

# Beelines

*Newsletter of The Beekeepers Club Inc. Est 1998.*

**APRIL 2016.**

Mission statement:

*To enhance the learning and better practices  
of the art of beekeeping within our community.*



*Meeting venue; Senior Citizens Club. 895-901 Doncaster Road Doncaster  
East. Melway 47k-1. Opposite Dan Murphy's.*

*Meetings held 3<sup>rd</sup> Thursday of each month 7.00pm for 7.30pm.*

*Guests and Visitors are Welcome*

*Enquiries and information:*

*[editor@beekeepers.org.au](mailto:editor@beekeepers.org.au)*

## Next Meeting.

**21<sup>st</sup> April 2016**      Chef Matt Wilkinson. Cooking with honey demonstration.  
 Matt will be assisted by Sous Chef Mat Lumalasi  
 7.30pm.      Beginners corner. Aris Petratos preparing for winter.

### Club Meetings:

19<sup>th</sup> May 2016.      Bee Pests and Diseases. (DEPI speaker to be confirmed)

16<sup>th</sup> June 2016      Honey and Photographic competition.

21<sup>st</sup> July 2016      AGM

The consensus from a number of people within the industry and in particular in relation to the specific conduct, content and presentation of the Flow course and indeed our own developed beginners courses has establish our club as the premier bee activity and training club in Victoria.

This external critique is reinforced by the fact our membership has now exceeded 300 members.

This is leading us into investigating new premises to accommodate the growing meeting attendees.

It is important members can have the meeting in comfortable seating, with good audio / visual, catering and car park facilities.

It is equally important the meeting venue be in a close proximity to our current. As we progress in this relocation search we will keep you all fully informed.

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## Preparing for winter.

Although as I write now in April the current temperature is a comfortable 27°C, remember winter is just around the corner so we should start to think of winter preparation now.

Although it is written in many articles and text books, we tend to forget that bees are extremely well adapted to staying warm in winter. Contrary to popular belief, they do not keep their entire hive warm in the way we keep a house warm, instead they only keep the cluster warm. This is aided somewhat by the structure of a Langstroth hive, but even open-air or feral colonies can survive a moderately cold winter if they can stay dry and out of the wind. Bees rarely die of cold it is the wind chill that will kill them so it is important to protect from severe wind actions.



Photo: [stevensbees.blog](http://stevensbees.blog)

Bees keep warm in winter by the workers forming a cluster around the queen and any brood, keeping them warm. The outer layer of workers insulates the bees inside the cluster or sphere. As the ambient temperature rises, the bees on the outside separate a little which allows more air flow and as the temperature falls the cluster tightens having the effect of

creating more warmth. It has been observed that they will start a shivering effect by vibrating their flight muscles but at the same time their wings remain still. This raises their body temperatures; with thousands of bees constantly shivering, the temperature at the centre of the cluster will maintain at about 34°C. When the outer cluster bees get cold, they push into the group and other bees then take a turn on the outer.

Bees generally will not fly or forage when the temperature is under 12°C and then only if there is no wind chill factor. Above those conditions it is possible that bees will forage and can increase their own stores in a mild winter spell.

## So how do we pack down to ensure survival?

To my mind preparation for winter should be the easiest part of beekeeping.

It only needs 2 rules.

1. Leave a minimum of 8 full frames of honey in the hive.
2. Reduce the number of boxes down to 2.



I estimate that an average colony will require around 18-20kg of honey to survive a typical Melbourne winter.

The honey is an energy producing food; bees eat it as their carbohydrate food to create energy which assists in maintaining hive temperature.

I cannot stress enough that it is important to leave sufficient stores in the hive.

In late autumn (dependent upon weather of course)

- Remove all top supers
- Remove queen excluders

Just remember honey in the hive is the same as insurance or money in the bank, if the bees end up not needing all the honey you have left in the hive, then it is there for a good start for next season, it is better in the hive as insurance for survival than sitting in jars on your shelf.

Although I have said only 2 rules apply. I do need to expand on that statement.

