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Inside this Issue:

Next ABACC Meeting Wednesday 28th of May 2025 at: Erina Trust Community Hall, 27 Karalta Road, Erina. Commencing 7pm Beginning in bees' session commences at 6pm.

Contributions for newsletter: Please send any stories, ideas or anything you wish to share to the editor to the below email address.

Email Address:
secretary@centralcoastbees.org

WELCOME TO THE MAY 2025 NEWSLETTER!

Hi Everyone!!

Oh my goodness, it is nearly half way through 2025! We will be looking into the future toward winter very soon but hope you and your bees have had a bumper season!

Since this is the May edition of the club's newsletter, it seems fitting that we acknowledge National Bee Day, which happens on May 20th.

We will also continue with the "Who am I?" series where Neil and I will share our beekeeping story.

New beekeepers will find some helpful information on the honeybee life cycle. Understanding this will help clarify why beekeepers may check their hives at a particular point or wait a certain timeframe, before we open them again.

We will also look at the important things to do with our hives to prepare them for winter, to keep our hives safe and healthy.

For the members who just love a cuddly little native bee, you will love our profile on the gorgeous Teddy Bear bee!

If you enjoyed Michael's demonstration on how to make creamed honey, then read the article by Len Verrenkamp which will assist you further.

*A **BIG CONGRATULATIONS** to our winners of the Royal Easter Show and Central Coast Regional Show Honey Competitions!!!*

All of this and more!

Don't forget that I would love any input or suggestions for future newsletters. If you have a great story or photo, passionate about a beekeeping related subject you would like covered or just have a great recipe to share, then PLEASE send it to the secretary email and it will be featured in the next newsletter.

So, sit back, with a cuppa or a cool relaxing beverage and catch up on a great read!

Sherrie Smith (Editor)

PRESIDENTS REPORT

Hi All,

Welcome to the May edition of our club's newsletter.

This month we have the Central Coast Regional Show coming up. We will again have our stand at the show to sell the club's honey and provide information to the community on the importance of bees.

We have also arranged to have the beezeebo in operation, to demonstrate working with bees. If you are available to help at the show stall and have not yet put your name down on the show roster, please make sure you contact our secretary Sherrie to do so.

As always, Sherrie has done a fantastic job on this newsletter!

We hope you enjoy!

Hart Peters (President)

APIARIST REPORT

Hi Members,

The Learning curve continues! As you may remember from the last apiary report, Hive 5 was found to have deformed wings and went to the Lab for testing. The results indicated the deformed wings were caused by heavy feeding by varroa mites on the drone larvae.

Everything was looking good until the 5th of April, when lots of dead bees were found outside the hives and the varroa mite count was high. When we extracted the honey the following week, Hive 2 was found with no bees and therefore lost.

A slide sample was taken of Hive 2 and sent to the Lab for testing. It tested positive for European Foulbrood. The hive has been sealed and wrapped for destruction. With this positive result, we have collected samples of all remaining hives for testing. During sampling we found the Warre Hive overrun with varroa mite and suspicion of American Foulbrood (AFB), so the hive was terminated and secured for destruction. With the Easter and Anzac Day long weekends, we are still awaiting the results from the lab.

On a better note, the American Foulbrood has no effect on the honey but has still excluded cut comb from the club hives for sale in the Central Coast Regional Show. So, we still have some cut comb to sell at this event, I will provided cut comb for sale from my own hives.

To finish on a good note Hives 1, 3, 4 and 5 are looking great all having lots of orienteering during the recent sunny periods.

Michael Graham (Apiary Officer)

Would you like to know why honey is so good for us? Then take the time to read this short article from the B-QUAL Australia Pty Limited newsletter:

HONEY: MORE THAN JUST A SWEETENER – EXPLORING THE HEALTH BENEFITS

World Bee Day is an international day created to help people understand the role of bees and other pollinators in our ecosystem and how important that is to us. Without bees, it wouldn't be long before our ecosystem collapses - their job is to pollinate wildflowers and trees, allowing them to grow and provide shelter and food for other creatures, including birds, mammals, and bats.

The main objective of World Bee Day is to raise awareness of threats bees and other pollinators face and their contribution to sustainable development, helping to maintain the planet we call home!

World Bee Day falls on the birth anniversary of Slovenian beekeeper Anton Janša, the pioneer of modern beekeeping. Born on the 20th of May 1734, Anton came from a long line of beekeepers and was the first beekeeping teacher at the Viennese imperial court.

In 1766, Anton enrolled himself in the first beekeeping school in Europe, where he worked on becoming a full-time beekeeper. In 1771, he published a book titled Discussion on Beekeeping.

Several decades later, in 2016, World Bee Day was proposed by Slovenia to the United Nations. Finally, on the 20th of May 2018, the first World Bee Day was celebrated.

So, what can you do to celebrate World Bee Day?

- ✓ Plant bee-friendly plants in their gardens and/or **Plant nectar-bearing flowers** for decorative purposes on balconies and terraces, to help encourage bees to visit the area.
- ✓ Build a bee hotel **Set up a pollinator farm or 'bee hotel"** on your balcony, terrace, or garden, to encourage them to stay and move in. You can either make it yourself or buy one from selected gardening stores.
- ✓ Leave out a dish with water and pebbles to provide a drinking source for busy bees - maintaining an ecosystem is thirsty work!
- ✓ Avoid using pesticides. If you must use **pesticides, choose ones that do not harm bees**, and spray them in **windless weather**, **either early in the morning or late at night**, when bees are no longer foraging.
- ✓ **Buy only Australian made honey and hive products**
- ✓ **Raise awareness among children and adolescents** on the importance of bees
- ✓ Write a letter to your MP to encourage their councils to plant wildflower meadows and leave grass verges alone to allow wildflowers to bloom.

For ideas to celebrate world bee day visit:
Get Involved – World Bee Day (Australia)

References: 1. When is World Bee Day? | May 20th | Twinkl - Twinkl
2. World Bee Day (Australia) – 20 May – Helping Protect our Bees

Sherrie Smith, March 2025

Club Member, Toni Mitchell has sent the below article to help celebrate World Bee Day. It is an article how Slovenia tries to protect bees and their environment. It is a great read and THANK YOU TONI so much for sharing it with us!!!!

A Country of 2 Million is the World Leader in Beekeeping and Protecting Pollinators

NEIL & SHERRIE SMITH

Roles in the club: Sherrie- ABACC Secretary and Newsletter Editor
Neil- ABACC Membership Officer and Assistant Apiary Officer
ABACC Catering Officers

Suburb we live in: Empire Bay

Members of the club: Since October 2018

Our beekeeping journey:

Our bee journey actually began in October 2017, when we went to a talk about native bees at Bunnings West Gosford. The garden club was run by Dianne Norris, who was the editor of Organic Life magazine and who helped to split native hives through the Hornsby Kur-ring-gai Council Native Bee program. It wasn't long after attending this presentation (December of the same year), that we purchased our first native stingless beehive (Tetragongula Carbonaria) from the Hornsby Kur-ring-gai Council native bee program.

