

# BEE LINES

Newsletter of The Beekeepers Club Inc. Est. 1998



**April 2017**



Cut-out carried out on 28<sup>th</sup> March. This large colony established in the open had no stores and would undoubtedly have perished in the winter. It is now safely installed in a hive and being fed syrup. Photo: Andrew Wootton.

**Next Club Meeting: Thursday 20<sup>th</sup> April 2017, 7 pm**

Venue: Performing Arts Centre (PAC)  
Doncaster Secondary College  
123 Church Rd Doncaster  
Melway 33 G 12

\*\*\*\*\* Guests and Visitors Welcome \*\*\*\*\*

Enquiries and information: [editor@beekeepers.org.au](mailto:editor@beekeepers.org.au)

# Next meeting:

## Thursday 20<sup>th</sup> April 2017

7.00 pm for 7.30 pm start      PAC    Doncaster Secondary College.

Topic:    Bio security and wax moth control  
          Jenni Fenton and Linda Anderson Berry

*Also continuation of Special General Meeting from adjournment 16<sup>th</sup> March (notice previously sent).*

# Upcoming events:

**Saturday 22<sup>nd</sup> April      Junior's meeting** 10.00 am at Saxon Street.

**Thursday 18<sup>th</sup> May      Club Meeting**

Topic: Insect photography.  
      Bring honey competition entries to this meeting.

**Saturday 29<sup>th</sup> July      Winter Workshop "Improving your Beekeeping"**

Saxon St Brunswick

An intermediate course covering:

- Inspecting and handling bees
- Splits and making increase
- Swarm prevention and collection (including artificial swarming)
- Diseases and pests
- Equipment building and maintenance

Workshop activities will feature hands on, interactive practical exercises. Participants will undertake a number of simulated hive manipulations. Cost: \$45 includes course book and refreshments including lunch. Full details and registration on web site.

**Date TBA                      Day Trip**

For those members wanting a day in the country we are planning a possible visit to Whirrakee Woodware, Maryborough . They would provide morning tea and a tour of facility with possible inclusion of an adjacent honey extraction plant. We need 50 to fill the bus so keep an eye on the website for further details. In the past these one day tours have been very successful and greatly enjoyed by those who attended so hopefully the tradition can continue.

**September 2017              Beginner's courses** will restart.

\* I encourage all to log on to website regularly to see what is going on, what events are coming up and the forum page as a good learning tool. A lot happens in this club, and the web site is a great way to keep involved.



**WELCOME NEW MEMBERS:** We are pleased to welcome 10 new Members into our club, and wish them well in their beekeeping journey. A warm welcome to: Otto Kruse, Michael Lambert, Craig Lowe, George Stefanou, Owen Wynn, Mark Huynh, Danny Lennon, Pauline Osborn, Ajith Peiris and Justine Wright

According to Irish and British folklore, you must never buy bees with normal money, only with gold coins. Although, if possible, it is best to barter over them, so as not to offend them, or to receive them as a gift, so that no money changes hands at all.

Ancient Egyptian pharaohs used the honeybee as the royal symbol, during the period between 3000 BC and 350 BC.

Bees symbolise wealth, the wealth of knowledge or the wealth of good luck as well as meaning wealth in the financial sense. In Wales it was very lucky if bees of any kind set up home in or near your home, as they were said to bless it with prosperity.

## Become involved

The club has a great resource in our interactive web site, and I encourage members who have a question not to wait until the next meeting but jump onto our forum page post your question and you may get good feedback virtually immediately.

To get the most benefit from our information session at the start of the meetings, you are invited to email your questions up to a week before the meeting and we can discuss at the information session. This way we can address issues directly affecting members. We will be expanding our library stand at the next meeting so again you are invited to take advantage of the books and DVDs and other assets.

If you would like the microscope set up at the library table or elsewhere on a meeting night, ask and we can try arrange to do so. Remember the microscope is primarily for class teaching and is valuable and fragile so it must be used in a safe and quiet area, sometimes hard to get at a meeting but we will see how best to work out a suitable site and use. We will most likely need to link to a lap top so it is not as easy as one may first think.

The club has an opportunity to bulk buy supers, lids, frames etc., if you would like to take advantage we will have a requisition book at the library table. Fill out what you want and once we have a bulk order we can proceed with purchase. We will try and have a price list by next meeting.