- When reducing the number of supers remember to remove the queen excluder (if fitted).
- Close the hive entrance down to around 70/75mm width. This will reduce the opening thus reducing thermal leakage and offering some protection from any other predators.
- I also think it a good idea to insulate or protect the roof with a sheet of EPS foam or other suitable material.
- If you have been careful in your original hive site location placement then you should have already covered wind protection, have the ability to get some winter sun and reduced the possibility of water ingress.

With all the above in mind you have packed down for winter.

If on a warm winter day you see some bees leaving the hive and returning that is enough to indicate all is ok particularly if you have winter plants close by.

## Feeding.

To my mind any hobbyist beekeeper who has to feed sugar syrup, or candy has failed in his duty.

Again in making this statement there may be reasons beyond his/her control and feeding may be necessary, but if unusual weather events or other external event occurs then feeding may be necessary.

**But!** .... as I have often heard beekeepers say in early mid-autumn “I just took out and extracted a really good yield of honey, it is a bit late but I can feed them in winter” .....WRONG.....WRONG.....WRONG. If that person came to my house for a 2/3 month stay and I only feed him bread and water what you he say! Think of your bees.

## Stores.

Do not leave unsealed honey in the hive for winter, unless it is only a small quantity and surrounded by sealed honey, and then leave it well inside the cluster of bees.

Combs of honey near the outside of the cluster should be completely sealed; otherwise the unsealed honey may take up moisture and ferment.



### Next meeting:

We have been fortunate enough to obtain as guest presenter for the April meeting Melbourne celebrity chef Matt Wilkinson.

Although an accomplished chef, Matt has also be hailed as the World’s Best Sandwich Maker, and is one of the food heroes of Melbourne. Matt Wilkinson is the chef and restaurateur behind Pope Joan, Hams and Bacon and Spudbar in Melbourne, he has released his second cookbook *Mr Wilkinson’s Simply Dressed Salads* to industry acclaim.

Matt will be preparing some honey based dishes, which will be available for sampling.

*This should be a meeting not to be missed.*

## Flow Course:

The fundamentals of beekeeping course conducted by the club in conjunction with Bee Inventive and input from the DEPI was held on April 7<sup>th</sup> and 8<sup>th</sup>.

The course was attended by 50 registrants and was 2 full days of both theory and practical sessions in the fundamentals of beekeeping and on the Sunday afternoon Stuart Anderson co-inventor of the Flow hive presented on the Flow hive, including the long invention and development period, the record breaking crowd funding process and the use and maintenance of the flow hive.

The club wanted to be involved and conduct the course as we saw an opportunity to enact our mission statement of

*“To enhance the learning and better practices of the art of beekeeping within our community.”*

Virtually all of the registrants were purchasers of the flow hive and have little or no beekeeping knowledge, so it was a great opportunity to engage and ensure the new beekeepers are coming into the industry with some knowledge, it is very satisfying that a large percentage have applied to our club for membership.

The course was conducted with input of the following presenters and I take this opportunity to publicly thank them for their participation in what we believe was the first dedicated flow course in the world.

The presenters were:-

Andrew Wootton

Mat Lumalasi

Helmut Huber

Sue Zuber

Barry Cooper

Daniel Martin

Stuart Anderson

The behind scene workers who did a fantastic job over the 2 days, and for which the days would not have run as smoothly as they did:-

Yvonne Ashby

Alan Walton (video recording)

Demi Lagos.

I thank you all for what was a great event for club in achieving all of our requirements and objectives.

We initially aimed at 50 applicants we received in excess of 130 so another course is planned for May 7<sup>th</sup> and 8<sup>th</sup>.





Stuart Anderson co-inventor of the flow hive explains.

Our treasurer has requested that those few members who have not yet paid their fees for the following events see her at the April meeting and clear the accounts , there are just a few outstanding and it would be good to have all cleared by next meeting.

- Family day
- Beginners course
- Membership fee.

## Upcoming events:

In response to a number of member requests we have commenced planning a couple of major events.