Whilst we loved our native bees, we decided we wanted to expand into European honey bees to help with pollinating our vegetable patch. We attended another talk at Bunnings, but this time on honey bees presented by no other than our very own Barbara Elkin. After listening to Barb and continuing to chat to Barb at the local farmers market, we joined the club in August 2018. We tried to gain as much information as we could from books, the internet and from the education presentations at the club and eventually purchased our first flow hive, ready for the next spring. We received our first 5 frame nuc from Barb and soon after we decided two would be better, because when something happened to the brood in the first hive, we could assist it with brood from the second hive.

We would sit in the yard for many hours with our cup of tea and watch them doing their thing. They were so mesmerising!

During our second season of beekeeping, the honey started to flow, and family and friends were all asking for our honey. This was closely followed by colleagues at work contacting us about swarms to collect and soon this led to cutouts of beehives which had established in people's homes and chimneys. People were very thankful when you were willing to help them, especially those who did not want to harm the bees, but did not want to deal with the problem themselves. We ended up with 14 hives by the time varroa mite arrived and we couldn't pass any of them on, due to the movement restrictions during the eradication effort. When we lost them all it was heartbreaking, but we got through it and now have our bees back! We are learning how to best manage our hives now with Varroa, along with all the other honey bee pests. Assisting the club apiary officer, Michael Graham with the club hives, has allowed us to learn something new every inspection we attend. Michael is full of bee-related knowledge that he is happy to share with us and we are happy to soak up!

We have also begun to expand our native bees by doing our first "eduction" from our original hive and it is doing well. We helped with the splitting of the native hives down in Horsby Kur-ring-gai council last year and look forward to going again this year. We learnt a lot, as Dr Alex Austin is just full off information and is so passionate about native bees.

We are continually working on our bee friendly garden for all our bees including the solitary native bees that have taken up residence. We have made various bee hotels to encourage them to stay.

We would hate to lose bees in our world, so we plan on doing all that we can to assist their survival. Why wouldn't we? We get honey, they pollinate our vegetable gardens and are fascinating to watch.

Hope you enjoy reading our beekeeping journey! Sherrie & Neil Smith

Hives need your health!

It has been sometime since Varroa Mite entered our lives, so I just wanted to check in!

The incursion of Varroa mite in Australia has come with many challenges, not only faced with new ways of beekeeping it can also affect us emotionally, physically and mentally, all normal responses to change.

During times of change, it's common to face situations beyond our control. It's completely natural to feel worried, anxious, or even angry when things get difficult. However, it's crucial to prioritise your mental health and well-being and to reach out for help if needed. Maintaining good mental health is key to building resilience and for those impacted more intensely, aiding in your recovery.

There can be varying reasons why the arrival of Varroa Mite onto our shores has had an impact on our mental health. Despite attending Varroa Mite workshops, reading all the information online and trying to source as much information as a we can , there is still the uncertainty that we will get it wrong and to the detriment of our hives. I am sure this is why some of our beekeepers have been hesitant to get back into their beekeeping or have opted out altogether.

For those of us who were in the red zone we may still think about the experiences we had during the emergency response phase. It could involve the emotional impact of the loss of control of managing our hives during the response, the frequent changes to requirements on beekeepers during this time, through to the trauma of having our hives euthanised.

For those beekeepers who just had to give it a go, they are now putting into practice what they have learnt, some confidently, some unsure, some feeling overwhelmed by the decisions they need to make to manage Varroa and some feeling they are unable to cope with this new situation. The ABACC club is here to support their members. If you need some help with your hives or have a question that needs answering or just confirmation that you are doing the right thing, contact us! There is a list of committee members and their contact emails in this newsletter. We will get back to you as soon as we can!

Regardless of the reason your mental health has taken a hit, and you are not feeling yourself, there is help out there!!! **There is no shame in asking for help** for anyone who has experienced a stressful situation or a loss!!! Remember, if you're not well within yourself, you risk losing the motivation to manage your hives (amongst other things), so for your bee's sake, take care of yourself!

See the list of places you can seek help for yourself or someone else, on the next page!

Places you can Seek Help:

Resilience Support

Resilience Officer, Jamie, is here to support you and navigate the situation; all conversations are strictly confidential. Jamie is Mental Health First Aid accredited and trained to support you with all levels of support.
Contact Jamie on 0477 544 379 –

jamie.perry-meijer@dpi.nsw.gov.au or www.varroa.org.au/resilience.

Wellbeing Services

There are many organisations and services you can reach out to for wellbeing resources, guidance and support. Many of these offer free counselling and support services and can be accessed online or via phone.

Some helpful places to start to find out more about the support available include:

Head to Health (www.headtohealth.gov.au)

An Australian Government website that offers multiple ways of searching for digital mental health resources.

Lifeline Phone: 13 11 14

Anyone across Australia experiencing a personal crisis can contact Lifeline's confidential crisis support service. Trained volunteers are available 24/7 to listen and provide support and referrals.

Mental Health Line Phone: 1800 011 511

The Mental Health Line is a 24/7 service operating across NSW which is staffed by mental health clinicians. Anyone, including carers or family members, can call the line to be directed to the most appropriate care. The mental health professionals operating the line will assess the urgency of the call and make recommendations for follow-up treatment.

Women's Information & Referral Service Phone: 1300 888 529

A free and confidential telephone service for women in NSW. The WIRS can help you find information that you, your family or friends may need including information on many organisations and services available to women. The service operates Monday to Friday from 9am to 5pm.

Mensline Phone: 1300 789 978

Mensline Australia is a 24/7 telephone and online support, information and referral service for men with family and relationship concerns. The service is staffed by professional counsellors, experienced in men's issues.

Reference: National Varroa Mite Program Well Being Newsletter, Accessed 25th February 2025

Sherrie Smith, March 2025

Honey Bee Life Cycle

Stage 1: Egg

As a honey bee develops, it goes through four distinct stages. Starting as an egg, within a few weeks it will have transformed into a larva, pupa, and finally, an adult and is dependent on the role that this bee has within the colony. Honey bees take different amounts of time to develop from an egg to adult bee, depending on their caste:

- 16 days for queens
- 21 days for worker bees
- 24 days for drones.

A queen bee can lay up to 3,000 eggs in a single day. Most of those will be fertilized to produce a worker bee, while the unfertilized will result in a drone. To produce a queen bee, she lays an egg in a queen cell.

A single egg that is the size of one grain of rice is laid in one of the hive's hexagonal beeswax egg cells. While the egg lies upright for the first couple of days, by the third day it will fall to its side. After three days, a honey bee egg will hatch to reveal a larva.

Stage 2: Larva

After three days of incubating, the egg hatches to reveal a larva. This small white grub has no sight or legs at this point. To sustain the larvae, young nurse bees feed them royal jelly for the first 3-4 days. After that, the feeding regime changes depending on their caste.