# Wintering your hives

Sooner or later winter will be setting in and it will be getting cold in many parts of Victoria. That triggers the question -do I pack down for winter and how much honey do I leave in the hive? Fortunately our winters, although cold and wet, are not as severe as some, and do not effect bees as much as some other parts of the world. I believe that as most bee books are written in the Northern Hemisphere this has prompted a lot of doubt and misunderstanding amongst hobby beekeepers in our region and causes unnecessary worry about 'packing down' for winter. Let common-sense prevail.

When the weather is cold, and/or wet, bees don't fly to gather nectar or pollen. When it's cold and raining bees stay in their hives and eat any stored nectar or pollen as a food source. If bees don't have ample stores of nectar/honey and pollen they can starve during extended periods of cold and/or wet weather.



Image: Brookfield Farms

To me, winter packing down means ensuring you have left enough food for your hive to last the next 12/16 weeks until early spring. My usual pack down means I leave 2 brood supers and 1 honey super. Yes, I usually winter with 3 boxes. If it is a smaller hive, I may then have just 1 brood and 1 honey. Based on the rule of thumb that the brood boxes would normally have 2 outer frames of capped honey in each box (~ 10kg), the other 12 brood frames average 1.25kg per frame. That's about 15 kg and the full honey super above 8 frames at 2kg. This gives a total food resource of approximately 40 kg; enough for a long cold winter. It can never be too much. If winter turns out to be not too harsh and the bees have been able to gather some winter pollen and nectar then the left over honey gives them a good start to next season. Honey left in the hive is as

good as money in the bank. People may say 3 boxes is too much for the bees to warm during winter. Not so, they have plenty of food for consumption in periods of exertion. Show me a feral hive that closes off half their tree so they don't have to warm as much space. Feral hives usually have good food supplies, not stolen by man. I have wintered in 3 or 4 boxes every year, leaving good food resources and have never lost a colony and always had good strong colonies to start the new season.

Natural honey is far better than sugar syrup so I do not believe in artificial feeding, unless environmental or other conditions outside my management control necessitate. We are fortunate in Australia to have access to winter sources of nectar and pollen and this usually means bees can survive the winter without feeding on sugar, so I urge you to take advantage of our winter resources, leave the sugar on supermarket shelves.

## Feeding Bees sugar/HFC/other chemicals

A bee's natural and main food source in winter consists of fermented pollen, nectar, and honey. Many bees are fed artificially because they are being transported or most of their honey stores have been harvested, or both. There is a common, but erroneous, belief that sugar, high fructose corn syrup, and honey are all the same. Actually raw honey is much more structurally complicated, containing 181 natural ingredients including vitamins, enzymes, and microbes that have been shown to aid in digestion. Sugar and HFC (High fructose corn syrup) on the other hand are processed at high temperatures, void of any nutrition whatsoever, and linked to several human

health problems namely obesity, Type II diabetes, insulin resistance and even some cancers.

If sugar and HFC can do that kind of damage to us, imagine what kind of damage they can do to a smaller more delicate creature like a bee.

### Preparing for winter

Victoria offers a cool to moderate climate, so I always try and place my hives in a site that provides winter sun and protection from the winds. Cold wind is a bigger problem than most people realise. Cold winds can kill. The sun warms the hive and helps it maintain a consistent temperature. If your site is prone to southern or cold winds, put a wind trap up: a piece of shade cloth or similar just to offer that extra little protection or wind deflection. When the hive is cold, bees cluster and shake their bodies causing them to use energy which they have to replace by eating their stores.

In your last inspection before winter, it is a good idea to do a final disease check and

place new hive beetle traps inside the hives at this time of year. Most of my hives have a 100 mm – 140 mm entrance openings. I do not bother reducing these openings just leave as is. I also have open or screen bottom boards on all hives and I leave them on all year including winter.

I have heard of people painting their lids black for winter, insulating their hive sides and back with foam or other insulation. I have no evidence this works or is of any great benefit. Nothing beats having your hive well sited for winter sun and protected from wind, raised off the ground to ensure no water ingress, and plenty of food.