The first will be a trip to Perth to visit Professor Baer's CIBER research unit at the University of WA, with visits to other places of interest. It is expected this event will take place on the 1<sup>st</sup> to 4<sup>th</sup> July 2016. Places will be limited to 50 passengers.

A second trip is being planned for members who cannot be away for an extended weekend and this will be a visit to a queen breeder and exporter in NSW and again other places of interest will be visited. A date is yet to be confirmed but most likely late July 2016.

I urge you all to keep an eye on the events page on the website over the next few weeks for more details and booking arrangements.

If you have a request or idea for an activity please let me know and we will see if we can get something organized.

Lavender is a powerful smell it may even change a bees DNA.



Lavender is a powerful smell, but could it be even more powerful than we think?

New Australian research reveals that not only can the smell of lavender help bees make new memories, but that it can also change their mood and even change their DNA.

Professor Charles Claudianos, Professor of Neurogenetics and Development, Monash University has discovered interesting facts about the reaction of Lavender and bees. Aromatherapies like lavender have been around for a long time in how they modify stress and anxiety in humans. What we've discovered in the honey bee is that lavender similarly changes their behaviour, their memories even their DNA, and these studies might be potentially very useful in how we study the lavender in a powerful human brain.

Professor Claudianos, says the bee brain is particularly interesting because although it is anatomically different from a human brain the fundamental mechanics of how it works are similar.

Lavender has been used in Europe for generations as a calmativ. It's not only used as a calmativ for bees but also a calmativ in terms of our pets and ourselves. So, clearly, there's antedotal evidence evidence that there is something in compounds like Lavender which bees might actually see as benefical.

However there is one scent bees seem to hate – bananas.

A lot of beekeepers, as a tip and a trick to promote hygienic behaviour and clean up inside the hive, ususally put a banana peel in the top of the hive and seal the lid, the smell that the banana peel emits usually

stimulates the bees to clean the hive a lot faster than it would without. Bees do not like the smell and they become more aggressive. Professor Claudianos said that the compound which is the banana smell isoamyl acetate, actually is used as an alarm pheromone in bees. We can use that information very insightfully to look at how we look at memory and learning and aggressive response in honey bees in the laboratory.

The procedure used by the research team is to collect bees between 10 – 14 days, before they actually gain an experience of the environment, they are then placed into a device where just their heads poke out and then the team start the classical conditioning experiment. For each bee, the scent of lavender is blown gently across its antennae and immediately after, it's given a drink of sugar water. After just a few repetitions the bees seem to learn to associate the smell with the reward.

If they have made that association the bee sticks out its tongue - and we can go back a day later and if we give it the smell it will put out its tongue as a positive response that it has formed a memory. We have also seen that association as being as long as weeks later, and considering the bee only lives generally 6-8 weeks average, this is a significant part of their life.

But are the bees reactions to the scent of lavender just a learned association or do they have an innate response to the scent? – By chance when the team were actually looking at memory and how memories are formed in the bee brain they did see a preference of certain odours and it just so happened that one of those components ended up being the same compound which actually modifies the aggressive responses in the bees.

So another experiment to identify the particular compounds that were modifying bee behaviour was designed.

The black feather experiment, (black being the colour that bees adversely respond to) because they think it is a threat. When the feather spins and hits the bees they got into an agitated state and started stinging behaviour. This caused bees to release its alarm pheromone – isoamyl acetate - the banana smell.

The team isolated two specific scent molecules that really did make bees calmer – 2 – phenylethanol, the compound of rose scent and linalcol, a common floral scent found in many varieties of plants, particularly lavender. They then replicated the experiment in the field, both experiments proved to give the same results, that these two components really had a significant effect on calming bees.

This led to further research with international collaborators to see what the scents were doing to the bees DNA.

Research using cancer drugs designed to stop the methylation process, researchers were able to see what the bees could remember, if they were not able to make epigenetic changes to their DNA.

Amazingly, the research team discovered that bees found it almost impossible to make long term memories if they were prevented from making epigenetic changes to their DNA. – So could this lead to human mental health ?

Bees are an exceptional model for research because they have many parallels to our own human development. So there are a few implications to human health.