- Queens are fed royal jelly which is what enables them to become a queen.
- Female workers are fed worker jelly containing less protein.
- Male drones are fed drone jelly containing less protein.

Bees spend different amounts of time in the larva phase depending on their caste. Queens spend the least amount of time as larva while drones take the longest to progress through this stage. A larva will shed its skin (moult) several times as it grows.

Bee Caste	Days spent as a larva
Queen	Up to 5½ days
Worker	6 days
Drone	6½ days

Royal jelly is a honey bee secretion that is used in the nutrition of larvae and adult queens. It is secreted from the glands in the hypopharynx of nurse bees, and fed to all larvae in the colony, regardless of sex or caste.

Queen larva in a cell on a frame with bees

During the process of creating new queens, the workers construct special queen cells. The larvae in these cells are fed with copious amounts of royal jelly. This type of feeding triggers the development of queen morphology, including the fully developed ovaries needed to lay eggs. Royal jelly is secreted from the glands in the heads of worker bees and is fed to all bee larvae, whether they are destined to become drones (males), workers (sterile females), or queens (fertile females). After three days, the drone and worker larvae are no longer fed with royal jelly, but queen larvae continue to be fed this special substance throughout their development.

From Wikipedia, the free encyclopedia

After around six days of larva development, a nurse bee will cap the cell by covering the opening in a layer of wax. This protective covering is in preparation for the pupa stage.

Stage 3: Pupa

Throughout the pupa phase, the future bee is starting to take shape under the capping. It is still a tiny organism but is growing fast and developing wings, antennae, legs, and eyes. Tiny hairs will start to sprout up over its body.

The queen takes the least amount of time to develop through the pupa stage. Within 8 days she'll be ready to chew her way out of the queen cell and begin her life.

Workers take 4 days longer to develop, while drones are the slowest to emerge, taking over 2 weeks.

Bee Caste	Days spent as a pupa
Queen	8 days
Worker	12 days
Drone	14½ days

Once the adult male leaves the cell, worker bees will clear out the cell, preparing it for the next egg.

Stage 4: Adult

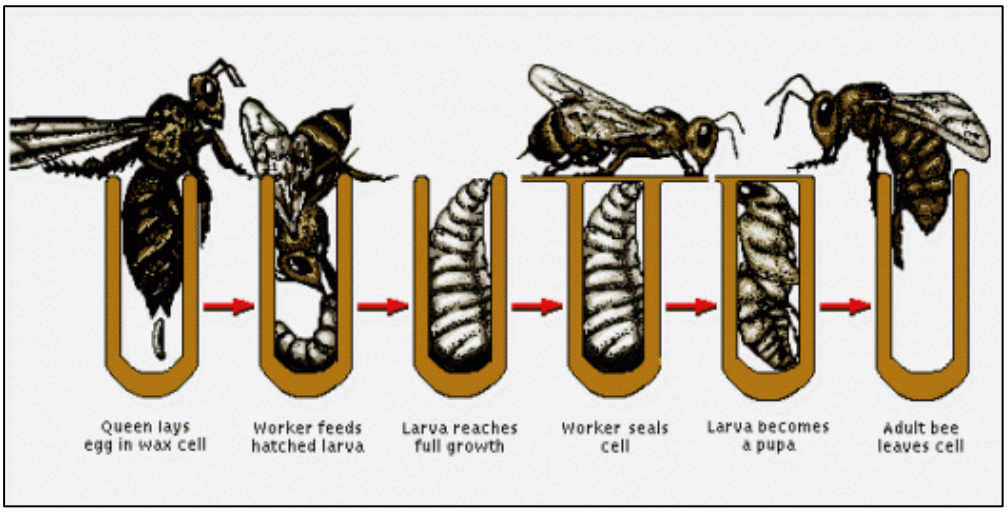
Now that the honey bee has reached adulthood, it will immediately go about its duties as part of the colony. Unlike humans, bees don't require nurturing in infancy. They are ready to go from the moment they leave the cell.

The Queen

Throughout most of her life, the queen bee stays in the hive laying eggs; however, five to eight days after hatching, the young queen will make one to three mating flights. During these flights, a young queen will fly up to 14 kms to find a waiting swarm of drones from neighboring colonies. They will then compete to mate with her in midair.

The queen bee has an average life expectancy of 1-2 years although she may live up to 7 years if she's lucky. Her longevity is reliant on her ability to lay fertilized eggs. Once she starts to slow down, the queen will be replaced by a new one.

Workers



Worker bees have different life expectancies, depending on what season they are hatched. The summertime variety has huge amounts of work to get done and is required to work long hours. It usually won't live more than 6 weeks before running its body into the ground.

Workers born in late fall or winter have a much simpler role. Rather than foraging, they spend the cold months huddled in a group within the hive. Their main job is to keep the queen warm and alive until spring. Winter worker bees may live up to 5 months.

Drones

A drone's life is much easier than a worker's, with its main purpose being to mate with a queen. It isn't required to do work like forage or nurse other bees. But an easy life doesn't mean a drone can expect a longer existence. There are two possibilities for a drone. It mates with a queen bee and dies immediately afterward as its appendage is ripped from its body. Drones can mate from 16 days of age, so this shows how short a drone's life can be. The second option is it doesn't successfully mate and gets evicted from the hive as winter arrives. A drone may live for up to 5-7 weeks if it is unsuccessful at finding a queen to mate with.

Honey Bee Life Cycle

BEST BEES



	QUEEN	WORKER	DRONE
EGG	Up to Day 3	Up to Day 3	Up to Day 3
LARVA	Up to Day 8½	Up to Day 8	Up to Day 9½
CELL CAPPED	Day 7½	Day 9	Day 10
PUPA	Day 8 Until Emergence	Day 10	Day 10 Until Emergence
DAYS UNTIL EMERGENCE	16 Days	21 Days	24 Days
START OF FERTILITY	Day 23 and Up	N/A	About 38 Days
BODY LENGTH	18-22mm (0.71-0.87in)	12-15mm (0.47-0.59 in)	15-17mm (0.59-0.67 in)
WEIGHT ON EMERGING	Nearly 200 mg (3.1g)	Nearly 100 mg (1.5 gr)	Nearly 200mg (3.1g)

References: 1. The Honey Bee Lifecycle, accessed 23/3/2025.
2. Lifecycle Of A Honey Bee - The 4 Phases Bee Professor, accessed 23/3/2025.
3.Royal jelly - Wikipedia, accessed 23/3/2025.

April and May are possibly two of the most important months in our season as beekeepers. This is the time when we prepare our bees for the oncoming winter, ensure they are disease free, and have ample stores of food to make it through to spring. We want them to emerge raring to go as the weather warms.

What you do now will determine the heath of your bees in July and August

There are a few critical components in wintering a hive and I'll address them in order of preference. Then I will explain each step. I won't go into what to do if you find a serious brood disease as this is a different subject.