Please think of bees over winter during cold, dark or raining days. Practice the art of 'hefting' and heft your hives every couple of weeks this will give you a feel as to how the colony is surviving. But nothing you do will provide your bees with a better chance of winter survival than leaving sufficient honey for them.



## Wintering with the FLOW HIVE

Essentially wintering with a flow hive is much the same as if you were beekeeping with a Langstroth hive.

1. Ensure you have enough stores for the bees over winter. Check the stores in the brood box or boxes if you have two. Is there capped honey?
2. If your flow hive is full of honey now, leave it in, remove the queen excluder, replace flow hive. If the 6 frames are full and you need some honey only take 1 frame and leave 5 for the bees.
3. If there is no honey in the Flow hive remove it. To store your Flow frames, wash them in warm to hot water and allow to dry thoroughly before storing them in a cool, dry, dark clean location for the winter. Remember the flow frame plastic is UV sensitive that's why a dark place is required.
4. Wash and store plastic queen excluder.
5. If you have to feed I suggest freezer bags of syrup placed on top of crown board. 1 -1 sugar water mix. Cut a few small slits in bags for feeding access.
6. If you have removed your flow hive heft your brood box or boxes regularly during winter to gauge the hive progress if getting lighter ....feed.

I would appreciate any flow owners in the club to send me your comments about your flow hive beekeeping over the last year for publication to assist others.

# Wax Moth

Wax moth is a pest we will all encounter in beekeeping. They are very destructive and will destroy stored frames and combs with honey and bee collected pollen. They tunnel into comb and will even bore into wooden frames.

The moth can, and will, attack when frames are stored and also when a hive is in a weakened condition or stressed. A healthy populous colony generally will not tolerate wax moth in the hive. The moth is not usually the initial cause of colony destruction but will move in and take advantage of a weak hive and quickly damage combs not covered or protected by the bees. So, the empty or unworked frames in the hive are usually the catalyst for an infestation.



Ken Walker Museum  
Victoria

**The Greater Wax Moth**  
*Galleria mellonella*



LandLearn  
NSW

Image: Landlearn NSW

There are two types of wax moth, the Greater and Lesser Wax Moth



**The Lesser Wax Moth**  
*Achroia grisella*



Both moths damage frames.

The adult moths tend to be pale brown to grey and usually are about 20mm overall length. The wings are quite often mottled and fold over the body in the appearance of a roof.

A moth can lay about 400 – 600 eggs a day. Eggs hatch in 3-5 days when temperature is in the range of 29C – 35c.

Larvae are creamy white, but will turn grey on reaching their fully grown size of



anything up to 28mm in length. After hatching, the small and active larvae tunnel into comb and line their tunnels with a silky web as they travel through the comb. They then move from comb to comb through any ever increasing mass of webbing. Overseas studies have shown that newly hatched larvae can travel more than 50 metres, so it becomes a high risk to other hives in your apiary.

Lesser Wax moth ( *Achroia grisella*) is smaller than the Greater wax moth, and is silver grey to dull yellow, with a slender body it is about 13mm in length., as compared to the Greater wax moth of 20mm. The lesser wax moth is usually solitary, whereas greater wax moth congregate in larger numbers.

Colonies that have become weak and have low numbers of adult bees resulting from starvation, queenlessness, excessive swarming, disease, pesticides or just plain neglect cannot effectively guard the hive against wax moth infestation. The first action by the moths will be to attack the frames unattended (usually the outer frames) and then as the colony weakens further combs with bees may be damaged.

When opening your hive, always keep an eye out for one or two wax moths as they may even be in a populous healthy hive. Although these would be removed by the bees sometimes larva can occur between the hive mat and top bar of a frame. If sighted, remove and place in your smoker.

A condition called bald brood occurs when the wax moth larvae partly remove the cell caps, and expose the honeybee pupae. Workers chew the remainder of the capping thereby fully exposing the heads of the pupae which continue to develop normally. The lines of bald brood follow the direction of the wax moth's travel. Some bee pupae nearing maturity may have deformed legs or wings. One of the causes of this deformity is a result of wax moth excreta affecting the final moult of the pupa before its emergence from the cell.

Sometimes the newly formed adult bees become trapped in their cells by the silken threads produced by the moth larvae tunnelling at the base of the cells. The bees eventually die and are later removed by hive bees.

