in the left sidebar of the group page. A new tab opens, and there are three spreadsheets. The first is for bee hotels.
- Double click on the spreadsheet to be filled in (or right click and select Open with-> Google sheets), and this opens in a new tab.
- Enter the data in a new blank row, according to the column headings. No need to fill everything in; just add what info you have available.
- Click on a blank cell. Wait for it to automatically save.

marauder often consumes the host egg or larva too.

Other invaders? Sometimes you'll spot beetles. And with their bounty of pollen, nectar and larvae, bee hotels can also attract invading ants.

Barring unwanted guests entirely from a bee hotel is nigh impossible. Some are welcome as biocontrol agents, helping to eliminate garden pests. However, the others are more problematic.

In nature there is a balance of parasitoids and hosts, and the presence of parasitoids indicates a healthy host population. Bee hotels make great nesting sites and so we may artificially increase the relative abundance of parasitoids to hosts and upset this delicate balance.

To help minimize parasitization, place several smaller bee hotels throughout your garden, rather than having one huge bee hotel or many bee hotels all aggregated together.

Want to increase the chance of the right occupants checking in? Put your bee hotel out just before the start of the native bee activity season.

Ants can be a real pain, and often the only way to deal with them is to tip the entire ant colony out, wash the bee hotel, and relocate it. Hang the bee hotel from a thin piece of rope tied to a tree limb, rather than tied against the tree trunk. Coat the rope with Vaseline.

Kit Prendergast is a native bee scientist, conservation biologist, zoologist and PhD researcher at Curtin University, WA. She has written an 80-page guide, "Creating a Haven for Native Bees", which is available as an e-book for \$18 via <https://www.facebook.com/CreatingaHavenforNativeBeesBook/> Printed copies will be available soon for \$30.

The original version of this article first appeared in 2 Million Blossoms, a new quarterly magazine about pollinators. The first issue, January 2020, is now available to read online for free at [2millionblossoms.com](https://www.2millionblossoms.com)

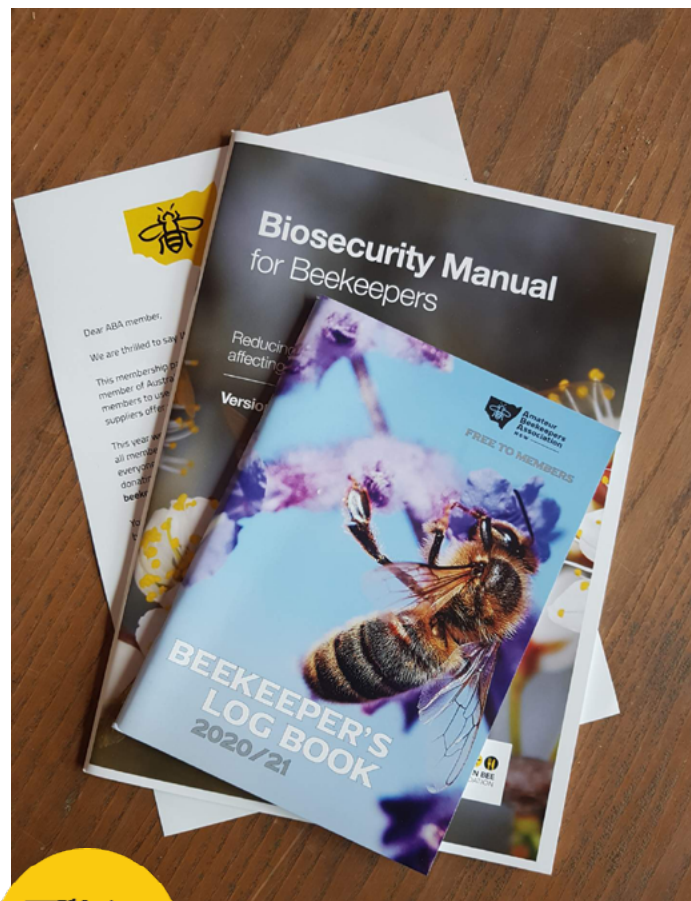
## MEMBERSHIP

# Welcome pack

## Cards, log books and biosecurity manuals: direct to members

**N**EW MEMBERS receive a membership pack in the mail. It is sent to the address entered in the online membership system. Along with a blue ID card, we enclose a new version of the ABA Beekeeper's Log Book and a copy of the Biosecurity Manual for Beekeepers. This 64-page publication is packed with information to help identify and deal with bee pests and diseases.

The ABA thanks the NSW State Advisory Group of the National Bee Biosecurity Programme for a contribution towards printing costs of the manual.



**Amateur  
Beekeepers  
Association  
NSW**

### CLUB NETWORK

For details of our network of 28 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)

## JOIN THE TEAM

The ABA is run by a team elected onto the executive each year at the AGM.

Are you interested in stepping forward to help the ABA?

We are particularly keen to hear from members with skills in finance, accounting, administration or promotions.

To find out more, or to volunteer to help in any small or larger-scale tasks that crop up from time to time, please drop us a line at [feedback@beekeepers.asn.au](mailto:feedback@beekeepers.asn.au) and we will be happy to chat about the opportunities coming up.



ABA Member

## MEMBERSHIP Q&A

**ABA FEE: \$30**

**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?"

*Affiliated clubs are independent associations and decide their own fees. The ABA collects club fees on behalf of clubs via a centralised membership register.*

*The ABA fee is retained by the ABA to fund its activities supporting clubs and amateur beekeepers.*

*The two fees are currently listed separately so that members can choose to join multiple clubs and pay only 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 face-to-face meetings can be held safely.

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