The following is what we're looking to achieve.

- Remove excess honey supers
- Pest and disease inspection including Varroa Mite surveillance using the alcohol wash, soapy water wash or sugar shake testing method you have chosen to use
- Checking for a laying queen or "queen right hive"
- Checking the strength of the colony and ensuring they have sufficient honey stores to see them through the cooler months

For this process, don't be too concerned about finding the queen. All we're looking for is evidence that she is laying eggs and producing brood.

When you do your inspections, have your phone or camera ready to take photos of anything about which you are unsure.

It is also important for your brood box and first honey super to be the same size. You will see why later.

Step 1- Remove your excess honey supers

Generally, we want our hives going through winter as a brood box and one honey super that is around 75% full of honey. This will often require the removal of any additional supers/boxes.

Ideally, try and do this a week or so before you actually winterise your hive. It is far less stressful on the bees and the beekeeper if you take excess honey supers off and leave the brood inspection for another day.

This also allows you to return the extracted stickies to the hive for a day or two and let the bees clean them up before finally removing the frames and boxes for storage over winter.

Step 2-

This is where we check off all of the remaining steps. It may take up to an hour, so make sure you have fair weather and the time available, so you're not rushed. The bees will know if you're in a hurry and they'll let you know too!!!

A week or so after you have removed the excess honey supers, return to your hive and carry out your pest and disease inspection. Gently remove each frame, looking over the frame for the queen. Then shake or brush the bees off each frame and back into the hive. Look for the following key items:

Pests and disease

- Look for dark, chocolate coloured, sunken and perforated capped brood cells. These are signs of potential **American Foul Brood (AFB)** infection.
- Look for open brood cells with hard, white, chalky, dried up pupae in them. This is a sign of **Chalk Brood**
- **Wax moth** will most likely only occur in hives that are already weak.
- Perform your **Varroa mite surveillance** and report your results to the DPI **HERE**
- Clean or replace any **small hive beetle (SHB)** traps. Leave them in for winter as we are seeing them all year now, especially with the arrival of Varroa Mites.

Checking for a laying queen

Just maybe you will see the queen, however it's not essential. Evidence of a laying queen is all we really need to see. Look for an even pattern of capped brood and the following:

- **Eggs:** These are very small and hard to see but are the best indicator of a laying queen.
- **Uncapped brood:** larvae between 4 and 12 days old.
- **Capped brood:** Pupae which are between 12 and 20 days old.
- **Hatching bees:** This would indicate the hive had a queen at least three weeks ago.

The evidence of a laying queen needs to be seen on at least two or three or more frames. A few capped brood cells on one or two frames does not indicate a healthy laying queen. It is more likely to point to a failing queen or queen-less hive.

The strength of the colony and supplies for winter

The strength of a colony is all about how many bees make up the colony. Many new beekeepers see a few frames half covered in bees and consider that a strong colony. It's essential you learn to judge the strength of a colony as it is critical to their survival and ability to thrive once the weather begins to warm.

What we are after is every frame completely covered in bees (←like the photo across) and bees in the lid of your hive. If you, the beekeeper is thinking, *"How on earth do they all fit in that box?"* it is a good indication of a strong colony.

The strength of the colony determines whether or not your hive goes through winter as one, two or in some cases three boxes.

The single brood box case

If all or most of the frames in your hive are only sparingly covered in bees (like the photo below) then reduce your colony down to just the brood box for winter. They will do better in a smaller space. It's easier for them to maintain the brood temperature of 35 deg when they don't have a box on top with few or no bees in it.

A weak colony ↑

It is important to ensure that the two very outside frames are full of honey as these are their stores for winter. If necessary, replace these frames with two full frames from the honey super.

You can only do this with an identical sized frame, so don't add an Ideal or WSP frame to a Langstroth brood box.

If you don't have any spare frames of honey, consider feeding sugar water at a 2:1 sugar/ water ratio. Only do this when your hive is just a single brood box, not a hive with a honey super.

Bee numbers like this would most likely benefit from being just a single box over winter ⟶

The Brood box and one (1) honey super case

If all the frames in your brood box and honey super are well covered in bees (see photo on previous page) then it should be fine to maintain two boxes (brood and super) through winter.

Earlier I suggest you maintain a 75% full for the honey super. The reason is that we often see a light honey flow on the Central Coast over winter. This space gives the bees some room to store any nectar they gather.

↑ Bee numbers in a brood box like this would be suitable for a two box hive over winter.

The Brood box and two (2) honey supers' case

If, in late May, you're lucky enough to have a colony that's absolutely full of bees (all the boxes, the lid and perhaps bees hanging out the front) then they can probably stay as three boxes over winter. Just keep a close eye on them and be prepared to remove the top box if required. It's your call, but if the top box and lid are not full of bees then it's better not being on there.

Bee numbers like this would likely require a 3 box hive through winter ⟶

A few general notes:

1. If you have a **Flow hive** now is the time to remove your flow frame super and drain/ wash your frames before storage. Try not to leave flow frame supers on over winter as the honey may candy in the frames and it's quite a process to get it liquid again in order to drain the frames.

2. What if you do not have any other supers on your hive? In that case winter is the time to make up that extra super and frames so you don't have the same problem next winter. Make the new boxes the same size as your brood box. It's better to keep things standard. If your hives are **located under trees**, give them some protection with an additional roof just above the existing hive lid. Leave a 100mm gap between the lid and the roof sheeting. This keeps the Chinese water torture off the hive lid and will make it easier for the bees to keep the brood warm

Consider pruning off any branches that are filtering out sunlight. Hives in sunny positions do better in winter

3. Consider a blanket under the lid in an ideal box. I don't mean a pure wool Onkaparinga heirloom. Just a pillow case stuffed with natural absorbent materials like clean sawdust works well.

4. Don't close off vented bases. Our winters are not cold enough to warrant this and your hive will stay dryer inside due to less condensation. Dry bees are happy bees.

HAPPY BEEKEEPING!

Written by Len Verrenkamp April 2020, minor updates S. Smith April 2025.

What is NOSEMA?

Nosema is a serious disease of adult European honey bees including queen bees. The disease is caused by the spore forming microsporidian – *Nosema apis*. Nosema can cause serious losses of adult bees and colonies in autumn and spring.

In recent years, another nosema, *Nosema ceranae,* has been found to infect European honey bees in a number of countries including Australia. *N. ceranae* is present at similar levels all year round and population losses can occur at any time of the year. Infections typically result in a slow drop in the adult population over summer and heavy winter losses. Sometimes dead bees will be seen around the hive, but this is not always the case. Infection by *N. ceranae* has a similar overall effect on the colony as *N. apis*. However, the dysentery and crawling bee behaviour that is associated with *N. apis*, has not been observed with *N. ceranae*.

How does our hive get Nosema?