Damage to stored combs and hive material will vary with the level of infestation and the time that has elapsed since the infestation first began. In time, stored combs may be completely destroyed and the frames and comb become filled with a mass of tough, silky web. In ideal wax moth conditions, a box of combs could be rendered useless in about a week.

Damage will generally occur in the warmer and hot months when the moths are most active. But considerable damage can still occur in the cooler climate conditions of late autumn and spring as greater wax moth can produce a large amount of metabolic heat which can raise the immediate temperature around them by up to 25C above the normal environment temperature. In extremely cold winter periods, little if any damage is seen as the larvae are relatively inactive.

At the time of storage, combs that are apparently free of wax moth may contain eggs that will hatch later. Monitor frames at frequent intervals for signs of infestation. Adult moths may also lay eggs in the external cracks and joints of stacked supers or combs. After hatching, the tiny larvae quickly tunnel through the joints to infest the combs.

Wax moth larvae appear to prefer dark brood combs that contain some pollen. **Stickies and combs containing honey are also at risk of attack.**

Combs infested with wax moth are best destroyed. A clean environment will always assist in minimising the incidence of wax moth.

Strong hives will curtail moth invasion so, always keep strong populous colonies. You would be well advised to join two weak colonies to form a strong one. Weak colonies will have little resistance to an infestation attack.

All life cycles of the wax moth, including eggs, are killed by freezing at the following temperatures: -12c for a minimum of 5 hours or -15c for a minimum of 3 hours .After freezing , the combs should be stored in a moth proof environment to prevent re-

infestation. Sealed, strong plastic garbage bags can provide good insect proof storage environment. Combs that have been frozen and then placed in untreated supers for storage are immediately at risk to infestation because the supers may contain moth eggs. It is best to treat the super and combs and then place them together in a sealed bag.

Again as in so many things with beekeeping observation is the best preventative. Observe and then act quickly when the problem is first sighted.

## Minimal intervention

Studies have shown that Small Hive Beetle can smell a honeybee colony's distress pheromones from an astounding 10km away and they come running (or flying, actually) to make the most of that disruption.

Stressed hives are perfect for small hive beetle to invade – the bees are dealing with other issues, the laying / filling of the comb may be out of whack, so the patrolling of the comb may be not ideal, and it's the perfect opportunity for the beetle to lay where they won't be annoyed.

Every time a hive is opened from the top, the nest scent is released and, if the bees are stressed or sick, this means a huge release of stress pheromones – out of the hive entrance and into the air.

By minimising hive openings (2-3 times a season is plenty if you do your research and know what you're doing), we can minimise the release of these alarm pheromones.

Choosing a good day to open your hives is also important. Opening your hives when it's cold or windy or wet, is a fast-track recipe for cranky, stressed bees. If the weather is wrong, wait. Put the bee's needs before your own convenience. An ideal hive opening would be mid-morning on a calm day, with an air temperature of 27°C or thereabouts. Yes, things aren't always perfect, but the more thought you can put into your hive



openings, the better for the bees, and their hive health. Waiting for an ideal day minimises the impact of a hive opening on the bees – the foraging bees will all be out in the environment already, and if the temperature is good, the impact on the brood, and the bees stress levels, will all be minimal.

Nadiring also helps with minimal intervention – by using nadiring when the bees need more space – which happens a few times a season in Australia, especially on a honeyflow – we can add space to the hive via the bottom, without opening it at the top.

## Juniors' Section

Juniors,

The last juniors' meeting was held Saturday March 18<sup>th</sup> at Saxon Street. The weather was not ideal for hive work so a film "The Mysterious Bee" was shown. This gave those attending a great view of beekeeping as practised by a competent beekeepers and fantastic photography of life inside the hive.

The next meeting will be Saturday 22<sup>nd</sup> April at 10.00 am.