We understand that when a human has a memory problem one of the first things to go is the sense of smell. Sensory acuity drops, whether it's Parkinsons or some forms of dementia. So great hopes are now held that research is going to be able to translate into practical uses and that researchers can actually think about taking that data and examining it in the context of mental health disorders.

Source: ABC / Monash University.  
University of Konstanz Germany  
University of Toulouse France.

We have now secured a premises for our proposed Junior Beekeepers Club, and hopefully the first session will be under way in June.

The location is the Community Building Saxon St Brunswick, where we also have the opportunity to place training hives.

So if you have a child or grandchildren 14 – 17 and want them to follow in your footsteps then take the opportunity and enrol them in this club. The syllabus will give an excellent introduction into beekeeping.

Modules will include:

|   |                            |
|---|----------------------------|
| Biology of the Bee                            | Natural history of the bee |
| Pests and Diseases                            | Manipulation of the hive   |
| Robbing and extraction.                       | Correct use of equipment   |
| Constructing and maintaining hive components. |                            |

With the emphasis we now place on training and the planned increase for more advanced training courses I have commenced discussions with various stakeholders to investigate the possibility of gaining teaching accreditation for the club.

This will be a fairly long and drawn out discussion however I am hopeful that we will eventually be able to offer accredited training and courses.

This will be a great asset for the club when and if concluded.

## Honey Competition.

The annual honey competition will be held during the June meeting.

Jars will be available at the April and May meetings.

## Volunteers Wanted:

The committee is interested to hear from a member who has a good level of I.T skills to help with our website management.

We really want to complete the installation and make the site as user friendly and interactive as we can. The software associated with the club management program has really streamlined our management records and is proving a great investment , now we want to make it as easy as we can for members to use and as well, place as much information of events etc, on it to keep all informed.

Just give Andrew Wotton [secreatry@beekeepers.org.au](mailto:secreatry@beekeepers.org.au) a quick email and he will follow up.

We also require the services of a couple of experienced beekeepers as mentors and mentor co ordinators. If you have a few years under your belt as a beekeeper and some spare time to answer queries both on line and telephone, and in some cases site visit then please contact either:-

[Secretary@beekeepers.org.au](mailto:Secretary@beekeepers.org.au)

[President@beekeepers.org.au](mailto:President@beekeepers.org.au)

From June we will require 5 or 6 members to roster for bi monthly services at the Junior beekeepers club.

Dependent upon final enrolment numbers we will need at least 1 person to assist our course facilitator at each meeting, and occasionally step in to take the course.

Mettings will be held on one Saturday a month 9.30 – 12.00 noon.

Contact:-

[President@beekeepers.org.au](mailto:President@beekeepers.org.au)

## Resources:

### Books.

**Australian Beekeeping Guide.** Russell Goodman and Peter Kaczynski.  
Available from the club or can be downloaded (free PDF) from  
<https://rirdc.infoservices.com.au/item/14-098>.

**The Australian Beekeeping Manual.** Robert Owens.  
Available Bob Owens Bob Beekeeping Zig Zag Rd North Eltham.

### Equipment Suppliers.

Bob's Beekeeping. 79 Zig Zag Rd North Eltham. 039439 5410.

[bob@bobsbeekeeping.com.au](mailto:bob@bobsbeekeeping.com.au)

Redpath Bee Supplies. 193 Como Pde East, Parkdale. 03 9587 5950.

[redpaths@redpaths.com.au](mailto:redpaths@redpaths.com.au)

John Edmonds. 724 Torquay Road Mt Duneed. 03 5264 1245

[edmondshoney@hotmail.com](mailto:edmondshoney@hotmail.com)

Bec McBride Beekeeping. 45 Trumpington Grv Kallista.

[bec@becsbeehive.com.au](mailto:bec@becsbeehive.com.au)

### Bee Livestock Suppliers.

Vanessa Kwiatkowski Heidelberg. [bees@rooftophoney.com.au](mailto:bees@rooftophoney.com.au)

John Edmonds. 724 Torquay Rd Mt Duneed. 03 5264 1245.

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