The fungi produce spores which are ingested by adult honey bees when they feed on food and water contaminated with spores, or are picked up while cleaning contaminated combs, robbing contaminated hives or by infected bees drifting to new hives. A single spore can cause infection, and by the time that infection is fully developed in an adult bee, there could be between 30-50 million spores in the gut of the bee. The life cycle of both Nosema species are similar and consist of the following:

- Infection begins when a bee ingests Nosema spores, which then germinate inside the mid-gut of the bee.
- The fungus enters the cells of the mid-gut and begins to absorb nutrients. This causes the cell to become damaged and the bee to be more susceptible to secondary infections.
- The fungus grows and multiplies infesting more of the mid-gut cells and produces spores.
- The spores either germinate within the bee's mid-gut, infecting new cells, or pass through the bee's digestive system.
- Faecal material containing Nosema spores can contaminate food and water sources, where they can then be ingested by other bees. Spores can also be spread to non-infected bees when they clean contaminated combs or rob contaminated hives and ingest spores in the process.

Beekeepers can also accidentally spread the spores of Nosema by moving combs from an infected colony to a non-infected colony. The spores can also be spread on tools between hives and apiaries.

Symptoms of Nosema?

There are no truly diagnostic symptoms of Nosemosis, rather a number of symptoms that are associated with the disease. However, these general colony symptoms could easily be confused with other pests or pathogens, or other factors such as a lack of pollen or nectar. Laboratory examination of adult bees is the only accurate way to diagnose Nosema. Using a light microscope is the only reliable method of diagnosing the presence of spores of nosema.

Infection of adult bees at a young age can cause the bee to have difficulty digesting food for the rest of its life. These bees usually do not produce brood food/royal jelly secretions from the hypopharyngeal glands and often skip the brood rearing stage of their life, becoming forager bees at a young age. The infected bee often has a shortened adult lifespan. When queen bees become infected, they also have reduced lifespans and cease to lay eggs. These impacts cause reduced colony health, population and performance, which can ultimately result in the colony dying.

Infections are usually most apparent in autumn and early spring. This is because the bees are often unable to make cleansing flights at these times of the year as the temperature is regularly insufficient for flight. This results in dysentery in and around the hive, which allows the spores to build up within the hive and have a greater impact on the colony. Unlike *N. apis*, *N. ceranae* is present at similar levels all year round and population losses can occur at any time of the year.

Treatment for Nosema:

As temperatures warm again the bees can make regular cleansing flights causing the infection levels within the colony to drop and the disease to become undetectable. Symptoms will likely return when conditions again favour the disease.

Good Beekeeping Practices to prevent Nosema.

The most effective control of the disease relies on maintaining strong hives and taking precautions to reduce the build-up of the disease.

The best way to manage Nosema is to maintain a strong, healthy hive. Good management practices such as ensuring that appropriate nutrition is available to bees, using young queen bees, and comb rotation every 3-4 years will keep colonies strong and remove possible causes of stress, which can make the colony more susceptible to the disease.

It is also good practice to try and avoid moving hives, or inspecting hives during winter, as inspections and movements at this time can increase the stress levels within the colony. When getting hives ready for winter, always ensure that there are not excess boxes on the hive, as well as ensure that there is enough good quality honey and pollen for the colony.

Maintaining good hygiene practices and checking the health of hives regularly during the warmer months can reduce the risk of accidentally spreading the disease between hives.

Although there are no reliable or specific field diagnostic symptoms associated with Nosemosis, beekeepers should also become familiar with some of the general symptoms that may be caused by Nosema infection. If you start to notice symptoms such as dysentery, reduced brood production, reduced honey production or population declines and there are no obvious reasons why this may be occurring, you should send a sample of bees to your local department of agriculture for testing as *Nosema apis* is a reportable pest in New South Wales.

References: 1. Nosema « Bee Aware, accessed 23/3/2025.
2. Nosema disease of honey bees | Honey bee pests and diseases | Animal diseases | Biosecurity | Agriculture Victoria, accessed 23/3/2025.
3. microsporidians (Nosema apis Zonder 1909), accessed 23/3/2025.
4. Nosema Ceranae: Symptoms, Prevention, and Treatment, accessed 23/3/2025.

Sherrie Smith, March 2025

THE TEDDY BEAR BEE

Above: a Teddybear Bee resting by hanging onto a stem with its jaws!

Teddy bear bees (*Amegilla bombiformis)* are native to Australia and found Australia-wide, except in Tasmania. They are a stocky bee which resembles a bumblebee and belong to the family Apidae. They have golden brown colouring, range from 15-20mm in length and are typically a fatter looking bee than European honey bees. They have dark hairless bands on their abdomen and are covered all over, including legs, in golden brown hairs. They have dark brown wing colour and medium length antennae.

They live solitary or within close range to other teddy bear bees. Each female builds an individual nest for herself in a small burrow in the soil. However, quite a few Teddy Bear Bees may build nests in a sheltered location such as in an eroded creek bank or underneath a house, somewhere with overhanging shelter.

The nest consists of several urn-shaped cells at the end of a 10 cm (4 in) long burrows. The cells themselves are 2 cm (0.8 in) long and lined with a waterproof material. The teddy bear bee adds an egg to each with a food supply of pollen and nectar paste. Nesting individuals of species can be stalked by the domino cuckoo bee (*Thyreus lugubris*), which hovers silently and observes before entering unattended burrows and laying its own egg, the grub of which consumes the supplies meant for the teddy bear bee larvae.

Teddy bear bees are buzz pollinators playing an important role in pollination services to flowering plants in particular to species that require buzz pollination. This specialised technique involves the bee gripping the flower and vibrating its flight muscles, causing the pollen to be released in a shower. Like the Blue-banded Bees, the Teddy Bear Bees fly with the dart-and-hover flight pattern. Teddy Bear Bee flies with lower pitch humming sound.

Their robust bodies and dense fur coats allow them to efficiently collect and transport large quantities of pollen. Both native plants and crops like tomatoes, blueberries and capsicums greatly benefit from the pollination services provided by these bees. They have also been observed foraging on a variety of flowers, including Abelia, Buddleia and the blue flax lily. The males rest overnight attached to plant stems.

Teddy bear bees are not aggressive and will generally not attack unless provoked. They will only sting if they feel threatened or nest is disturbed, and their sting is less painful than a honeybee or wasp. However, it is important to remember they are wild animals and should be treated with respect and caution.

By providing bee-friendly plants to preserve their habitat, minimizing the use of pesticides and minimizing climate change, we can enjoy these charming pollinators and enjoy them without interrupting their natural behaviour.

Teddy Bear Bee © Marc Newman

References: 1. Aussiebee :Teddy Bear Bee (Amegilla)
2. NSW DPI: Teddy bear bee
3. Meet the Teddy Bear Bee: Australia's Charming Pollinator - Their Role in Ecosystem Health
4. Teddy bear bee Facts for Kids
5. Amegilla (Asaropoda) bombiformis – Ausemade

Teddy bear bee burrows under the house in Berkley Vale

Teddy Bear Bee Visit

The Club Apiary Officer was requested to attend a home in Berkeley Vale in February this year as the owners were selling. They were concerned about bees that were living in the storage area under their house and that they posed a danger to their grandchildren and new owners.