# ANNUAL HONEY COMPETITION

June 15<sup>th</sup> meeting

This year the competition has been enlarged to include the following categories:

| CATEGORY   | SUBMISSIONS DUE   | OTHER INFO   |
|--|---|--|
| <b>Honey</b> (includes flow hive) <ul style="list-style-type: none"> <li>♣ Dark</li> <li>♣ Light</li> <li>♣ Medium</li> <li>♣ Creamed</li> <li>♣ Comb</li> </ul> | To be lodged at May 18 <sup>th</sup> meeting  | <ul style="list-style-type: none"> <li>- Ensure you use the correct honey jars.</li> <li>- Jars are available from the front desk at the April meeting.</li> <li>- Marks are deducted for odd size jars.</li> <li>- Comb honey can be in any container with lid.</li> <li>- Capped honey frames should be in a suitable stand or container.</li> </ul> |
| <b>Wax modelling:</b><br>Candles / sculptures  | To be lodged at May 18 <sup>th</sup> meeting  | Transport in a safe container which can be left with your exhibit  |
| <b>Mead / liqueurs</b>   | To be lodged at May 18 <sup>th</sup> meeting  | Can be presented in any bottle of your choice.   |
| <b>Photos</b>  | To be submitted by 31 <sup>st</sup> May via download web site, or email to mail@beekeepers.org.au | Digital submission as well as printed copies. Bring 6x4 photo exhibits for entry at the May meeting or enter up to 31st May by emailing mail@beekeepers.org.au. If you chose the email option bring a 6x4 copy of the photo to the JUNE meeting.   |
| <b>Honey cakes, biscuits, slices</b>   | To be submitted and judged at June 15 <sup>th</sup> meeting                                       | All baked items require a minimum of 3 pieces per plate. Preferably use a paper plate. Any honey from any source can be used.  |

## Terms and conditions of entry

- 1: In fairness to all, late entries will not be accepted for judging.
- 2: Entries closing at the 18<sup>th</sup> May meeting are to allow judging to be done in a timely manner and preparation of prizes and presentation of judges' commentary.
- 3: By submitting photos, entrants agree that these may be used in the club newsletter or other material published by the club.
- 4: Photos may also be taken of other exhibits and used in club material.
- 5: Entries will be stored by the club in a safe and secured area and returned at the June meeting

A friend of mine Cynthia Riach presented this wax model entry and won first prize at the Royal Highland Show Scotland, last year.

Do we have any artisans in the club that can better this wax model entry? If we can beat it I may sponsor a Scotland v Australia annual modelling competition.



Or maybe an ornate candle



To get the creative juices flowing for our cooks in the club, this is one recipe suitable for the competition.



### **Apricot Honey Oat Bar Biscuits**

1½ cups old-fashioned rolled oats (uncooked)

½ cup finely chopped dried apricots

**½ cup honey**

¼ cup non-fat plain yogurt

2 large egg whites

2 tbsp wheat germ

2 tbsp flour

3 tbsp margarine, melted

½ tsp cinnamon

½ tsp vanilla

¼ tsp salt

1. Preheat oven to 325°F.

2. Spray an 8" square baking pan with non-stick cooking spray.

3. In large bowl, combine all ingredients; mix to blend.

4. Turn mixture out into prepared pan, smooth evenly.

5. Bake until centre is firm and edges are lightly browned, about 25 minutes.

6. Cool and cut into 2" squares.

The judges are really looking forward to having a big turnout for this section of the competition, so get the recipe books out and make their job as hard as you can.

## **Bee facts**

Honey bees have 170 odorant receptors, compared with only 62 in fruit flies and 79 in mosquitoes. Their exceptional olfactory abilities include kin recognition signals, social communication within the hive, and odour recognition for finding food. Their sense of smell is so precise that it could differentiate hundreds of different floral varieties and tell whether a flower carried pollen or nectar from metres away.

## **Access of bees to honey**

It is quite alright to feed bees honey that they have stored in their own hives. However, it is illegal to allow bees access to honey that is outside the hive. This includes honey that is in or on comb, wax cappings, wax scrapes and hive components. With the ever increasing threat of disease, please be conscious of good practice when working your apiary.

## **Maintain good apiary hygiene**

Keep hive bottom boards clean. Discarded comb, burr comb and beeswax scraps left around the apiary will attract beetles and encourage them to breed. These items should be collected and removed for processing. Hives with dead colonies should first be inspected for presence of American foulbrood (AFB), and if found free of AFB they should be removed from the apiary and stored securely. Notify one of the Department of Environment and Primary apiary officers if there is a suspicion of AFB.

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