When the apiary officer went to investigate, he discovered there was an area approximately 12 square metres, that a colony of Teddy Bear bees were making their home. The bees were known to be there for a number of years.

Whilst there, our apiary officer educated the owners about how special and rare it was to find a breeding location of Teddy Bear Bees this size and strongly encouraged the new owners to preserve the bee's home and not to spray them. He also requested that the owners informed the realestate how important it was to preserve them and inform any new potential owners.

Fingers crossed they remain safe.

Sherrie Smith, April 2025

For many people, creamed honey brings back special memories from childhood. Thoughts of creamed honey spread thickly on a hot crumpet definitely causes the mouth to water. From time to time I have had people ask specifically about the availability of creamed honey.

The following article by our President, Len Verrenkamp gives some very practical steps to guide us in making this tasty delight. Before doing my editorial 'thing' on Len's notes, I put his suggestions into practice. The result was my first batch of creamed honey which is now happily 'setting' in the refrigerator. I must confess to having sampled some on toast at lunch time today. Yummmmm!!!!

Here are Len's Guidelines:

Despite its name, there are no dairy products in creamed honey. For that matter, there is nothing other than pure honey. Creamed honey is simply a combination of naturally candied honey and liquid honey vigorously beaten together to give the creamy look and buttery texture. The process is a lot like creaming butter and sugar when baking cakes. It just takes a bit longer.

If you have surplus honey, a good-sized starting batch is around 5 kilograms of honey. This will make the process a bit easier than making just a couple of jars. Once a few people have tried your first batch, you will realise the benefits of having made this quantity.

In making creamed honey, you will lose some product. Part of the result of beating and aerating the honey will be a residue of froth on the top of the mix once it has had time to settle. The finished product needs to be refrigerated for at least 2 weeks after bottling. These two factors are part of the reason that creamed honey attracts a premium price over the normal runny honey. It is also worth noting that the normal 500gm jar we use for runny honey will only hold between 430 and 440gms of creamed honey. The creaming process aerates the honey thereby increasing the volume.

Setting Up:

In order to make a 5kg batch of creamed honey you will need the following:

- 5kgs of liquid honey.
- 500gms of candied honey. (A 10:1 ratio of liquid honey to candied honey is the maximum recommended.)
- Two food grade plastic buckets, one with a honey gate near the bottom.
- A medium mesh kitchen strainer. (400 micron or .4mm mesh is recommended).
- A new stainless steel or chrome rotary paint stirrer.
- A powerful battery drill or slow speed mains powered drill (preferred).

The Process:

Place the 5kgs of runny honey and 500gms of candied honey in the bucket without the honey gate. Using the power drill and paint stirrer, mix the honey for 15 to 20 minutes in total. After a minute or two, the mixture will lighten and begin to cream. This is important. The honey may continue to lighten for the next 10minutes or so. Continue beating the honey. The long beating time reduces the size of crystals from the candied honey and produce a smoother product in the end. (A good example of this is the well- rounded stone from a fast-flowing

river).

Once the beating process is completed, the creamed honey will be quite runny. The mixing does generate some friction and, as a result, warms and thins the honey slightly. Using this to our advantage, we strain the honey into the second bucket (with the honey gate) through the kitchen strainer. This removes any large, candied crystals and any other impurities that may have fallen into the honey during the extracting or beating process.

The next step is to allow the honey to settle for 8 to 12 hours before bottling. During this period any excess air in the honey will rise to the surface and form a 1–2cm layer of 'froth'. We want this froth to form before bottling so that the jar is filled with pure candied honey.

Once the candied honey has settled, we are ready for bottling. During bottling it is important not to allow any of the froth to be decanted into the jars. There will always be a jar or two of creamed honey with a froth layer on top remaining at the end. Put these aside for your own consumption.

When bottling is completed, seal the bottles and place them in the refrigerator for a minimum of two weeks. The longer they are refrigerated, the firmer will be the final product.

You could do all of the above in your kitchen mixer. However, be aware that honey is a lot thicker than cake batter and there is a risk of overheating the mixer. A semi commercial mixer such as a KitchenAid or Kenwood may be suitable.

For a smaller batch Gavin followed the guidelines above using his wife's KitchenAid mixer. He found that 2kgs of runny honey and 200gms of candied honey was the maximum batch size that would fit into the mixing bowl.

The mixer beat the honey effortlessly, but it was warming up after 20minutes of vigorous beating. This process produced 4x375ml bottles of creamed honey weighing approximately 430-440gms per bottle. A remaining 375ml bottle of creamed honey and froth has been retained for our own use. This was a good learning exercise for me.

Written by Len Verrenkamp

Honey Extraction Workshops February and April 2025

The club apiary has run two honey extraction workshops this year, the first one on the Sunday the 23rd of February and the second on the 12th of April. These workshops not only allowed new beekeepers a look into the club hives and how honey was extracted but also for our more experienced beekeepers to share their knowledge. Everyone seems to enjoy their time and getting covered in a sticky mess.

These workshops also assisted the club apiarist to extract enough honey to be sold at the upcoming Central Coast Regional Show.

Sherrie Smith March 2025

CONGRATULATIONS TO OUR SYDNEY ROYAL EASTER SHOW HONEY COMPETITION WINNERS!

CLASS: 12 Pollen, cleaned and dried.
First Prize Max Rae

CLASS:14 Liquid honey, produced from sources other than Eucalypt, standard colour, light
Third prize Beeutiful Honey- Max Rae

CLASS: 19 Natural granulation honey, fine grain.
Second Prize Beeutiful Honey- Max Rae

CLASS: 24 Frame of comb honey, in ideal frame.
Second Prize Natural Hive- Steven Lee

CLASS: 32 Liquid honey, standard colour, dark.
Second Prize- Michael Graham

CLASS: 36 Creamed honey, fine grain.
First Prize- Michael Graham

CLASS: 38 Beeswax, natural yellow.
Third Prize Michael Graham

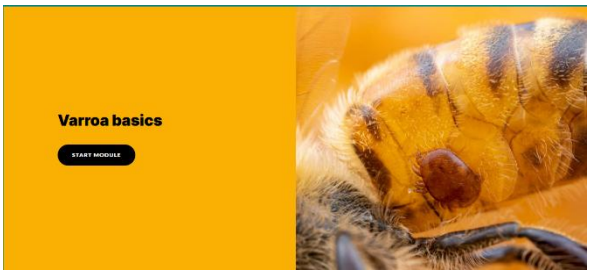
CLASS: 47 Traditional or Straight Honey Mead.
Third Prize Sandra Rae

CLASS: 48 Melomel or Fruit Mead.
Third Prize – Max Rae

CONGRATULATIONS TO OUR CENTRAL COAST REGIONAL SHOW HONEY COMPETITION WINNERS!

BEST IN SHOW:* *Michael Graham			
Liquid Honey	***Light*** **1st** Robert Ray **2nd** Robert Ray **2nd** Roger Dixon		
	Medium **1st** Michael Graham **2nd** Kevin & Carol Hearne		
	Dark **1st** Michael Graham		
Candied Honey	**1st** Kevin & Carol Hearne **2nd** Kevin & Carol Hearne	***Native Honey***	**1st** Heather Wightman **2nd** Michael Graham
Creamed Honey	**1st** Neil Smith **2nd** Kevin & Carol Hearne	***Candles***	**1st** Michael Graham **2nd** Heidi Andrews
Flow Honey	**1st** Susan Greentree **2nd** Hunter Valley Amateur Bee Association	***Mead***	**1st** Heather Wightman **2nd** Michael Graham

Need a Varroa Refresher or new to beekeeping, then try this new online training!



Introduction to Varroa Management - online training

Introduction to Varroa Management is a short online course that takes beekeepers through a series of topics to help better understand Varroa and prepare for the mite.

The course covers mite monitoring and surveillance, cultural and mechanical controls, synthetic and non-synthetic chemical use, record-keeping, safety measures and more.

It consists of 9 topics with a quiz at the end of each one. A certificate of completion is available at the end of the training. Each topic can typically be completed in 20-30 minute blocks with beekeepers able to continue and log back on at their convenience.

To access the training you will need to login or create an account on the BOLT platform.

Varroa Management face to face training

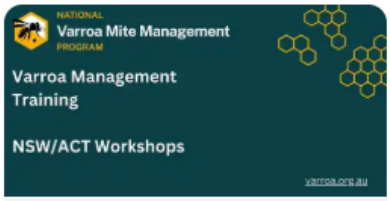
NATIONAL
Varroa Mite Management
PROGRAM

The FREE one-day **Varroa Management Training Workshop** for all levels of beekeepers provides information on:

- Understanding Varroa mite and its impacts
- The importance of monitoring and treatment thresholds
- Integrated pest management and Varroa
- Chemical treatment options including organic options
- Brood location, frame rotation and management
- Best practice record keeping

The **Advanced Varroa Management Workshops** have been created specifically for commercial beekeepers, these more detailed workshops look at the impact of colony losses on commercial operations, strategies to improve business decision-making, development of effective management plans, federal and state support services and more.

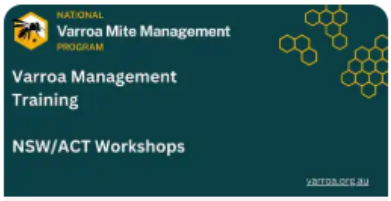
There are a limited number of workshops to be delivered. Participants will need to register to attend. Each workshop is free to attend and is presented by the Program's accredited trainers.



Wed, 30 Apr, 9am - 3pm AEST

Albion Park - Varroa Management Training Workshop

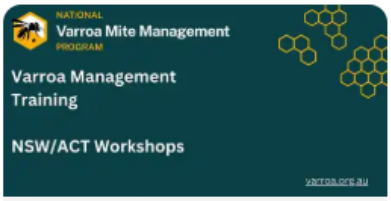
Albion Park Bowling Club 32-52 Taylor Rd, Albion Park NSW 2527,...



Thu, 1 May, 9am - 3pm AEST

Albion Park 2 - Varroa Management Training Workshop

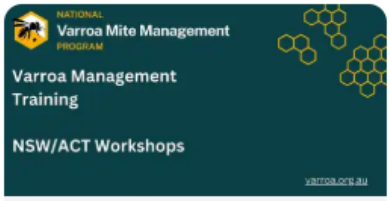
Albion Park Bowling Club 32-52 Taylor Rd, Albion Park NSW 2527,...



Sat, 10 May, 9am - 3pm AEST

Hunter Valley - Varroa Management Training Workshop

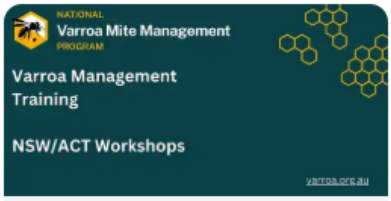
Tocal Agricultural College 815 Tocal Rd, Paterson NSW 2421, Australia



Wed, 21 May, 9am - 3pm AEST

Ballina Advanced Varroa Management Workshop

Ballina RSL Club 1 Grant St, Ballina NSW 2478, Australia



Thu, 26 Jun, 9am - 3pm AEST

Port Macquarie Advanced Varroa Management Training Workshop

The Westport Club 25 Buller St, Port Macquarie NSW 2444,...

If you are unable to attend a workshop and would like some one on one assistance, you are welcome to contact a Varroa Development Officer for advice.

Looking for a reputable queen bee breeder? Try the below contacts.

Name	Phone number	Location
Lockwoods- Garth Miller	0450369982	Bathurst
Jamie Baggs	0410508939	Edgeworth
Hannabees	0408543437	Dubbo

The 112th NSWAA Annual General Meeting, Conference and Trade Exhibition will be held on Thursday, 22 and Friday, 23 May 2025 at Ballina RSL Club, 1 Grant Street, Ballina. The theme of the 2025 Conference is "Managing Hives for Tomorrow, Today".

Wednesday, 21 May 2025 will be host to our Hospitality Evening within the Trade Exhibition space at the Ballina RSL Club, including canapés and drinks, commencing at 5:00pm, where delegates will have the opportunity to mingle and meet with some of our Guest Speakers.

The two-day Conference, sponsored by Lockwood Beekeeping Supplies, will feature presentations by industry leading experts, both international and local, including presentations by Keynote Speakers: Anne Marie Fauvel, Emily Remnant and Nick Milne.

Our feature Trade Exhibition, which will run for the two days of conference, will showcase trade booths from exhibitors from both Australia and overseas.

Friday night will host our Annual Conference Dinner. Featuring a delicious meal and a live auction, this will be a night not to be missed! Note: Tickets for Annual Conference Dinner and Hospitality Evening are additional to the full conference package.

Tickets are limited so get in quick to avoid disappointment!
Events – NSW Apiarists' Association

THE CLUB COMMITTEE NEEDS YOU!

Do you need a challenge for 2025 but haven't quite found it? Well, why not join the club committee. The Events Co-Ordinator, Equipment Officer and Assistant Secretary positions are yet to be filled for 2025. These positions may sound daunting, but if you choose to try one on for size, you will be well supported by the current committee members!!!
If you would like to help out the club and take on a new role, please send an email to president@centralcoastbees.org
We would love to have your help as many hands make light work!!!

ABACC 2025 CLUB MEETING DATES

Club Meetings on the 4th Wednesday of the Month (except January)

Wednesday 26th of February 2025
Wednesday 26th of March 2025
Wednesday 23rd April 2025
Wednesday 28th May 2025
Wednesday 25th June 2025
Wednesday 23rd July 2025
Wednesday 27th August 2025
Wednesday 24th September 2025
Wednesday 22nd October 2025
Wednesday 26th November 2025
December meeting/ Christmas party date to be confirmed

Reminder...

To report your Varroa Mite surveillance results click HERE

To watch the new Alcohol washing tutorial video click HERE

OFFICE	NAME	EMAIL ADDRESS
Voting Positions		
President	Hart PETERS	president@centralcoastbees.org
Vice President	Wayne LOGAN	vicepresident@centralcoastbees.org
Secretary	Sherrie SMITH	secretary@centralcoastbees.org
Treasurer	Gordon FOSTER	treasurer@centralcoastbees.org
Ordinary Member	Michael GRAHAM	apiaryofficer@centralcoastbees.org
Ordinary Member	Neil Smith	membership@centralcoastbees.org
Ordinary Member	Robert Ray	
Non-Voting Positions		
Public Officer	Hart PETERS	president@centralcoastbees.org
Club Apiary Officer	Michael GRAHAM	apiaryofficer@centralcoastbees.org
Biosecurity Officer	Max Rae	biosecurity@centralcoastbees.org
Assistant Apiary Officer	Neil Smith	membership@centralcoastbees.org
Membership Officer	Neil Smith	membership@centralcoastbees.org
Quartermaster	Bruce MAIN	bhv.main@gmail.com
Newsletter Editor	Sherrie SMITH	secretary@centralcoastbees.org
Publicity Officer	Barbara ELKINS	barbaraelkins@ozemail.com.au
Librarian	Heidi ANDREWS	rumbalarabeesau@gmail.com
Catering Officer	Neil & Sherrie SMITH	secretary@centralcoastbees.org
Events Co-Ordinator	**Position currently vacant**	
Equipment Officer	**Position currently vacant**	
Assistant Secretary	**Position currently vacant**	

The Club Quartermaster, **Bruce Main**, carries a stock of basic beekeeping supplies available to Club members. Items and pricing are as follows:

Price List (as of 24th January 2025)

HIVES		
Boxes – 8 Frame (unassembled) – Full Depth	$31.00	each
Boxes – 8 Frame (unassembled) – WSP	$28.00	each
Boxes – 8 Frame (unassembled) – Ideal	$25.00	each
Migratory Lids – 8 Frame (unassembled)	$25.00	each
Bottom Boards – 8 Frame (unassembled)	$25.00	each
Queen Excluder – Metal 8 Frame	$11.00	each
Queen Excluder – Timber Surround Metal 8 Frame	$12.00	each
FRAMES		
Frames (unassembled) - Full Depth	$19.00	per bundle of 10
Frames (unassembled) - WSP	$20.00	per bundle of 10
Frames (unassembled) - Ideal	$20.00	per bundle of 10
Frames – Plastic Drone Comb	$3.80	each
FOUNDATION WAX		
Foundation Wax – Full Depth	$3.00	per sheet
Foundation Wax – WSP	$2.80	per sheet
Foundation Wax – Ideal	$2.30	per sheet
Foundation Wax – Drone Comb	$2.50	per sheet
TOOLS & ACCESSORIES		
Apithor – (hive beetle trap)	$9.00	each
Bee Brush	$14.50	each
Cover End Vents (metal)	$2.50	per set of 4
Emlocks (Hive Strap)	$11.00	each
Escape Boards – 8 Frame (complete)	$29.00	each
Eyelet Tool	$11.00	each
Eyelets - Brass	$16.00	pack of 500
Frame Lifter	$7.00	each
Framing Wire – Stainless Steel (500g roll)	$26.50	per roll
Hive Tool	$17.50	each
Queen Catcher Clips – Stainless Steel	$5.00	each
Varroa Mite – Alcohol Wash Test Kit	$10.50	each
CONTAINERS & LABELS		
Glass Jars with Lids (500gm)	$23.50	per carton of 24
Honey Squeeze Bottles with Caps (500gm)	$10.50	per pack of 12
Honey Tubs with lid (1kg)	$1.90	each
Labels - Club Honey Container Labels	$0.65	each label
Labels - “Made in Australia” (126 labels on a sheet)	$5.00	per sheet

We have a Wire Framing Jig and a Wax Embedder (electric) available for hire to club members at a small cost of $3.00 per item for 3 days’ hire. (members are to provide their own framing hardware)

NOTE: Item/s hired must be returned by 5:00pm on day 3 of the hire period (unless prior arrangement for alternate return is made.)

To order items either phone 43 246284 and leave a short, clear message or send through an email to bhv.main@gmail.com and I will either prepare the order for pick up at Narara at a mutually pre- arranged day and time or I can bring your order along to the next monthly club meeting. (address available on request.)

ALL ORDERS LODGED will be responded to on the same day, providing the request is placed before 4:30pm. Orders placed after this time will be responded to the following day.

All sales are CASH ONLY. There is no Eftpos available for any purchases.

NOTE: Please be aware, prices shown are to be used as a guide only and may vary without notice depending on Supplier cost variations.

This equipment is stored and maintained currently by the club president, Hart Peters until we can find a new equipment officer for the club.

The protocol for use of the equipment is to contact Hart in advance of when you are expecting to carry out an extraction and make a booking. It is wise to plan 1-2 weeks ahead. In times of peak honey flow, the equipment can be in high demand.

Hart can be contacted on 0417674687 or email president@centralcoastbees.org and he will advise availability, a pickup and drop off time and location. Please adhere to these times as other members may be in line to use the equipment after you.

Hart will request a deposit of $20.00 (depending on how much equipment you borrow). The deposit will be refunded when the gear is returned, clean and ready for the next user. If the equipment is covered in wax or honey, and therefore not ready for the next user, your deposit may be forfeited. This is at Hart's discretion.

Any damage or breakages are the responsibility of the member borrowing the equipment. You are expected to rectify or replace the item at your cost. Please check the equipment when you collect it. If anything is out of order, please notify Hart immediately.

Equipment available:

- 3 Manual honey extractors in 3 frame size
- 1 Manual honey extractor in 4 frame size
- 1 Electric honey extractor in 3 frame
- X3 Extracting kits
- 1 Honey creamer
- X1 2-person hive lifter for moving hives or removing or replacing supers.
- 2 Manual honeycomb presses

Extracting Kit Contents
X1 container to hold contents
X1 double sieve strainer
X1 cold knife
X1 bucket support
X1 spikey roller
X1 spatula
X2 stainless steel bowls

ABACC CLUB LIBRARY

The following publications are available for members of the ABACC to borrow. Please see Heidi at our club meeting. The library is available from 6:30pm on club meeting nights. You may hold a book for 1 calendar month, and it must be returned at the next meeting. If you are unable to attend, please make arrangements for the item to be returned in your absence. **Click on the link below** to see our library book list.

ABACC CLUB LIBRARYBOOK LIST

CONTACT HEIDI OUR LIBRARIAN via email:
rumbalarabeesau@gmail.com